

SCHEDULE 1

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SCHEDULE 1

PART 1 – CONTRACT SCOPE

1. DEFINITIONS AND INTERPRETATION

1.1 Definitions

1.1.1 In this Contract the following words and expressions have the meanings hereby assigned to them except where the context otherwise requires.

"Access System" means a permanent or temporary moveable access gantry or platform together with associated runway beams, supports and associated fixings.

"Accident Investigation and Prevention Report" means a report, prepared by the Operating Company, containing proposals for remedial actions to address identified causes of accidents.

"Adjudicator" means the person referred to in Schedule 1, Annex 1.

"Agreement" means the executed and legally binding document that witnesses the agreement in writing of the parties for the 4th Generation Term Contract for Management and Maintenance of the Scottish Trunk Road network.

"All-Routes" means the term used within a Bid to define the application of a Scheme to the total Trunk Road network within a Unit.

"Annual Period" means the period of one year from 00.00 hours on the 1 April each year to 24.00 hours on the 31 March of the following year, except for the first Annual Period which is the period from 00.00 hours on the Commencement of Service Date to 24.00 hours on the 31 March of the following year and the last Annual Period which is the period from 00.00 hours on the 1 April of the preceding year to 24.00 hours on the Contract Termination Date.

"Annual Road Safety Review Report" means an annual report, prepared by the Operating Company, containing a programme of proposed road safety initiatives planned to contribute to achieving the Scottish Government's casualty reductions targets.

"Area Network Manager" means the Transport Scotland official who directs the management and maintenance of individual routes.

"Assignment of Rights Agreement" means an assignment of the Scottish Ministers' rights to pursue a claim in respect of damage to Crown Property in the form contained in Schedule 4 Part 4, Annex 4.4/E.

"Automated Diary Facility" means a web-based software application supplied by Transport Scotland to the Operating Company for the input, editing and dissemination of information on all planned roadworks, traffic management, lane closures, lane occupations and events likely to cause traffic delays or disruption on the Unit.

"Base Index Figure" has the meaning given to it in Clause 10.7.2 of this Schedule.

"Base Lending Rate" means the base lending rate published by the Royal Bank of Scotland, as varied from time to time.

"Bid" means the submission by the Operating Company in accordance with the process used within the Annual Cycle containing the requisite operational and

financial information to the Director in order to seek his approval for inclusion of a Scheme within the one and three year programmes.

"Bond and Undertaking" means the bond and undertaking, to be provided by the Operating Company to the Scottish Ministers, described in this Schedule.

"Bridge Assessment" has the meaning given to it in the *Design Manual for Roads and Bridges: BD 21: The Assessment of Highways Bridges and Structures*.

"Carbon Management System" means Transport Scotland's computerised system for calculating and managing greenhouse gas emissions.

"Carbon Management System Annual Account" means Transport Scotland's computer spreadsheet programme that is designed to collect operational activity data for Transport Scotland's greenhouse gas inventory.

"Carbon Management System Road Infrastructure Projects Tool" means Transport Scotland's computer programme that calculates project greenhouse gas emissions resulting from structural maintenance and construction of new road infrastructure.

"Category 1 Defect" means a Defect that necessitates prompt attention because it presents:

- (i) an immediate or imminent hazard, or
- (ii) a risk of rapid structural deterioration to the affected element.

"Category 2 Defect" means any Defect which is not a Category 1 Defect.

"CDM Regulations" means the *Construction (Design and Management) Regulations 2015*.

"Central Office" means the Operating Company's central office to be established and located as referred to in Schedule 5 Part 7.

"Certificate" means any document that formally attests the fulfilment of requirements of this Contract.

"Claim Notification" means the notice in writing to the Scottish Ministers by the Operating Company of an intention to claim additional payment in accordance with the provisions of Clause 10.8.2 of this Schedule.

"Commencement of Service Date" means 01 April 2013.

"Conditions of Contract" means this Schedule.

"Confirmation of Oral Order" means a retrospective Order raised using the contract control and management function of the Integrated Roads Information System in response to an oral Order raised by the Director.

"Consolidated Operations Instruction" means an Operations Instruction raised by the Operating Company in order to undertake a number of Operations related to different Scheme Identifiers at the same location.

"Constructional Plant" means all appliances and things required for carrying out the Operations but does not include materials or other things intended to form or forming part of the Unit.

"Contemporary Records" means those Records to be produced by the Operating Company in accordance with the requirements of this Contract.

"Contract" has the meaning given in the Agreement.

"Contract Commencement Date" means the date notified by the Scottish Ministers notwithstanding the date or dates of execution of this Contract.

"Contract Expiry Date" means the later of:

- (i) the Initial Contract Expiry Date, and
- (ii) the date specified in the last Notice of Extension.

"Contract Termination Date" means the earlier of:

- (i) the Contract Expiry Date, and
- (ii) the date on which this Contract is terminated in terms of this Contract.

"Contract Period" means the period between the Contract Commencement Date and the expiry of the Non-Conformance Liability Period.

"Contract Price" means the sum of money set out in, or calculated in accordance with, this Contract properly payable to the Operating Company in accordance with the provisions of this Contract in respect of its performance of this Contract.

"Contract Price Fluctuation" means the index linked adjustment to the Schedule of Rates and Prices applied to payment to take account of inflation.

"Contract Personnel" means employees and workers of the Operating Company (and/or contractors and subcontractors of any tier of the Operating Company) employed or engaged in the performance of the Operations from time to time.

"Contract Personnel Information" means any information about the employment and the employment terms and conditions of Contract Personnel requested by the Scottish Ministers.

"Core Management Team" means the core management team appointed by the Operating Company or their replacements subsequently agreed under the terms of this Contract.

"Core Operations" means the Operations which are not stated as being subject to an Order.

"Core Operations Closure Date" means the date logged into the contract control and management function of the Integrated Roads Information System as the date on which all amounts for the relevant Core Operation for the preceding Financial Year have been included in a Statement and after which no further amounts will be claimed by the Operating Company.

"Crown Property" means everything included in the Unit.

"Current Index Figure" has the meaning given to it in Clause 10.7.2 of this Schedule.

"Damage to Crown Property" means any damage that reduces the lifespan, or impairs the usefulness or appearance, of anything in the Unit.

"Data Capture Device" means any portable electronic device that can be used by the Operating Company for entry and storage of data in digital form.

"Default" means:

- (i) any breach of the obligations of either party to this Contract (including but not limited to any breach of any undertaking or warranty given under or in terms of this Contract),

- (ii) any failure to perform or the negligent performance of any obligation under this Contract,
 - (iii) any breach of any Legislation, or
 - (iv) any negligence or negligent or fraudulent mis-statement or any other default,
- in all cases by either party, its employees, agents, contractors, subcontractors of all tiers or representatives.

"Defect" means any defect or fault on the Unit.

"Defects Correction Period" means the period for correction of any Defects in a Scheme, commencing on the date of completion of that Scheme and expiring on the earlier of:

- (i) the date falling 52 weeks later, and
- (ii) the Contract Termination Date.

"Defects Correction Operations" means any works to correct Defects.

"Design" means any Operations so described in and instructed to be undertaken by the Operating Company under an Order, including:

- (i) all work necessary for the preparation and completion of drawings, including carrying out all procedures and checks stipulated by this Contract to be undertaken by the Operating Company, and
- (ii) specifications and all other information,

from which the Operations or Works are executed, including the design input necessary for all maintenance activities.

"Design Element" means a part of a Design identified in an Order.

"Detailed Inspection" means the inspection referred to in Schedule 7 Part 1.

"Director" means the Director of Transport Scotland Trunk Road and Bus Operations Directorate or any other person named by the Scottish Ministers from time to time to act on behalf of the Scottish Ministers.

"Dispute" means a difference or dispute of any nature between the Scottish Ministers and the Operating Company arising out of or concerning this Contract, described in a Notice of Dispute and notified to the other Party.

"Disruption Risk Management Plan" means the document maintained by the Operating Company to record the processes and activities to manage all identified risks of disruption to the Trunk Road network through Incidents.

"Disruption Risk Site" means a site where there is a history of or potential for unplanned disruption in the form of a lane, carriageway or full road closure or some other temporary restriction to normal movement, excluding disruption due to congestion.

"Drawings" means the drawings:

- (i) prepared by the Operating Company and its Designer in pursuance of or in connection with a Design together with any subsequent modification of such drawings received by the Scottish Ministers, and
- (ii) also such other drawings as may from time to time be provided by the Scottish Ministers or the Operating Company.

"Effective Value" has the meaning given to it in Clause 10.7.2 of this Schedule.

"Electronic Copy" means a copy of any document provided or received by e-mail, internet or on a CD-ROM or DVD-ROM, in a standard software format, or a specified software format, in accordance with the provisions of this Contract in a format acceptable to, and confirmed in writing by, the Director.

"Emergency Services" means the ambulance service, police force, coast guard and fire brigade.

"Engineer" means the person consented to by the Director in accordance with Clause 4.11.2 of this Schedule.

"Estimated Bid Value" means the estimate of the value of a Scheme submitted with the Bid.

"Final Index Figure" has the meaning given to it in Clause 10.7.2 of this Schedule.

"Financial Year" means Transport Scotland's financial year, which starts on 01 April and ends on the following 31 March.

"Further Detailed Direction" means the response raised within the contract control and management function of the Integrated Roads Information System by the Director to a Further Detailed Enquiry raised by the Operating Company in respect of Orders previously issued.

"Further Detailed Enquiry" means an enquiry raised within the contract control and management function of the Integrated Roads Information System by the Operating Company to the Director in respect of Orders previously issued.

"General Inspection" has the meaning given to it in the *Design Manual for Roads and Bridges*.

"Hazard Notice" means a notice issued to the Operating Company by the Performance Audit Group identifying a situation which represents an immediate hazard requiring action by the Operating Company.

"HB" means type HB loading as defined in the *Design Manual for Roads and Bridges: BD 37/01: Loads for Highway Bridges*.

"Health and Safety Plan" means the plan prepared by virtue of the *Construction (Design and Management) Regulations 2007*.

"Historical Records" means those records held by the previous operating company for the Unit and which the previous operating company is contractually required to hand over to the Operating Company.

"Incident" means an unplanned event on or near the Unit that has given rise to, or is likely to give rise to, disruption to traffic flow, harm to the environment or harm to the safety or welfare of road users, the public, or those working on or close to the Unit.

"Incident Response" means all operational activities undertaken by the Operating Company to co-ordinate, direct and execute an effective response after notification of an Incident.

"Incident Response Operations" means all operational activities undertaken by the Operating Company to execute an effective response after notification of an Incident.

"Incident Response Plan" means a written plan containing the Operating Company's arrangements for executing its Incident Response Operations, including details of resources, roles and responsibilities and communication arrangements.

"Incident Response Resources" means personnel, equipment, supplies, facilities and other resources utilised by the Operating Company to execute its Incident Response Operations.

"Incident Support Unit" means all Operating Company's vehicle and personnel responding to Incidents occurring on the Trunk Road network outwith the Trunk Road Incident Support Service geographical coverage areas and on all Trunk Road Incident Support Service Routes as required.

"Information Acts" has the meaning given to it in Clause 19.13.1 of this Schedule.

"Information and Communication Technology System Plan" means the plan to be prepared by the Operating Company as referred to in Schedule 5 Part 2.

"Initial Contract Expiry Date" means 31 March 2018.

"Integrated Roads Information System" means the road information system used by Transport Scotland and the Welsh Government referred to in Schedule 4 Part 2.

"Intellectual Property Rights" means all intellectual property rights of any kind which may subsist or be enforceable, at present or in the future, in any part of the world, including but not limited to all forms of copyright, design, right, goodwill, know-how, moral right, performing right, service mark, trade mark, patents, domain names, database rights, trade secrets, confidential information and other similar rights or obligations, whether or not registered or able to be registered in any country, or any applications for such registered rights.

"Item Category" means the category assigned in Schedule 1, Annex 4 to any particular item in Schedule 2 Part 2 or subsequently derived that shall be used when calculating the increase or decrease in respect of Contract Price Fluctuations to amounts otherwise payable to the Operating Company in accordance with this Contract.

"Key Staff" means the key staff appointed by the Operating Company or their replacements subsequently agreed under the terms of this Contract.

"Landscape Areas" means vegetated areas of the Unit listed in the landscape inventory.

"Landscape Development Plan" means the plan to be prepared by the Operating Company as referred to in Schedule 7 Part 4.

"Lane" means a delineated running lane or a hard shoulder of a road within the Unit.

"Lane Occupation" means the occupation of a Lane by the Operating Company, in connection with the Operating Company's Operations, resulting in the Lane becoming unavailable for use by any permitted classes of vehicles.

"Lane Occupation Charge" means a charge levied for occupying a Lane under the circumstances stated in Clause 15.5 of this Schedule.

"Legislation" means any legislation as from time to time enacted, amended, extended, or re-enacted that applies in the United Kingdom, including, without prejudice to the generality of the foregoing:

- (i) any subordinate legislation,

- (ii) any legislation applying in a part of the United Kingdom only, and
- (iii) any legislative act of the European Union or the Commission of the European Community which without further enactment has legal effect in the United Kingdom.

"Lump Sum Quotation" means a fully inclusive, fixed price quotation provided by the Operating Company to the Scottish Ministers for the execution of all the Operations proposed in respect of the execution of an Order, including a detailed breakdown of resources, quantities, rates and prices.

"Management System" means the system for the management of health and safety, quality, and environment, to be provided by the Operating Company.

"Mass Action Programme" has the meaning given to it in Chapter 8 of Transport Scotland's *Strategic Road Safety Plan*.

"Mobilisation Period" means the period commencing on the Contract Commencement Date and ending at 00.01 hours on the Commencement of Service Date.

"Monitoring Indicator" means a numerical measure of service provision as stated in Schedule 5 Part 6, Annex 5.6/B.

"Mutual Aid" means the provision of assistance and resources to Operational Partners in exceptional circumstances as determined by the Director.

"National Street Gazetteer" has the meaning given to it in Schedule 7 Part 5.

"Network Operations" means a branch within Transport Scotland managed by the Director.

"Non-Conformance" means any:

- (i) Default by the Operating Company, or
- (ii) defect in Operations, including but not limited to any defect in Design or resulting from defective Design, defect resulting from defective materials or defective workmanship, failure of any part of the Operations to meet or continue to meet the provisions of this Contract, and damage, destruction or other effect consequential on any default, or
- (iii) failure, as shown by the value of a Performance Indicator, to achieve the required standard of service, or
- (iv) failure by the Operating Company to professionally ensure the adequacy of the insurances offered by a Works Contractor in respect of a Works Contract.

"Non-Conformance Liability Period" means the period for correction of any Non-Conformances, commencing on the Contract Termination Date and expiring on the date falling 52 weeks later.

"Non-Execution Adjustment" means the sum of money that the Scottish Ministers are entitled to receive from the Operating Company, in addition to the compensation, costs and expenses that the Scottish Ministers are otherwise entitled to recover in respect of Default by the Operating Company, as stated in Clause 15.4.6 of this Schedule.

"Normal Working Hours" means 0700 to 1900 hours on Working Days.

"Notice of Adjudication" has the meaning given to it in Schedule 1, Annex 1.

"Notice of Arbitration" has the meaning given to it in Clause 18.3.1 of this Schedule.

"Notice of Assignment of Rights" means a notice, given by the Operating Company to a person or organisation causing Damage to Crown Property, of the Scottish Ministers' assignment to the Operating Company of their rights against the person or organisation.

"Notice of Dispute" has the meaning given to it in Clause 18.1.1 of this Schedule.

"Notice of Extension" has the meaning given to it in Clause 6.2.2 of this Schedule.

"Notice of Non-Conformance" means a notice issued by the Performance Audit Group to the Operating Company recording an Operating Company Default.

"Observation Resulting from Inspection" means a notice issued to the Operating Company by the Performance Audit Group identifying circumstances requiring action by the Operating Company.

"Operating Company" means the person or persons, firm or firms or company or companies with whom the Scottish Ministers have completed and signed the Agreement, including the Operating Company's personal representatives, successors and permitted assignees. All references to the Operating Company are deemed to include reference to its employees, agents, subcontractors or representatives, unless the context otherwise requires.

"Operating Company Change Proposal" means any change to the Scottish Ministers' Requirements proposed by the Operating Company in accordance with Clause 14.1 of this Schedule.

"Operating Company's Representative" means the person appointed by the Operating Company pursuant to Clause 2.5.4 of this Schedule.

"Operating Company's Submission" means the Tender and all documents forming part of the Operating Company's offer, together with such modifications and additions thereto as may be agreed in writing between the parties prior to the Contract Commencement Date and included in this Contract.

"Operating Company's Hold Point" means a point incorporated in the Management System beyond which work shall not proceed until all work up to that point has been demonstrated under the Management System as complying with the requirements of this Contract.

"Operational Items" means:

- (i) any Design forming part of the Operations,
- (ii) any materials, plant or equipment forming part of the Operations and for incorporation within the Unit,
- (iii) the Unit (insofar as the Unit is within the control of the Operating Company), or
- (iv) any person on the Unit, including but not limited to users of the Unit (insofar as the Unit is within the control of the Operating Company).

"Operational Partners" means those organisations which are involved in the operation of any part of the Trunk Road network and may work in partnership with the Operating Company. Operational Partners are:

- (i) branches within Trunk Roads and Bus Operations Directorate and other Directorates in Transport Scotland and Transport Directorate,

- (ii) the Traffic Scotland Operator,
- (iii) the Performance Audit Group,
- (iv) the Police Services and the Association of Chief Police Officers (Scotland),
- (v) the Emergency Services,
- (vi) the Scottish Roads Traffic Database Operator,
- (vii) Transport Scotland's customers,
- (viii) local roads authorities,
- (ix) local authorities,
- (x) local authority emergency planning departments,
- (xi) bridge authorities,
- (xii) the Traffic Customer Care Line Service,
- (xiii) Operating Companies in adjacent units,
- (xiv) Design Build and Finance Operators in adjacent units,
- (xv) the Trunk Road Incident Support Service patrols in adjacent units,
- (xvi) the Scottish Environment Protection Agency,
- (xvii) the Highways Agency service providers,
- (xviii) the Department for Transport,
- (xix) Authorised contractors, notified to the Operating Company by the Scottish Ministers,
- (xx) Undertakers,
- (xxi) Statutory Authorities,
- (xxii) Network Rail, and
- (xxiii) any other organisation notified to the Operating Company by the Scottish Ministers.

"Operations" means the operations, activities, duties and responsibilities of the Operating Company set out in this Contract, together with such other operations, activities, duties and responsibilities of the Operating Company as may be the subject of an Order issued from time to time in accordance with the Contract.

"Operations Instruction" means the Operating Company's internal instruction to its personnel in respect of an Order.

"Order" means an instruction issued from time to time by the Scottish Ministers to the Operating Company specifying Operations to be undertaken under this Contract by the Operating Company.

"Ordered Operations" means Operations instructed by an Order.

"Overseeing Organisation" means the Director or, if waived in writing by the Director, the Operating Company.

"Part" means a part of a Schedule.

"Parties" means the Scottish Ministers and the Operating Company. (A Party is either one of them as the context dictates.)

"Payment Adjustment Factor" means a factor to be applied in the measurement of items in the Schedule of Rates and Prices as stated in Schedule 2 Part 1.

"Payment Notified Record" means the record produced by the contract control and management function of the Integrated Roads Information System to document those items paid within the payment of a monthly Statement.

"Payment Received Record" means the record raised by the Operating Company to acknowledge receipt of its monthly payment under this Contract.

"Performance Audit Group" means Halcrow Group Limited, of City Park, 368 Alexandra Parade, Glasgow G31 3AU, or its successors or assignees or any other person or persons, firm or company that the Director may from time to time appoint.

"Performance Indicator" means a numerical measure of the Operating Company's compliance with a requirement of this Contract.

"Pollution" means any pollution or contamination of any part of the Operations or the Unit or outwith the Unit in connection with the Operations or of water or land or the atmosphere and all losses, damage and bodily injury, however caused, arising from or as a consequence of such pollution.

"Possession" means planned safety arrangements which control or prevent the normal movement of rail traffic between defined locations and for a predetermined period.

"Press Transport Scotland" means the team in Transport Scotland that are responsible for the management, answering and issue of media and press enquiries on behalf of Transport Scotland.

"Principal Contractor" has the meaning given to it in the CDM Regulations.

"Principal Designer" has the meaning given to it in the CDM Regulations.

"Principal Inspection" is as defined in the *Design Manual for Roads and Bridges*, as added to and amended by Schedule 7 Part 6.

"Professional Services" means Operations undertaken by the Operating Company in accordance with Schedule 9 Series 6200.

"Project Manager" means the person consented to by the Director in accordance with Clause 4.11.2 of this Schedule.

"Quality Plan" means the quality plan to be provided by the Operating Company pursuant to Schedule 5 Part 1.

"Records" means Contemporary Records and Historical Records.

"Records Register" means a schedule of Records to be held by the Operating Company.

"Records Retention Period" means the periods referred to in Schedule 5 Part 2.

"Reference Date" means the date 42 days prior to the final Tender submission date stated in the *Invitation to Submit Final Tender*.

"Relevant Organisation" means an organisation as referred to in Clause 23.1 of this Schedule.

"Remedial Action Plan" means the plan which may be requested by the Scottish Ministers from the Operating Company to address a Non-Conformance.

"Remedial Notice" means a notice of a Default given by the Scottish Ministers to the Operating Company, stating requirements for remedial action.

"Remedial Period" means the period stipulated in a Remedial Notice for remedying the relevant Default.

"Route" means a pre-numbered section of Trunk Road within the Unit.

"Route Accident Reduction Plan" means a document containing proposals for reduction of road accidents, based upon consideration of accident patterns and rates along routes or parts of routes.

"Route Safety File" means a file containing information about a route that includes details of its overall safety performance.

"Route Safety Group" means a group, consisting of representatives from organisations with an interest in road safety (such as local authorities, police forces, Emergency Services, safety camera partnerships and others), formed to develop a sound knowledge base made up of five key components: route information and contacts; accident analysis; stakeholder and community issues; scheme programmes (safety, minor and major improvements, etc); and technical projects and initiatives.

"Safety Inspection" means the inspection referred to in Schedule 7 Part 1.

"Safety Patrol" means the patrol referred to in Schedule 7 Part 1.

"Schedule" has the meaning given in the Agreement.

"Scheme" means a discrete element of work carried out as Operations or as a Works Contract and subject to a Bid and an Order.

"Scheme Closure Date" means the date logged onto the contract control and management function of the Integrated Roads Information System on which all amounts for a Scheme have been included in a Statement and after which no further amounts will be claimed by the Operating Company.

"Scheme Completion Date" means the date logged onto the contract control and management function of the Integrated Roads Information System on which all Operations within each individual Scheme have been completed.

"Scheme Identifier" means the unique scheme identifying number allocated by the contract control and management function of the Integrated Roads Information System.

"Scottish Ministers' Hold Point" means a point notified by the Scottish Ministers at any time to the Operating Company for incorporation in the Management System, beyond which point the Operating Company is not permitted to proceed without demonstrating under its Management System to the Scottish Ministers' satisfaction that it has complied with the requirements of this Contract up to that point.

"Scottish Ministers' Requirements" means Schedules 3 to 9.

"Scottish Road Works Register" means the register of roadworks that provides the means for the Scottish Ministers and local roads authorities to meet their obligations in relation to *the New Roads and Streetworks Act 1991* and any successor register notified at any time to the Operating Company by the Scottish Ministers.

"Scottish Roads Traffic Database" means the system used to collect, validate, store and disseminate traffic count data for the Trunk Road network and limited parts of the non-trunk network.

"Scottish Roads Traffic Database Operator" means the organisation responsible for operating and maintaining the Scottish Roads Traffic Database on the Director's behalf.

"Scour Assessment" has the meaning given to it in the *Design Manual for Roads and Bridges*, as added to and amended by Schedule 7 Part 6.

"Scour Inspection" has the meaning given to it in the *Design Manual for Roads and Bridges*, as added to and amended by Schedule 7 Part 6.

"SEAS" means the Scottish Government's accounting system that is the financial ledger used by Transport Scotland.

"Severe Weather" means adverse weather conditions that disrupt, or are likely to disrupt, driving conditions and traffic movements on the Unit.

"Site" means the land or place where the work activity or part of the work activity of the Operations is executed.

"Site Operations Instruction" means a copy of an Operations Instruction issued to Operating Company personnel, or subcontractors of the Operating Company, for the carrying out of Operations.

"Site Waste Management Plan" means a plan for management, reuse, recycling and disposal of waste produced in connection with a Scheme.

"Special Inspection" is as defined in the *Design Manual for Roads and Bridges*, as added to and amended by Schedule 7 Part 6.

"Special Requirements" means the published requirements of the Relevant Organisations which are current at the time of undertaking Operations.

"Specification" means Schedule 9.

"Specified Person" means the Director, who shall be the "specified person" as defined in section 110A(6) of the *Housing Grants, Construction and Regeneration Act 1996* (as amended).

"Standard Incident Diversion Route" means existing roads designated by the Director as temporary routes for maintaining traffic around sections of the Trunk Road network temporarily closed due to roadworks, incidents, Severe Weather events or special events.

"Standard Reports" means reports generated by the contract control and management function of the Integrated Roads Information System in a fixed or variable format on a routine or ad hoc basis in accordance with the Director's specification as to period covered and level of detail.

"Statement" means the documentation provided by the Operating Company each month to support its request for payment.

"Statement of Intent" means a document prepared by the Operating Company which describes the scope of, and justification for, a Scheme.

"Statutory Authority" means an organisation constituted under statute which has duties or responsibilities which may affect or be affected by the Trunk Roads or Operations or Works on the Trunk Roads.

"Statutory Function" means any statutory function given to a Statutory Authority.

"Strategic Road Safety Unit" means the specialist accident investigation unit within Transport Scotland that manages the annual road safety programme and develops and implements a road safety strategy.

"Structure" means any:

- (i) bridge with span greater than 3.0 metres, over, under or alongside Trunk Roads,
- (ii) footbridge with span greater than 3.0 metres that carries pedestrians, cyclists or equestrians over or alongside Trunk Roads,
- (iii) culvert with span or diameter between 0.9 and 3.0 metres that conveys water, pedestrians or livestock under or alongside Trunk Roads,
- (iv) service duct that is a structure for database purposes,
- (v) underpass that allows pedestrians, cyclists, equestrians, livestock or farm vehicles to pass under a Trunk Road (such underpasses are deemed to be culverts if their span is between 0.9 and 3.0 metres),
- (vi) retaining wall constructed as a component of a Trunk Road that retains heights of material greater than 1.5 metres (ground level to ground level),
- (vii) sign or signal gantry over or adjacent to a Trunk Road, or sign or signal gantry that is the Scottish Ministers' responsibility at a specified location adjacent to a local road, supporting lighting, fixed signing, electronic signing, electrical equipment, or control equipment,
- (viii) high mast lighting over 20 metres high that supports demountable luminaires, or
- (ix) mast supporting closed circuit television equipment or other electronic equipment.

"Structures Safety Inspection" means the inspection defined in *Design Manual for Roads and Bridges Part 4 BD 63/07: Inspection of Highway Structures*, as added to and amended by Schedule 7 Part 6.

"Supervisor" means the person consented to by the Director in accordance with Clause 4.11.2 of this Schedule.

"Supplied Data" means any information, documents, designs and data supplied to the Operating Company, directly or indirectly, by or on behalf of the Scottish Ministers, whether by their consultants, agents, servants or other such personnel.

"Technical Approval" is as defined in the *Design Manual for Roads and Bridges*.

"Technical Approval Authority" is as defined in the *Design Manual for Roads and Bridges*.

"Technical Approval Schedule" is as defined in the *Design Manual for Roads and Bridges*.

"Temporary Diversion of Traffic" means:

- (i) a temporary carriageway onto which vehicular traffic is diverted from a road,
- (ii) a temporary footpath or bridleway onto which pedestrian or equestrian traffic is diverted from a road,
- (iii) a combination of (i) and (ii) or a temporary carriageway as in (i) with an associated footway or way for use of animals and equestrian traffic, or
- (iv) a temporary private means of access onto which traffic is diverted from a private means of access,

but in all cases does not include a central reserve crossover or other traffic management measures constructed to permit contraflow traffic on an existing carriageway.

"Tender" means the Operating Company's tender to and accepted by the Scottish Ministers for the management and maintenance of the Unit.

"Threshold Value" has the meaning given to it in Clause 7.2.6 of this Schedule.

"Total Order Value of Scheme" means the cumulative value of the individual Order values of Operations as contained in all Orders raised under individual Scheme Identifiers.

"Traffic Scotland Control Centre" means the location from which the operational element of the Traffic Scotland Service is provided and managed.

"Traffic Scotland Equipment" means the Scottish Ministers' intelligent transport system generally comprising of all equipment, transmission buildings located on the Trunk Road and part of the non-trunk road, associated communications equipment, computers and operator workstations operated, maintained and developed in the provision of the Traffic Scotland Service.

"Traffic Scotland Maintenance Contractor" is the company appointed by the Director to maintain the Traffic Scotland Service and notified as such to the Operating Company by the Director.

"Traffic Scotland Operator" is the company appointed by the Director to deliver the Traffic Scotland Service and notified as such to the Operating Company by the Director.

"Traffic Scotland Service" means the traffic control, network management and the distribution of information relating to the Trunk Road network provided by the Scottish Ministers.

"Transport Scotland Structures Workbank" means the scope of work defined by the Director relating to the maintenance of Structures on the Trunk Road network.

"Trunk Road" means a road as defined in the *Roads (Scotland) Act 1984* for which the Scottish Ministers are the roads authority including:

- (i) carriageways, hard shoulders, central reserves, interchanges, slip roads, connecting roads, access and service roads, roundabouts, junctions,
- (ii) lay-bys, traffic islands, police observation areas,
- (iii) cycle tracks, cycleways, footways, footpaths, pavements,
- (iv) Structures,

- (v) any associated infrastructure and amenities, including fences, barriers and restraint systems, kerbs, gullies, drainage systems outfalls and balancing ponds, grassed areas, hedges, trees, planted areas, traffic signs, traffic signals, authorised signs erected by, or for, any party other than the Scottish Ministers, road furniture, road lighting, loop detector systems, communications installations, picnic areas, environmental mitigation measures, embankments and cuttings, rock faces, coastal defences, erosion protection works, and
- (vi) any other item confirmed in writing from time to time by the Scottish Ministers.

"Trunk Road Incident Support Service" means all Operating Company's vehicle and personnel specifically designated to undertake standing patrols on defined sections of Trunk Road with the purpose of providing first line response to incidents and defects identified on the Trunk Road network.

"TUPE Regulations" means the *Transfer of Undertakings (Protection of Employment) (TUPE) Regulations 2006* and *Transfer of Undertakings (Protection of Employment) (Amendment) Regulations 2009*.

"TUPE Information" means the information listed as such in Clause 22.1.5.

"Undertaker" means "undertaker" as defined in the *New Roads and Street Works Act 1991, Section 107*.

"Undisclosed Employees" has the meaning given to it in Clause 22.1.8.

"Undisclosed Agreements" has the meaning given to it in Clause 22.1.8.

"Unit" means the group of Scottish Trunk Roads to be managed and maintained according to the provisions of this Contract.

"Updated TUPE Information" has the meaning given to it in Clause 22.1.6.

"Value Added Tax" means value added tax as provided for in the Value Added Tax Act 1994 and in supplemental legislation (whether delegated or otherwise) or in any primary or secondary legislation promulgated by the European Community, or any official body or agency of the European Community and any similar sales, consumption or turnover tax introduced in addition to the foregoing and includes the charge to tax under paragraph 6 of Schedule 9A of the Value Added Tax Act 1994.

"Value for Money Assessment" means an assessment provided to the Director as part of a Bid to demonstrate the achievement of maximum effectiveness through efficient use of resources and at minimum cost.

"Winter Service Plant" means the Operating Company's plant and equipment used to deliver the Winter Service.

"Winter Service" means the service provided by the Operating Company in accordance with Schedule 7 Part 2.

"Winter Service Patrols" means the patrols that monitor road conditions to supplement weather information and carry out precautionary or de-icing treatments to deal with conditions that may arise during the Winter Service Period.

"Winter Service Period" means each period or part of period from 01 October to 15 May.

"Winter Service Plan" means the plan prepared by the Operating Company in accordance with Schedule 7 Part 2.

"Winter Service Records" means the records to be maintained by the Operating Company in accordance with Schedule 7 Part 2.

"Winter Service Report" means the report to be prepared by the Operating Company in accordance with Schedule 7 Part 2.

"Work Code" means the code for a Scheme within a Bid, in accordance with the system stated in Schedule 4 Part 1.

"Work Series" means a group of Work Codes, in accordance with the system stated in Schedule 4 Part 1.

"Working Day" means a day (other than a Saturday or Sunday or bank holiday or public holiday) on which banks are open for business in Scotland or would be open other than for the occurrence of an industrial dispute or force majeure event.

"Works" means the "Temporary Works" and the "Permanent Works" as specified in a Works Contract except that in Schedule 9 reference to the "Works" shall, where the context so requires, be taken to be reference to the Operations.

"Works Contract" means a contract between the Scottish Ministers and a Works Contractor for execution of a Scheme or part of a Scheme.

"Works Contract Instruction" means an instruction issued by the Director to the Operating Company to procure Works Contracts and to undertake related duties as provided by this Contract.

"Works Contractor" means the contractor for a Works Contract.

"9901 Activation" means the activation of a 9901 Bid by the Operating Company.

"9901 Bid" means a bid for the additional payment claimed within a claim submission following a Claim Notification.

1.2 Interpretation

1.2.1 Words importing persons include companies, firms, partnerships, corporations and any other organisation having legal capacity.

1.2.2 Words importing the singular also include the plural and vice versa, where the context so requires.

Words importing the male also include the female and vice versa, where the context so requires.

1.2.3 Except in Schedules 2 and 9, the headings in this Contract are provided for ease of reference only and are deemed not to be part of, and not to be taken into consideration in the interpretation or construction of, this Contract.

1.2.4 All references in this Contract to "Clauses" in:

(i) Schedules 1 to 8, and Schedule 10 unless otherwise provided, are references to Clauses numbered in Schedule 1, and

(ii) Schedule 9 are, unless otherwise provided, references to Clauses numbered in Schedule 9.

1.2.5 All references in this Contract to "Schedules" are, unless otherwise provided, references to Schedules to this Contract.

1.2.6 Any reference to any Act of Parliament or Act of the Scottish Parliament shall be construed as a reference to that Act of Parliament or Act of the Scottish Parliament

as from time to time amended, extended or re-enacted and shall include a reference to any bye-laws, statutory instruments, rules, regulations and orders, notices, directions, consents or permissions made or given thereunder from time to time.

Any reference to any statutory instrument, rule, regulation, order, notice, direction, consent or permission shall be construed as a reference to that statutory instrument, rule, regulation, order, notice, direction, consent or permission as from time to time amended, extended or re-enacted.

- 1.2.7 A reference to any person or organisation includes the successors (statutory or otherwise) and assignees or successors in title of such person or organisation, irrespective of whether such succession or assignation has occurred before or after the Contract Commencement Date.
- 1.2.8 The word "cost", when used in these Conditions of Contract, means all expenditure properly incurred or to be incurred, whether on or off the Unit, including overhead costs, except as expressly stated otherwise.
- 1.2.9 Every reference in documents referred to in this Contract to:
- (i) "British Railways",
 - (ii) "British Railways Board",
 - (iii) "Railtrack",
 - (iv) "Network Rail", and
 - (v) "Railway",
- is deemed to be a reference to "Network Rail Infrastructure Limited" or their successors.
- 1.2.10 Every reference in documents referred to in this Contract to "public holiday" and "Public Holiday" is deemed to be a reference to 25 December, 26 December, 01 January and 02 January in any year.
- 1.2.11 Every reference in this contract to "day" is deemed to be a reference to a calendar day.
- 1.2.12 References within Schedule 9 and the *Design Manual for Roads and Bridges* to:
- (i) "defect" means "Defect",
 - (ii) "category (i) defect" means "Category 1 Defect", and
 - (iii) "category (ii) defect" means "Category 2 Defect",
- unless the context otherwise requires or implies.
- 1.2.13 Every reference in Schedule 2 Parts 1 and 2 to "Plant" is deemed to be a reference to Constructional Plant.
- 1.2.14 Any requirement on the Operating Company under this Contract to "consult" any firm, organisation or person shall be construed as a requirement also to allow a sufficient period for that consultee to comment on the matter in question.
- 1.2.15 Any consent or approval given by the Scottish Ministers or the Director to the Operating Company pursuant to the terms of this Contract shall not be held to relieve the Operating Company of any of its obligations under this Contract.

1.2.16 All obligations contained in this Contract are deemed to be obligations on the Operating Company unless any such obligation has been specifically stated otherwise.

2. SCOPE OF CONTRACT, OPERATING COMPANY OBLIGATIONS, CONTRACT ADMINISTRATION AND APPLICABLE LAW

2.1 Scope of Contract

2.1.1 The Operating Company acknowledges that it has not entered into this Contract in reliance on the accuracy or sufficiency of any Supplied Data. This Contract sets out the entire rights and liabilities of the Operating Company and the Scottish Ministers relating to the subject matter of this Contract and except where it may be expressly referred to or referenced herein supersedes all prior representations, understandings, agreements, and documents between or by the Operating Company and the Scottish ministers in regard to the Operations and to any other matters covered by this Contract except in respect of any fraudulent misrepresentations made by either party.

2.1.2 The Operating Company is deemed:

- (i) to have inspected and examined the Unit and its surroundings and information available in connection therewith,
- (ii) to have satisfied itself, before submitting its Tender, as to the form and nature of the Unit, the extent and nature of the work, and the materials and all other resources necessary for the completion of the Operations in accordance with the provisions of this Contract,
- (iii) to have satisfied itself, before submitting its Tender, as to the means of communication with and access to the Unit,
- (iv) to have satisfied itself, before submitting its Tender, as to the accommodation that it may require,
- (v) generally to have obtained for itself, before submitting its Tender, all necessary information as to risks, contingencies and all other circumstances that might have influenced or affected its obligations and any payment received,
- (vi) to have satisfied itself of the correctness and sufficiency of the rates and prices included in the Contract, before submitting its Tender.

2.1.3 Unless otherwise stated in this Contract, the rates and prices in this Contract cover all of the Operating Company's risks and obligations under this Contract.

2.1.4 The Scottish Ministers neither warrant nor take responsibility for the accuracy of any information in connection with the matters referred to in Clauses 2.1.1, 2.1.2 and 2.1.3 that may have been provided by, or on behalf of, the Scottish Ministers or any other source. The Operating Company is deemed not to have relied on any information referred to in Clauses 2.1.1 to 2.1.3 except to the extent that it has satisfied itself under Clause 2.1.2 as to the accuracy of such information for the purposes of the Operations.

The Scottish Ministers do not warrant that any condition or circumstance prevails at the Unit and its surroundings, whether a condition applying generally or to the particular parts or positions.

- 2.1.5 The Operating Company shall, in return for having undertaken and performed the Operations in accordance with this Contract, be paid the Contract Price.
- 2.1.6 The Operating Company shall execute all Operations with due expedition and without delay.
- 2.1.7 Subject to the other provisions of this Contract, the Operating Company shall not make any alteration in, addition to or omission from any Order issued under this Contract.
- 2.1.8 The Operating Company does not have the exclusive right to undertake work within the Unit.

2.2 Operating Company Obligations

- 2.2.1 The Operating Company shall be responsible for the acts, Defaults, omissions and negligence of its employees, agents, contractors and subcontractors (of all tiers), representatives and other persons engaged by it in any capacity whatsoever, as if they were the acts, Defaults, omissions or negligence of the Operating Company.

2.3 Operating Company Knowledge

- 2.3.1 Without limitation to its actual knowledge, the Operating Company shall for the purposes of this Contract be deemed to have such knowledge in respect of the Operations as is held by:
- (i) the Designer,
 - (ii) the Checker,
 - (iii) the Road Safety Manager, and
 - (iv) any other persons engaged by it in any capacity.

2.4 Delegation of Statutory Functions

- 2.4.1 The Director may from time to time delegate to the Operating Company any additional Statutory Functions which are allowed to be contracted out in accordance with the:
- (i) *Roads (Scotland) Act 1984*,
 - (ii) *The Secretary of State's Trunk Road Functions (Contracting Out) (Scotland) Order 1996* (Statutory Instrument 1996 No 878 (S99)) made under Section 69 of the *Deregulation and Contracting Out Act 1994*, and
 - (iii) *New Roads and Street Works Act 1991*,

subject to the Scottish Ministers giving the Operating Company not less than four weeks' prior written notice.

The Director may from time to time delete or vary the existing delegation of any Statutory Function to the Operating Company.

To the extent that such delegation, deletion or variation is in respect of any of the Statutory Functions specified in this Contract, no compensation is due or shall be paid to or by either the Scottish Ministers or the Operating Company for such addition, deletion or variation.

2.5 Arrangements for the Administration of this Contract

2.5.1 The Director is empowered to act on behalf of the Scottish Ministers in respect of all their powers and duties under this Contract. He is responsible for administering this Contract on behalf of the Scottish Ministers.

2.5.2 The Director may from time to time in writing authorise any person to carry out any duty of the Director under this Contract on behalf of the Director.

Prior notice in writing of any such authorisation shall be given by the Director to the Operating Company. Such authorisation shall continue in force until such time as the Director notifies both the Operating Company and the authorised individual in writing of its cessation.

2.5.3 If the Operating Company is dissatisfied with any Order given by a person authorised to carry out duties of the Director, the Operating Company may refer the matter in writing to the Director, who shall thereupon confirm, reverse or vary such Order in writing.

2.5.4 The Operating Company shall appoint and provide an Operating Company's Representative, who shall have full authority to act as agent of the Operating Company in relation to all matters arising out of, or in connection with, the Contract.

The Operating Company's Representative shall be appointed to act on a full-time basis as the Operating Company's representative in respect of all matters pertaining to this Contract.

The Operating Company's Representative shall be the Operating Company's principal point of contact for the Scottish Ministers, their representatives and the Core Management Team throughout the Contract Period. All communications between the Scottish Ministers and the Operating Company or any of its members shall be made through the Operating Company's Representative.

The Operating Company's Representative shall ensure that the Operating Company executes all Operations in accordance with the requirements of this Contract, and that the Management System demonstrates the fulfilment of those requirements.

2.5.5 Following the establishment of the Central Office, the Operations shall be coordinated, planned, managed and maintained by the Operating Company from the Central Office for the remainder of the Contract Period.

2.5.6 The Operating Company shall establish and maintain within the Unit such additional subordinate offices, depots, and other facilities as required to enable the Operating Company to execute the Operations.

2.5.7 The Operating Company's Representative and the Core Management Team shall be responsible to the Operating Company and shall act independently of any other part of their organisation that may be carrying out work related in any way to this Contract.

2.5.8 This Contract provides for the Performance Audit Group to audit the performance of the Operating Company and to undertake various related duties and obligations.

The Director may from time to time substitute for the existing Performance Audit Group a new person, persons, firm, or company, provided that on each such occurrence the Director shall in writing notify the Operating Company of the identity of the substitute person, persons, firm or company appointed.

The Performance Audit Group is responsible for administering specified parts of this Contract on behalf of the Scottish Ministers.

The Scottish Ministers may from time to time change the duties, responsibilities and authority of the Performance Audit Group. The Director shall notify the Operating Company in writing of any such changes at least three days before they take effect.

2.6 Assignment and Subcontracting

2.6.1 This Contract shall be personal to the Operating Company.

The Operating Company shall not assign, novate, or otherwise transfer, by any means whatsoever, any right, interest or obligation which it may have in or under this Contract without the prior written consent of the Scottish Ministers and any Default in respect of this requirement shall entitle the Scottish Ministers to terminate this Contract in accordance with the provisions of this Schedule.

2.6.2 Following the Operations Commencement Date, the Operating Company shall advertise through the Public Contracts Scotland advertising portal all new subcontracting opportunities related to the execution of this Contract that the Operating Company had not already planned to award to a particular sub-contractor or supplier when preparing its Final Tender Submission for the award of this Contract.

2.6.3 Except where otherwise provided by this Contract, the Operating Company shall not subcontract any part of the Operations without the prior written consent of the Scottish Ministers.

2.6.4 The provision of labour on a labour-only basis does not require the written consent of the Scottish Ministers under the provisions of Clause 2.6.3.

2.6.5 No assignment, subcontracting or other transfer of any duty, function, liability, obligation or other responsibility (or any part thereof) incumbent upon the Operating Company in terms of this Contract by any means whatsoever to any third party by the Operating Company shall have the effect of relieving the Operating Company of any such duty, function, liability, obligation, or responsibility (or any part thereof) owed to the Scottish Ministers in terms of this Contract, notwithstanding that the Scottish Ministers have consented to such assignment, subcontracting or other transfer and the Operating Company shall at all times be bound fully to implement this Contract.

2.6.6 The Operating Company shall provide to the Scottish Ministers, when they so request, a copy of the agreement or other document that records any permitted assignment, subcontracting, or other transfer arrangements with a third party of any of the Operations under or in terms of this Contract.

2.7 Giving of Notices and Payment of Fees

2.7.1 The Operating Company shall give all notices, take all actions, and pay all fees required to be given, taken or paid by any Legislation in relation to the execution of the Operations and by the rules and regulations of all Statutory Authorities, companies and Undertakers whose property or rights may be affected in any way by the Operations.

2.8 Legislation

2.8.1 The Operating Company shall, in undertaking and performing the Operations and all other obligations incumbent upon it under this Contract, ascertain and comply in all

respects with the provisions of all Legislation that applies to the Operations and with the rules and regulations of Statutory Authorities, companies and Undertakers.

The Operating Company shall indemnify the Scottish Ministers against all penalties and liability of every kind for breach of any Legislation or such rules and regulations.

Provided always that:

- (i) except in the case of a Design, the Operating Company is not required to indemnify the Scottish Ministers against the consequences of any such breach that is the unavoidable result of complying with any Order of the Scottish Ministers,
- (ii) where an Order is at any time found not to comply with any such Legislation, rules or regulations, the Scottish Ministers shall issue such further Order as necessary to secure compliance, and
- (iii) the Operating Company is responsible for obtaining any planning permission, consents or other permissions of any nature which may be necessary in respect of the Operations or any completed Operations undertaken under any Order.

Such obligations shall include obtaining any such permissions and consents necessary in respect of any Design and any Works Contract forming part of an Order.

2.8.2 The Operating Company shall comply with the statutory and other procedures, rules and regulations specified in this Contract, or contained in, or which form the subject of, any Order.

2.9 Scots Law to Apply

2.9.1 This Contract shall be governed by and interpreted in accordance with Scots Law. The Parties hereto hereby submit to the exclusive jurisdiction of the Scottish Courts.

2.10 Language

2.10.1 All documents to be produced for, or to be provided to, the Scottish Ministers in accordance with this Contract shall be in English.

2.10.2 All:

- (i) operating and maintenance instructions and identification labels appearing on Constructional Plant and all other written and printed matter required for the Operations, and
- (ii) notices to the public and third parties given by the Operating Company in the course of executing the Operations,

shall be in English and in such other language or languages as required by the other provisions of this Contract or ordered in writing by the Scottish Ministers.

2.11 Notices

2.11.1 Except where otherwise provided in this Contract, any document, notice or other communication required or permitted to be given or served in terms of this Contract may be given or served personally or by sending by first class recorded delivery post at or to:

- (i) in the case of the Scottish Ministers:
The Director, Trunk Road and Bus Operations
Transport Scotland
Buchanan House
8th floor
58 Port Dundas Road
Glasgow
G4 0HF
- (ii) in the case of the Operating Company, its registered office or Central Office,
- (iii) and, in the case of the Performance Audit Group:
Halcrow Group Limited
City Park
368 Alexandra Parade
Glasgow
G31 3AU
- (iv) or, in all three cases at or to such other address as last notified in writing.

2.11.2 Subject to evidence to the contrary, any document, notice or other communication (other than an Order) given or served by first class recorded delivery post in accordance with the provisions of this clause is deemed to be given or served on the second Working Day after posting.

Subject to evidence to the contrary, proof of proper addressing and posting as stated above is deemed to be proof of such giving or service.

2.11.3 Notwithstanding the other provisions of this Clause 2.11, Orders shall generally be issued by transmission through the contract control and management function of the Integrated Roads Information System and shall be deemed to have been received when the Order has so been transmitted by the Scottish Ministers to the Operating Company.

3. CONTRACT DOCUMENTS

3.1 Interpretation of Contract Documents

3.1.1 The documents forming this Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

- (i) the Agreement,
- (ii) the Conditions of Contract (Schedule 1),
- (iii) the Scottish Ministers' Requirements (Schedules 3 to 9),
- (iv) Method of Measurement and Schedule of Rates and Prices (Schedule 2),
- (v) clarifications that have not been captured elsewhere issued between 4 April 2011 (the date of issue of the invitation to participate in dialogue) and 8 February 2012 (the date of final tender submission) (Schedule 10),
- (vi) contractual documents required under the invitation to participate in dialogue and the invitation to submit final tender, including the final tender submission submitted by the Operating Company together with other

- relevant documentation and correspondence between the parties to the Agreement between 8 February 2012 (the date of final tender submission) and execution of the Agreement (Schedule 11), and
- (vii) any other documents forming part of this Contract.
- 3.1.2 In the case of any conflict between the provisions of this Contract and the provisions of British Standard EN ISO 9001, British Standard EN ISO 14001, British Standard EN ISO 27001 and Occupational Health and Safety Management Systems Specification OHSAS 18001, the provisions of this Contract shall prevail.
- 3.1.3 The Operating Company shall notify, and shall ensure and procure that all others for whom it is responsible (including the Designer, the Checker and the Road Safety Manager) notify, the Scottish Ministers of conflicts within or between documents forming this Contract.
- 3.1.4 Where there is any conflict within or between any of the documents forming the Scottish Ministers' Requirements, the Scottish Ministers shall provide an interpretation which in their opinion ensures the safest and most conservative result. The Scottish Ministers shall notify the Operating Company of that interpretation.
- 3.1.5 The Scottish Ministers shall resolve any conflict notified to them within or between the *Design Manual for Roads and Bridges* and any other document forming part of the Scottish Ministers' Requirements.
- 3.1.6 In the case of any conflict within or between any documents supplied by the Operating Company for the purposes of this Contract, the Scottish Ministers shall resolve such conflict after consultation with the Operating Company.
- 3.1.7 The Scottish Ministers shall confirm to the Operating Company in writing their decision as to any interpretation of documents or any resolution of conflict within or between documents. Any such decision shall be binding upon the Operating Company. Any consequential alteration to the Operations shall be subject to the written consent of the Scottish Ministers.
- 3.1.8 The Operating Company is deemed to have made due allowance in the rates and prices contained in this Contract for complying with the requirements of this Clause 3.1 and no financial adjustment shall be made in respect of the application of or compliance with such requirements.
- 3.2 Provision of Documents**
- 3.2.1 Following the execution of this Contract, the Scottish Ministers shall provide to the Operating Company one copy of this Contract.
- 3.2.2 The Operating Company shall submit to the Scottish Ministers and the Performance Audit Group, in the manner and at the times detailed in this Contract, all documentation and other information (including files, reports, drawings, calculations, data, and records), whether provided by the Scottish Ministers or obtained or made by or on behalf of the Operating Company, including documentation and information held as Electronic Copy.
- 3.2.3 For the purposes of this Contract, all Electronic Copies to be provided by the Operating Company to the Director for archive purposes shall be provided in both the original software format and portable document format (pdf) on DVD-ROMs.

3.3 Drawings and Information

3.3.1 The Operating Company shall provide to the Scottish Ministers such information and Drawings concerning the Operating Company's proposals in respect of any Order as are, in the Scottish Ministers' opinion, necessary for the proper execution of the Operations in accordance with this Contract. The Operating Company shall be bound by the information and Drawings so provided.

The Operating Company shall provide such information and Drawings as soon as practicable following any request or requirement to do so, and in any case at the time required in an Order or this Contract.

3.3.2 The Operating Company shall at all times keep in its Central Office at least one copy of all information and Drawings. Such information and Drawings shall be available at all times for inspection and use by any person authorised under this Contract.

4. CONTRACT OBLIGATIONS

4.1 General Obligations

4.1.1 The Operating Company shall undertake and complete all Operations in respect of the Unit in accordance with the terms of this Contract.

The Operating Company shall provide everything necessary, whether of a temporary or permanent nature, including all resources required in and for such Operations, so far as the necessity for such provision is specified in or can reasonably be inferred from any Order and this Contract.

Such resources shall include without limitation:

- (i) the provision of all personnel of appropriate level of skill, competence and where necessary holding the appropriate formal qualifications,
- (ii) the provision of all Constructional Plant,
- (iii) the provision of all materials,
- (iv) the provision of all offices, depots, stores and other such facilities, and
- (v) the provision and maintenance of all temporary traffic management arrangements.

4.1.2 The Operating Company shall immediately take such action as necessary for the:

- (i) saving of life,
- (ii) protection of property,
- (iii) safety of the Operations,
- (iv) safety of users of the Unit, and
- (v) safety and protection of the Unit.

4.1.3 During each Winter Service Period, all vehicles actively involved in maintenance and management Operations shall be fitted with winter tyres on all wheels.

4.1.4 If at any time the Scottish Ministers consider that any arrangements of the Operating Company are insufficient for the proper discharge of its obligations under this Contract, they shall in writing notify the Operating Company, explaining why such a view is held. The Operating Company shall thereupon, at its own expense, take such remedial actions as necessary.

4.1.5 The Operating Company shall provide to the Director all reasonable access, facilities, and resources to permit the Director to undertake such audits and inspections of the Operating Company's financial accounts, and other financial and cost records relating to this Contract, as the Director may consider necessary from time to time.

4.2 Operating Company Staff

4.2.1 Prior to the Commencement of Service Date, the Operating Company shall prepare a register listing each member of the Operating Company's staff who is available to carry out Professional Services. Each such member of staff shall be allocated a title as referred to in Schedule 9 Part 2, Appendix 62/1.

The Operating Company shall submit the register of Professional Services staff to the Director for written consent.

4.2.2 Prior to the Commencement of Service Date, the Operating Company shall prepare a register listing each member of the Operating Company's staff who may be utilised and paid for under the time work schedule - Series 6500 of Schedule 2 Parts 1 and 2.

Each member of staff shall be allocated a relevant title as referred to in Table 1 in Series 6500 of Schedule 2 Part 1.

4.2.3 The Operating Company shall maintain and update the two registers referred to in Clauses 4.2.2 and 4.2.3 for the duration of the Contract Period.

The registers shall show the start and end dates of the period during which each member of staff was allocated each title.

The Operating Company shall, within five Working Days of the amendment being made, submit to the Director, for written consent, any amendment to the register of Professional Services staff.

4.3 Operating Company Responsibilities

4.3.1 The Operating Company shall exercise reasonable professional skill, care and diligence in undertaking the Operations and shall secure that the Operations meet the requirements of this Contract.

4.3.2 The Operating Company is responsible for the adequacy and safety of all Design, Site Operations, Defects Correction Operations, and other activities forming part of the Operations.

4.3.3 No claim by the Operating Company is admissible on the ground that the Operating Company or any of its employees, agents, subcontractors (of any tier) or representatives relied upon any audit, inspection or supervision conducted, or any consent or approval issued, by or on behalf of the Scottish Ministers when signing any Certificate required to be provided under this Contract or when discharging any of its other obligations in accordance with this Contract.

4.3.4 The Operating Company is not entitled to rely on any such audit, inspection, supervision, consent or approval of the Scottish Ministers:

- (i) when signing any Certificate required to be provided under this Contract,
- (ii) when discharging any of its other obligations in accordance with this Contract, or

- (iii) as a justification for failure to sign any such Certificate or discharge any of its other obligations in accordance with this Contract.

4.4 Addition and Removal of Things to and from the Unit

- 4.4.1 The Operating Company shall carry out Core Operations on any additions to the Unit made during the Contract Period. There shall be no adjustment to payments under this Contract either in respect of such additions or in respect of removal of things during the Contract Period, apart from those provided for under Schedule 2, Series 6700.

4.5 Design, Design Checks and Certification

- 4.5.1 Where the requirement for a Design or a part of a Design is included in an Order, or part of an Order, the Operating Company shall undertake a Design. Such Design shall be carried out in accordance with the Scottish Ministers' Requirements.

- 4.5.2 The Operating Company shall bear responsibility for a Design as if it had carried out the whole of the Design itself, whether or not it has carried out the whole or any part of the Design itself.

If the Designer and Checker fail to agree on any matter relating to the Design or this Contract, the Operating Company shall, subject to the prior written consent of the Scottish Ministers, appoint and employ a person of appropriate professional skill expeditiously to resolve the matter.

The Director shall consent to, or object to, such proposed appointment within 14 days of being requested to do so in writing by the Operating Company.

In the event that the Director so objects to such a proposed appointment, the Operating Company shall nominate another person, the appointment being subject to the foregoing provisions of this clause.

- 4.5.3 The Operating Company shall complete, register and retain within the Central Office all Certificates (including associated data) and information (including drawings, calculations and all other associated documents) required by this Contract in respect of the Operations for which the Operating Company has produced a Design.

No part of any Site Operations in respect of a Design shall be commenced unless such completion and registration of Certificates has been effected.

The Director may require the Operating Company from time to time to provide to him and the Performance Audit Group copies of registers and other evidence of:

- (i) registration,
- (ii) Certificates (including associated data), and
- (iii) information (including drawings, calculations and all other associated documents).

- 4.5.4 Where, during the carrying out of any Operations for which the Operating Company has undertaken a Design, the Operating Company encounters anything which invalidates any of its Design assumptions, or requires amendments to its method of Site Operations in respect of such Design, it shall immediately notify the Director in writing of the matter.

As soon as practicable thereafter, the Operating Company shall submit in writing to the Director details of any such amendments proposed to be made to such Design

or Site Operations, and shall obtain an amending Order from the Director prior to making the proposed amendment. Such Order shall have no value.

The Operating Company shall provide any further information required or requested by the Director prior to, or as a condition of, any such grant of written consent before such written consent is granted.

All risks, including to all costs, time and Operations, in connection with and resulting from any such amendment to a Design or Operations pursuant to this clause shall be borne by the Operating Company.

4.5.5 To the extent that any Certificate requires the Operating Company and the Designer to certify that Operations for which the Operating Company has undertaken the Design have been constructed, completed and maintained in accordance with this Contract, the Operating Company shall in undertaking the Operations ensure and procure that:

- (i) both the Operating Company and the Designer supervise such Operations, including sampling and testing required by this Contract, in such a manner and to such extent as may be considered reasonable by the Director,
- (ii) the Designer notifies the Operating Company in writing (providing copies simultaneously to the Director and the Performance Audit Group) of any change in the Operating Company's arrangements which are necessary in the opinion of the Designer for the proper discharge of the Operating Company's Design obligations in respect of this Contract, and
- (iii) the Designer notifies the Operating Company in writing (providing copies simultaneously to the Director and the Performance Audit Group) of any sample and test which the Designer considers necessary in connection with this Contract and the Operating Company thereafter, as soon as reasonably practicable after such notification, executes any such sample, test and record and preserves in the Central Office all results thereof.

The Operating Company shall at any time make available unrestricted access to the Director and the Performance Audit Group in the Central Office for inspection or audit and, on the written request of the Director or the Performance Audit Group, provide a copy of any records to either or both parties within seven days of such request.

4.5.6 Where additional work of Design arises as the unavoidable result of any Order, the Operating Company is bound to undertake and is responsible for such additional work of Design. The provisions of this Contract concerning Design apply to any such additional work of Design.

All costs in connection with and resulting from such additional Design shall be borne by the Operating Company, where resulting from a Default by the Operating Company.

4.6 Sureties

4.6.1 The Operating Company shall, not later than 30 days prior to the Commencement of Service Date, provide a validly executed Bond and Undertaking by an insurance company or bank which shall be jointly and severally bound with the Operating Company in the sum of £1,300,000 for the due performance of this Contract under the terms of such Bond and Undertaking.

The Bond and Undertaking shall be provided by an insurance company or bank acceptable to the Scottish Ministers and shall be in the form of the Bond and Undertaking contained in and forming Schedule 1, Annex 2, or otherwise acceptable to the Scottish Ministers.

The Bond and Undertaking shall be in place until the end of the Contract Period or the settlement of the final account, whichever is the later.

Prior to preparing the execution of the Bond and Undertaking, the Operating Company shall submit the proposed Bond and Undertaking, including the name of the guarantor, for the prior written acceptance of the Scottish Ministers.

The obtaining of the Bond and Undertaking and all costs incurred thereby are the responsibility of the Operating Company.

4.7 Inspection of the Unit

4.7.1 The Operating Company shall make and keep itself familiar with the Unit.

4.8 Operations to the Satisfaction of Scottish Ministers

4.8.1 Everything to be provided by the Operating Company in respect of this Contract, including the mode, manner and speed of executing the Operations, shall be of a kind and conducted in such a manner as is to the satisfaction of the Scottish Ministers.

4.9 Setting Out

4.9.1 The Operating Company shall be responsible for:

- (i) the proper setting-out of work executed in carrying out the Operations,
- (ii) the correctness of the position, levels, dimensions and alignment of all parts of such work, and
- (iii) the provision of all necessary resources in connection therewith.

If, at any time during the Contract Period, any error appears or arises in the position, levels, dimensions or alignment of any part of such work, the Operating Company shall at its own cost rectify such error and any consequences whatsoever of such error.

Any monitoring by the Scottish Ministers of any setting-out or of any line or level shall not in any way relieve the Operating Company of its responsibility for the correctness of such setting-out or of any line or level in accordance with this Contract.

4.10 Safety and Security

4.10.1 The Operating Company shall, throughout the progress of the Operations, ensure the safety of all persons entitled to be upon the Unit (so far as such safety is under its control). Accordingly, the Operating Company shall keep the Unit (so far as the Unit is under its control) in an orderly and tidy state, in order to avoid danger to such persons.

4.10.2 The Operating Company shall, in connection with the Operations, provide and maintain, at its own cost, all lights, guards, fencing, warning signs and watching, when and where deemed necessary by the Scottish Ministers, Undertakers, any Statutory Authorities or any other authority for the protection of the Operations or for

the safety and convenience of the public and all other persons, companies, firms and other organisations entitled to be on the Unit.

4.10.3 Where the Scottish Ministers execute work themselves or employ other contractors and similar organisations to execute work on the Unit, they shall, in respect of such work:

- (i) ensure and procure that any such contractors and similar organisations ensure the safety of all persons entitled to be upon the Unit,
- (ii) ensure and procure that any such contractors and similar organisations liaise with the Operating Company in respect of their activities on the Unit, and
- (iii) keep and procure that any such contractors and similar organisations keep the Unit in an orderly and tidy state appropriate to the avoidance of danger to such persons.

4.11 Operating Company's Superintendence

4.11.1 The Operating Company shall provide all necessary superintendence during the execution of Operations and as long thereafter as required by this Contract.

Such superintendence shall be undertaken by a sufficient number of persons, all of whom shall have sufficient knowledge of the Operations to be executed (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents) for the satisfactory execution of the Operations.

4.11.2 The Operating Company shall nominate to the Director in writing, for written consent, competent and available persons of appropriate professional skill to act as the Engineer, or Project Manager and Supervisor or equivalent, in accordance with the form of Works Contract used, in all Works Contracts.

4.12 Clearance During and on Completion of Operations

4.12.1 The Operating Company shall, in the course of undertaking Operations, take all necessary measures to keep the Unit free from all Constructional Plant and vehicles not required for the Operations, surplus materials, rubbish and any obstruction to the free flow of pedestrian and vehicular traffic.

On the completion of Operations, the Operating Company shall clear away and remove from the Unit all Constructional Plant, surplus materials, rubbish, temporary works of every kind and traffic management equipment, and leave the whole of the Unit clean and in a workmanlike condition, to the satisfaction of the Scottish Ministers.

4.13 Discrimination

4.13.1 The Operating Company shall not discriminate unlawfully in any matter relating to discrimination in employment.

4.13.2 The Operating Company shall take all reasonable steps to secure that none of its contractors, agents, employees and other persons engaged by it in any capacity whatsoever in the execution of this Contract discriminates unlawfully in any matter relating to discrimination in employment.

4.14 Motorway Passes and Keys

4.14.1 In recognition of the potential danger of the environment, Operations on motorways shall generally be undertaken within the protection of traffic management arrangements.

However, in some situations, Operations off the carriageways of motorways can be undertaken safely without traffic management arrangements. In such situations, the Operating Company shall apply in advance to the Director for special authority for any persons so to work. Such authority will be given by the Scottish Ministers by the issue of a motorway pass.

The Operating Company shall take responsibility for:

- (i) training of any of its employees, and any of the employees of its subcontractors, who are to work on motorways within the Unit,
- (ii) the planning and management of any activity on such motorways, and
- (iii) the actions of such employees when working on such motorways.

All applications from the Operating Company for motorway passes shall be made on a standard proforma provided by the Director. Such requests shall specifically identify:

- (iv) the name of the person for whom the application is made,
- (v) the activity to be undertaken and the section of motorway to which it relates,
- (vi) the start and end dates of the period for which the application is made,
- (vii) the reason why the activity is being proposed without traffic management,
- (viii) how the individual shall operate when on the motorway, and
- (ix) the specific training on the health and safety risks that has been given to that person.

Motorway passes issued by the Director allow relaxation under *Motorways Traffic (Scotland) Regulations 1995* in accordance with the terms of the application and the pass. The Operating Company shall ensure and procure that no other motorway working without traffic management arrangements is undertaken.

All Operations accessed using a motorway pass shall be planned and logged. The local police control room shall be informed prior to any such Operations being undertaken.

4.14.2 Where the Operating Company requires access to unattended locked premises within the Unit, it shall apply to the Director in writing for such access. The Director shall provide keys to the Operating Company, which is thereafter responsible for their safe keeping.

Such keys shall be surrendered immediately upon written request from the Director and in any event at the Contract Termination Date. Loss of a key shall be reported immediately to the Director, to enable security precautions to be implemented.

5. ACCESS, INSPECTION PROCESS, COMPLETION OF ORDERS AND DEFECTS CORRECTION

5.1 Access and Provision of Facilities

5.1.1 The Scottish Ministers, the Performance Audit Group and any other person authorised by the Scottish Ministers (including other contractors and other third parties) shall at all times have unrestricted access to the Operations and to the Unit and to all files, documents, information and all other data produced by the Operating Company as part of, or in connection with, the execution of the Operations.

Such access shall at all times include access to the Central Office, subordinate offices, depots and workshops belonging to, or under the control of, the Operating Company and all such places where work is being prepared, materials are being manufactured or articles and machinery are being obtained for, or in connection with, the Operations.

The Operating Company shall afford every facility for, and every assistance in obtaining, such access.

5.2 Rate of Progress

5.2.1 Where, for any reason that does not entitle the Operating Company to an extension of time, the rate of progress of all or any of the Operations is at any time in the opinion of the Scottish Ministers too slow to ensure completion of the relevant Operations by the time prescribed in this Contract or any Order or by the extended time for completion referred to in this Contract, the Scottish Ministers shall so notify the Operating Company in writing.

The Operating Company shall thereupon take such measures as necessary and to which the Scottish Ministers consent to expedite progress to allow completion of those Operations by the prescribed time or extended time.

The Operating Company is not entitled to any additional payment for taking measures required under this clause.

5.3 Completion Certificates and Notification of Completion of Schemes

5.3.1 For each Scheme, the Operating Company shall, within seven days of:

- (i) completion of the whole of the Operations required for a Scheme, and
- (ii) these Operations having passed any final test required by this Contract,

issue to the Scottish Ministers a Certificate, in the form shown in Schedule 6 Part 4, stating the date on which the Operating Company has, in its opinion, completed its obligations, for that Scheme, to execute Operations covered by the relevant Order in accordance with this Contract.

5.3.2 For each Scheme, the Operating Company shall, within seven days of:

- (i) completion of the whole of the Operations required for a Scheme, and
- (ii) these Operations having passed any final test required by this Contract,

record such completion and passage of final tests within the contract control and management function of the Integrated Roads Information System.

5.4 Examination of Work before Covering Up

5.4.1 Where required in writing by the Director, the Operating Company shall ensure that no part of the Operations is covered up or put out of view without the prior written consent of the Director.

The Operating Company shall afford every opportunity to the Director to:

- (i) examine or measure any work which is about to be covered up or put out of view, and
- (ii) examine foundations and other constructed elements before permanent work is placed on them.

The Operating Company shall provide written notice to the Director whenever any such work or foundation is ready or about to be ready for such examination. On receipt of such notice, the Director shall, if he wishes to make such examination, without unreasonable delay and in writing notify the Operating Company accordingly, and make such examination.

5.4.2 The Operating Company shall, when required by the Scottish Ministers under any Order:

- (i) uncover any part or parts of the Operations,
- (ii) make openings in or through the such part or parts,
- (iii) carry out searches, inspections, investigations, tests and trials, and
- (iv) reinstate and make good such part or parts to the satisfaction of the Scottish Ministers.

If any such part or parts have been covered up or put out of view and are found to have been executed in accordance with this Contract, the cost of such uncovering, making of openings, carrying out searches, inspections, investigations, tests or trials, reinstating and making good shall be borne by the Scottish Ministers but in all other cases all such costs shall be borne by the Operating Company.

5.5 Operating Company to Determine Cause of Defects

5.5.1 The Operating Company shall, where required by the Director under any Order during the Mobilisation Period, Annual Periods, and Non-Conformance Liability Period, execute such searches, inspections, investigations, tests and trials as necessary to determine the cause of any Defect and to carry out such Defects Correction Operations as required by the Scottish Ministers.

Where such Defect is a Non-Conformance, the cost of all such searches, inspections, investigations, tests, trials and Defects Correction Operations shall be borne by the Operating Company.

Where such Defect is not a Non-Conformance, the value of all such searches, inspections, investigations, tests, trials and Defects Correction Operations executed by the Operating Company shall be ascertained in accordance with Clause 10 of this Schedule for payment to the Operating Company in accordance with this Contract.

5.6 Urgent Repairs

5.6.1 Where at any time, in the opinion of the Scottish Ministers, any Defects Correction Operations or other action, work or repair needs to be urgently executed in connection with or arising out of the Operations (including where the Scottish

Ministers deem there to be any immediate threat to public safety), the Scottish Ministers are entitled, subject to the provisions of Clause 5.6.4, to execute themselves, or to employ other persons to execute, such Defects Correction Operations or other action, work or repair.

- 5.6.2 The Scottish Ministers shall, as soon as reasonably practicable following their decision to exercise their entitlement under Clause 5.6.1, notify the Operating Company in writing of such decision and provide details within any such notice of the Defects Correction Operations or other action, work or repair to be executed or which has already been executed by them, or on their behalf.

Any such notice shall not be deemed to be a Remedial Notice, whether or not the requirement for such Defects Correction Operations or other action, work or repair occurs because of the Default of the Operating Company.

- 5.6.3 Where the Scottish Ministers execute, or arrange for the execution of, Defects Correction Operations or other action, work or repair under Clause 5.6.1 or Clause 5.6.5 and in their opinion the Operating Company was liable to execute it at its own expense, all costs and expenses properly incurred by the Scottish Ministers in the execution shall be, at the option of the Scottish Ministers, either:

- (i) paid by the Operating Company to the Scottish Ministers on demand, or
- (ii) deducted by the Scottish Ministers from any amounts due, or which may become due, to the Operating Company under this Contract.

The Scottish Ministers shall notify the Operating Company in writing of such costs and expenses prior to any such demand or deduction by them.

- 5.6.4 The Scottish Ministers are only entitled to execute, or employ other persons to execute, any Defects Correction Operations or other action, work or repair required under Clause 5.6.1 if in their opinion (acting reasonably in all the circumstances) the Operating Company is unable or unwilling to execute the same within the timescales which the Scottish Ministers deem to be necessary in the particular circumstances.

- 5.6.5 If, in the event of circumstances arising to which the provisions of Clause 5.6.1 apply, the Scottish Ministers either do not opt to, or pursuant to Clause 5.6.4 are not entitled to, exercise their option in terms of Clause 5.6.1 to execute or employ other persons to execute any Defects Correction Operations or other action, work or repair required, they shall issue an Order to the Operating Company requiring the Operating Company to execute and complete the Defects Correction Operations or other action, work or repair required.

In respect of any such Order, the Operating Company is not entitled to any extension of time under Clause 8. If the Operating Company does not execute and complete the Defects Correction Operations or other action, work or repair required in terms of such Order, the Scottish Ministers are entitled, without further notice to the Operating Company, themselves to execute, or employ other persons to execute, such Defects Correction Operations, other action, work, or repair, and to demand of, or deduct from amounts due to the Operating Company, the whole costs and expenses incurred by the Scottish Ministers in terms of Clause 5.6.3.

5.7 Removal of Improper Work and Materials

- 5.7.1 The Scottish Ministers may, during the progress of the Operations, issue an Order requiring:

- (i) the removal from the Unit within such time or times as may be specified in such Order of any materials that, in the opinion of the Scottish Ministers, are not in accordance with this Contract and the substitution of proper and suitable materials for such non-compliant materials, or
- (ii) the removal and proper re-execution (notwithstanding any previous test thereof or interim payment therefore) of any work that, in the opinion of the Scottish Ministers, in respect of materials or workmanship is not in accordance with this Contract.

All costs in relation to such Orders shall be borne by the Operating Company.

5.7.2 The failure of the Scottish Ministers, or any person acting for them pursuant to the other provisions of this Contract, to reject or disapprove any work or materials shall not prejudice the power of the Scottish Ministers, or any person acting for them, subsequently to reject or disapprove such work or materials.

5.8 Correction of Defects

5.8.1 To ensure that the Operations executed under the Contract are in the condition required by this Contract (fair wear and tear excepted) at the expiry of the relevant Defects Correction Period, or as soon as practicable thereafter, the Operating Company shall:

- (i) search for, undertake inspections and investigations concerning, and record, in accordance with the Scottish Ministers' Requirements, all Defects that occur during the relevant Defects Correction Period and execute and record all Defects Correction Operations in accordance with the other provisions of this Contract,
- (ii) execute and record, in accordance with the Scottish Ministers' Requirements, any Defects Correction Operations that, within 14 days after expiration of the relevant Defects Correction Period, are required of, and notified to, the Operating Company in writing by the Scottish Ministers,
- (iii) maintain, in accordance with the Scottish Ministers' Requirements, records and registers of all the activities referred to in this clause, and
- (iv) provide from time to time, to the Director and the Performance Audit Group, copies of such records and registers, within 21 days of any request.

5.8.2 Defects Correction Operations shall be carried out by the Operating Company at its own expense where, in the opinion of the Scottish Ministers, the relevant Defect is a Non-Conformance.

Otherwise, the value of such Defects Correction Operations shall be ascertained and paid for as if they were additional work forming the requirements of an Order.

5.8.3 Where the Operating Company fails to execute any necessary Defects Correction Operations required by this Contract or the Scottish Ministers, the Scottish Ministers are entitled to:

- (i) execute such Defects Correction Operations themselves, or
- (ii) arrange for the execution of the Defects Correction Operations by other contractors.

Where such Defects Correction Operations relate to a Non-Conformance, the Scottish Ministers are entitled, at their option, either to:

- (iii) recover from the Operating Company the costs incurred by the Scottish Ministers in connection with execution of the Defects Correction Operations, or
- (iv) deduct the amount of these costs from any amounts due, or that become due, to the Operating Company from the Scottish Ministers.

5.9 Defects Correction Certificate

- 5.9.1 Upon the expiry of each Defects Correction Period, and when all relevant Defects Correction Operations referred to in Clause 5.5.1 and Clauses 5.8.1 to 5.8.3 have been completed, the Operating Company shall issue to the Scottish Ministers, in the form shown in Schedule 6 Part 4, a Certificate stating the date on which the Operating Company has, in its opinion, completed its obligations to execute Defects Correction Operations in connection with the Operations covered by the relevant Order in accordance with this Contract.
- 5.9.2 The issue of this Certificate does not relieve either the Operating Company or the Scottish Ministers from any liability arising out of, or in any way connected with, the performance of their respective obligations under this Contract.

5.10 Non-Conformance Liability Period

- 5.10.1 During the Non-Conformance Liability Period, the Scottish Ministers may make their own investigations and employ their own workmen and other contractors to execute searches, inspections and investigations for all Non-Conformances, and may execute any necessary Defects Correction Operations themselves or arrange for execution by other contractors. The execution of such searches, inspections and investigations shall be audited by the Performance Audit Group or such other person or body as authorised from time to time by the Scottish Ministers.
- 5.10.2 The Scottish Ministers shall give at least 14 days' notice in writing to the Operating Company, stating the intended dates, times and locations of any such searches, inspections or investigations. The Operating Company has the right to witness these searches, inspections or investigations.
- 5.10.3 Within a reasonable period after the date of completion of each such search, inspection or investigation, the Scottish Ministers shall deliver to the Operating Company a list of any resulting necessary Defects Correction Operations.
- 5.10.4 The value of the work undertaken in searching, inspecting, or investigating for Non-Conformances and undertaking any Defects Correction Operations under Clauses 5.10.1 to 5.10.3 shall be ascertained by the Scottish Ministers as if, for such purpose, such work had been the requirements of an Order issued under Clause 5.5.1.
- 5.10.5 The Scottish Ministers shall provide the valuation of such work to the Operating Company within seven days of completion of any such Defects Correction Operations. The amounts of all such valuations are recoverable by the Scottish Ministers from the Operating Company under this Contract.

5.11 Removal of Operating Company's Employees

- 5.11.1 The Operating Company shall employ or cause to be employed only persons who are careful, skilled and experienced in their several trades and callings.

The Scottish Ministers are entitled to object to, and may at any time require the Operating Company to remove from the execution of the Operations by written

notice to such effect to the Operating Company, any person employed thereon who, in the opinion of the Scottish Ministers, has:

- (i) misconducted himself,
- (ii) been incompetent,
- (iii) been negligent in the performance of his duties,
- (iv) failed to conform with any particular provisions with regard to safety set out in this Contract, or
- (v) persisted in any conduct that is prejudicial to safety or health.

5.11.2 The Operating Company:

- (i) shall immediately comply with any such requirement (or, where appropriate, ensure and procure that any contractor, subcontractor (of any tier) of, or supplier (of any tier) to the Operating Company complies with such requirement), and
- (ii) shall ensure and procure that such person is not again engaged by the Operating Company (or any contractor, subcontractor (of any tier) of, or supplier (of any tier) to the Operating Company) in any capacity upon the Unit or in respect of the Operations, without the prior written permission of the Scottish Ministers.

5.11.3 In the event of any such removal, the Operating Company shall not delay, suspend, terminate or withhold the performance of any of its obligations under this Contract and shall remain bound to implement its obligations in full.

5.11.4 The Scottish Ministers shall have no liability to the Operating Company in respect of any costs or expenses incurred by the Operating Company as a result of any requirements of the Scottish Ministers pursuant to Clauses 5.11.1 to 5.11.3.

5.12 Responsibility for Loss or Damage

5.12.1 The Operating Company shall be liable for any loss or damage to the Operations occasioned by it in the course of any activity carried out by it for the purpose of completing any outstanding Operations or of complying with its obligations under Clauses 5.5 and 5.8.

SCHEDULE 1

PART 2 – PERIODS AND PROGRAMMES

6. PERIODS AND PROGRAMMES

6.1 Mobilisation Period

6.1.1 During the Mobilisation Period the Operating Company shall:

- (i) acquire the capacity to execute the Operations in accordance with the provisions of this Contract and of any issued Orders, and
- (ii) carry out the Mobilisation Period requirements of this Contract.

6.1.2 The Scottish Ministers are entitled to issue Orders to the Operating Company during the Mobilisation Period.

Any Orders issued prior to the availability of the contract control and management function of the Integrated Roads Information System shall be:

- (i) issued in writing independently of the contract control and management function of the Integrated Roads Information System, and
- (ii) subsequently transmitted to the Operating Company by the Director via the contract control and management function of the Integrated Roads Information System after it becomes operational.

6.1.3 The Operating Company shall not later than 60 days prior to the Commencement of Service Date establish within the geographical area served by the Unit, at the locations required by this Contract:

- (i) the temporary central office,
- (ii) all subordinate offices, depots and other facilities necessary to allow the Operating Company to execute Operations under this Contract, and
- (iii) a Core Management Team,

all in terms of this Contract.

6.2 Execution of Operations

6.2.1 The Operating Company shall execute the Operations from the Contract Commencement Date until the Contract Termination Date.

The Operating Company shall from 00.00 hours on the Commencement of Service Date until 00.00 hours on the day after the Contract Termination Date take full responsibility for:

- (i) the care of the Unit,
- (ii) the care of the Operations, and
- (iii) the safety of all persons entitled to be upon the Unit (so far as such safety is within the control of the Operating Company).

6.2.2 The Scottish Ministers may at their discretion extend the period of this Contract beyond the Initial Contract Expiry Date, to a later Contract Expiry Date, by a period or periods as stated below, up to a total extension not exceeding five years, by giving written notice to the Operating Company.

The first such period of extension shall be of two years' duration. Subsequent periods of extension shall each be of one year's duration.

Such a notice shall be termed a "Notice of Extension".

Where the Scottish Ministers wish to exercise their discretion to extend the period of this Contract, they shall issue a Notice of Extension in writing to the Operating Company:

- (i) no later than 24 months before the Initial Contract Expiry Date, or
- (ii) if the period of this Contract has already been extended by the giving of a Notice of Extension in accordance with this clause, no later than 24 months before the Contract Expiry Date,

specifying within such Notice of Extension the period by which this Contract is extended.

- 6.2.3 The Operating Company may at its option waive the requirements stated in Clause 6.2.2 for 24 months' notice.

6.3 Preparation of Programmes

- 6.3.1 The Operating Company shall prepare programmes for the Operations and submit them to the Scottish Ministers in accordance with the other requirements of this Contract.

6.4 Revision of Programmes

- 6.4.1 If at any time the Scottish Ministers consider that the actual progress of any part of the Operations does not comply with any programmes, times, or dates forming part of any Order or of any requirement of this Contract, the Scottish Ministers shall issue an Order to the Operating Company requiring it to produce a revised programme or times showing the modification to the original programme or times necessary to ensure the completion of the Operations in accordance with such programmes or times.

Any costs associated with such revisions to programme or times shall be borne by the Operating Company.

6.5 Methods

- 6.5.1 Where required by the Scottish Ministers, the Operating Company shall submit, at such times as the Scottish Ministers may require, all information pertaining to the proposed methods for execution of the Operations.

Any such submission shall be sufficiently detailed to enable the Scottish Ministers to assess whether the proposed methods are adequate for execution of the Operations in accordance with this Contract.

6.6 Scottish Ministers' Consent

- 6.6.1 Within a reasonable period after receipt of any submission in accordance with Clause 6.5.1, the Scottish Ministers shall notify the Operating Company in writing whether or not they consent to the Operating Company's proposed methods for the execution of the Operations.

6.6.2 In the event that the Scottish Ministers do not consent to any such proposed methods, they shall:

- (i) with their notice withholding consent, notify the Operating Company of the respects in which (in the opinion of the Scottish Ministers) the proposed methods fail to meet the requirements of this Contract, and
- (ii) subsequently issue an Order to the Operating Company to make such changes in the methods as may be necessary to meet the Scottish Ministers' Requirements and to obtain their consent.

The costs for executing any such Order shall be borne by the Operating Company.

SCHEDULE 1

PART 3 – ORDERS, EXTENSIONS OF TIME, MEASUREMENT AND PAYMENT PROVISIONS

7. BIDS, SCHEMES, ORDERS AND THRESHOLD VALUES

7.1 General

- 7.1.1 Subject to the other provisions of this Contract, including but not limited to Clauses 7.1.1 to 7.3.4, Bids shall also comply with the requirements of Schedule 4 Part 1.
- 7.1.2 Bids shall be in the form specified by the Scottish Ministers within this Contract and, when ordered by the Scottish Ministers, in accordance with the Order to which they relate.
- 7.1.3 Bids shall be valued in accordance with Clause 10.1 of this Contract, and provided irrespective of the value of work involved and the Threshold Values given in this Contract.
- 7.1.4 Bids shall remain open for acceptance by the Scottish Ministers for 63 days from the date of receipt of the Bid by the Scottish Ministers.
- 7.1.5 The Scottish Ministers may issue an Order to the Operating Company requiring the Operating Company to provide a Bid for Operations under consideration but not yet ordered. The Bid shall be provided within the time period given in the Order or when no time period is given in an Order, the Bid shall be submitted within 28 days.

7.2 Orders, Schemes, Threshold Values, Bids

- 7.2.1 The Scottish Ministers may from time to time during the Contract Period issue Orders to the Operating Company under this Contract.

Such Orders shall relate to the Unit and may include, without prejudice to the generality of the following:

- (i) executing work,
 - (ii) making additions, omissions, substitutions, alterations or changes in quality, form, character, timing or kind, relative to those referred to in the Scottish Ministers' Requirements,
 - (iii) making additions, omissions, substitutions, alterations or changes to the extent of the Unit,
 - (iv) making changes to the Scottish Ministers' Requirements pursuant to Clause 14.1,
 - (v) executing Non-Conformance Operations,
 - (vi) entering into a contract with a third party (or parties) for the execution of work or of supply, and
 - (vii) executing such other Operations, activities, duties and responsibilities by the Operating Company as the Scottish Ministers may require to place on the Operating Company.
- 7.2.2 Subject to the other provisions of this Contract, for any Scheme with an Estimated Bid Value of not more than £5,000,000, the Scottish Ministers may from time to time

issue Order(s) to the Operating Company to execute Operations and the Operating Company shall execute such Operations for any such Scheme.

Subject to the other provisions of this Contract, Operations for any such Scheme may include any operations, activities, duties and responsibilities in connection with the management and maintenance of the Trunk Road network as the Scottish Ministers may at their discretion place on the Operating Company.

7.2.3 For Schemes with an Estimated Bid Value of less than £350,000, following an Order from the Scottish Ministers, the Operating Company may undertake the ordered Operations without competitive tendering. Operations undertaken without competitive tendering will be valued according to the principles in Clause 10.1.

7.2.4 For Schemes with an Estimated Bid Value of more than £350,000 and less than £5,000,000, the Scottish Ministers may proceed with one of the following procurement options:

- (i) issue an Order or Orders to the Operating Company to undertake the works, which will be valued according to the principles in Clause 10.1, or
- (ii) issue an Order to the Operating Company to provide Professional Services and/or undertake all work necessary for procurement of the works by the Scottish Ministers under a Works Contract, or
- (iii) issue an Order to the Operating Company to provide all assistance to third parties to enable the Scottish Ministers to procure the Scheme using third parties.

Where a Scheme is to be procured by a Works Contract under Clause 7.2.4 (iii), the Operating Company, in addition to its other obligations under the Contract, shall if so ordered:

- (iv) assist the Director to undertake a pre-qualification process,
- (v) prepare all necessary tender documentation, and
- (vi) undertake the role of Engineer or equivalent role(s), according to the form of contract used, during the construction stage.

7.2.5 For Schemes with an Estimated Bid Value of more than £5,000,000 the Scottish Ministers at their discretion may:

- (i) order the Operating Company to provide Professional Services necessary for a subsequent Works Contract procured by the Scottish Ministers,
- (ii) order the Operating Company to undertake the work as Operations,
- (iii) procure the Scheme or similar works under separate contracts with others,
- (iv) not proceed with the Scheme.

7.2.6 The values given in Clauses 7.2.2, 7.2.3, 7.2.4 and 7.2.5 above are Threshold Values which may be revised from time to time by the Scottish Ministers.

7.2.7 The Scottish Ministers may at their discretion issue Order(s) that combine individual Schemes, or combine individual Schemes with potential individual Schemes, or combine potential individual Schemes.

Where individual schemes are combined into a new single Scheme and their combined Estimated Bid Value falls within the Threshold Values stated in Clause 7.2.3 or 7.2.4, the Scottish Ministers may proceed in accordance with Clause 7.2.3

or 7.2.4 as appropriate for the single Scheme. The Operating Company shall execute Operations for the single Scheme in compliance with the Orders of the Scottish Ministers.

7.2.8 The Scottish Ministers may, at their discretion, issue Order(s) for the Operating Company to execute Operations, activities, duties and responsibilities in any other part of the Scottish Trunk Road network outside the boundary of the Unit.

Such operations, activities, duties and responsibilities outside the Unit are likely to be ordered at and require execution at little or no notice by the Operating Company and such Operations may require:

- (i) resources to be provided within the timescale stated in the Order by the Operating Company, and
- (ii) immediate diversion of part of the Operating Company's existing resources employed elsewhere in the Unit.

For the purposes of this clause and operation of the Contract, all such operations, activities and responsibilities which are the subject of an Order under this clause shall be deemed to be Operations.

7.2.9 Unless subject to an Order, the Operating Company shall not be permitted to undertake the work when the Estimated Bid Value of a Scheme exceeds the higher Threshold Value stated in Clause 7.2.4. The Scottish Ministers shall within 28 days of the date of receipt of a Bid notify the Operating Company in writing of the actions proposed, with respect to such Scheme.

7.2.10 The Scottish Ministers may, at their discretion, issue Order(s) pursuant to the other provisions of this Contract for the Operating Company to execute any or all of the following:

- (i) feasibility studies,
- (ii) technical investigations including but not limited to further investigations as defined in the *Design Manual for Roads and Bridges*,
- (iii) Structures assessments, and
- (iv) Design,

for any such Operations activities duties and responsibilities that shall be the subject of a separate competitive tender as referred to in Clause 7.2.4 (ii).

7.2.11 In consideration of the issue of any potential Order for any Scheme in accordance with the provisions of Clause 7.2.1, the Scottish Ministers, at their discretion, may decide that:

- (i) if a potential Order for any Scheme contains any rate (or rates) contained in Schedule 2 Part 2, and
 - (ii) the potential Order does not give value for money to the Scottish Ministers,
- the Scottish Ministers may instruct the Operations, activities, duties and responsibilities associated with such Order to be executed in accordance with the provisions of Clauses 7.2.4 (ii) and 7.2.4 (iii) irrespective of the value of any such Scheme or potential Scheme.

7.2.12 Subject to the other provisions of this Contract, any Order may be issued via the contract control and management function of the Integrated Roads Information

System, in writing, or in exceptional circumstances orally, subject to the requirements of Schedule 4 Part 1.

Any such oral Order shall be followed up by the Operating Company submitting a Bid within two Working Days.

- 7.2.13 The Scottish Ministers may, subject to agreement with the Operating Company, Order Schemes as a Lump Sum Quotation. The Lump Sum Quotation shall be derived from the applicable Schedule of Rates items adjusted for Contract Price Fluctuations at the estimated time of Scheme execution.

7.3 Commencement and Completion of Schemes and Times of Working

- 7.3.1 Within any Order the Scottish Ministers may specify for any Scheme:

- (i) the date for commencement of all or any part of the Operations,
- (ii) the time or date for completion of all or any part of the Operations, or
- (iii) the time or date for commencement or completion of all or any part of the Works,

required to be undertaken by the Operating Company or the Works Contractor as relevant under any such Order.

- 7.3.2 The Operating Company on receipt of any Order shall proceed with the Operations with due expedition and without delay in accordance with the Order and this Contract.

- 7.3.3 Each part of the Operations for any Scheme shall be completed within the time or date for completion stated in each Order (or such extended time or date as may be allowed under Clause 8.1 in respect of such part of the Operations).

- 7.3.4 Operations for any Scheme shall be undertaken on whatever days and at whatever time or times of day as shall be permitted under this Contract taking account of any restrictions specified in the Scottish Ministers' Requirements or exceptionally on such other days or other time or times of day as may be specified in any Order for any such Scheme.

7.4 Cancellation of Orders

- 7.4.1 The Scottish Ministers at their discretion may cancel any Order, or part of an Order by issuing a written notice of cancellation. On receipt of a notice of cancellation, the Operating Company shall take all possible steps to terminate, at the earliest possible date and on the best possible terms, any commitments and liabilities it has entered into, or incurred for the purposes of carrying out its obligations under the relevant Order or cancelled part of the Order.

- 7.4.2 Following cancellation of an Order, or part of the work within an Order, the Scottish Ministers will pay the Operating Company the following amounts:

- (i) any amount due for completed work assessed in accordance with the Contract,
- (ii) the cost of equipment and materials purchased and accepted by the Operating Company for the Order and not included in the work and in respect of which equipment and materials the Operating Company demonstrates to the reasonable satisfaction of the Scottish Ministers that title will pass to the Scottish Ministers upon payment. Payment will only be

- made for equipment and materials that cannot be used for other Operations ordered at the time of, or within one month of, the notice of cancellation,
- (iii) other costs reasonably and directly incurred in the expectation of completing the whole of the Order,
 - (iv) the cost of removing plant, equipment and surplus materials which were properly on Site for the purposes of carrying out the Order, from the relevant Site,
 - (v) an allowance for overheads and profit calculated by applying the percentages stated in Schedule 2 Part 2 Series 6900 as follows:
 - (a) to costs stated in Clauses 7.4.2 (ii) and (iii), the percentage adjustment stated in Series 6900 items 03.002 and 03.003, and
 - (b) to costs stated in Clause 7.4.2 (iv), the percentage adjustment stated in Series 6900 item 03.003,
 - (vi) any amounts retained by the Scottish Ministers in respect of the cancelled Order, subject to there being no Defects and uncorrected Non-Conformances in respect of work already completed for the Order.

The Operating Company shall include details of any amounts it considers due for payment under this Clause 7.4.2 in the Statements submitted in accordance with Clause 10.3.

Subject to proper substantiation by the Operating Company, the Scottish Ministers shall pay to the Operating Company the amount which, in the opinion of the Scottish Ministers on the basis of such a Statement, shall be due to the Operating Company pursuant to this Clause 7.4.2 following the timings and procedures given in Clause 10.3.

All amounts considered due for payment must be included in Statements within three months of the notice of cancellation. Amounts notified to the Scottish Ministers in later Statements will be not be eligible for payment unless prior agreement by the Scottish Ministers is given within two months of the notice of cancellation.

8. EXTENSION OF TIME PROVISIONS

8.1 Extension of Time for Completion of Operations for any Scheme within an Order

8.1.1 Where for any Scheme, or part of a Scheme identified within an Order (other than an Order issued pursuant to Clause 5.6.5), any cause of delay occurs which is referred to in this Contract, exceptional adverse weather conditions or other special circumstances which delays Operations, the Operating Company shall be entitled to an extension of time for completion of the Operations within the Order.

Where any of such events occur which in the opinion of the Operating Company (acting reasonably) entitle the Operating Company to an extension of time for the completion of any such Operations or a Scheme or part of any such Scheme identified within an Order, the Operating Company shall within seven days after the cause of the delay notify the Scottish Ministers that a delay has occurred and state the timing and reason for such delay. Within 14 days of the cause of the delay or as soon thereafter as shall be reasonable in the circumstances, the Operating Company shall deliver to the Scottish Ministers full and detailed particulars of any

claim for extension of time to which it may consider itself entitled in order that such claim may be considered by the Scottish Ministers.

- 8.1.2 After receipt of full and detailed particulars of the extension of time claim from the Operating Company the Scottish Ministers shall as soon as practicable in the circumstances grant in a notice in writing to the Operating Company the extension of time (if any) to which they consider the Operating Company shall be entitled for the completion of the said Operations or any such Scheme or part of any such Scheme within the Order concerned.

Where the Scottish Ministers do not consider that any extension of time is due to the Operating Company in respect of the said Operations or any such Scheme or part of any such Scheme within the Order concerned, the Scottish Ministers shall as soon as practicable in the circumstances notify the Operating Company accordingly.

- 8.1.3 Any extended time for completion granted under Clause 8.1.2:

- (i) shall not extend beyond the Contract Termination Date, and
- (ii) shall not entitle the Operating Company to any additional payment under this Contract,

and there shall be no affect on the value of the said Scheme within the Order and the Order concerned.

9. MEASUREMENT PROVISIONS

9.1 Measurement

- 9.1.1 Any error in description in Schedule 2 Parts 1 and 2 or omission therefrom shall not vitiate this Contract nor release the Operating Company from the execution of the whole or any part of the Operations according to the relevant Order and the Scottish Ministers' Requirements, or any of its other obligations or liabilities under this Contract.

Subject to the other provisions of this Contract, the Scottish Ministers shall correct any such error or omission. If as a result of such a correction the Operating Company believes that a new rate or price should be used, the Operating Company shall follow the procedures given in Schedule 4 Part 1.

Notwithstanding the foregoing, there shall be no rectification of any errors, omissions, or wrong estimates in the rates or prices inserted by the Operating Company in the Schedule of Rates and Prices in Schedule 2 Part 2.

- 9.1.2 Except where any statement or general or detailed description of the work for the Operations contained in Schedule 1 or Schedule 2 expressly shows to the contrary, quantities shall be deemed to be measurable and measurements shall be made according to the procedure set forth in Schedule 2 Part 1, notwithstanding any general or local custom.

9.2 Measurement of Operations Executed

- 9.2.1 Subject to the other provisions of this Contract, the Operating Company shall measure and value the Operations executed in accordance with this Contract.

- 9.2.2 If the Scottish Ministers require any part of the Operations to be measured by themselves or by the Performance Audit Group, they shall give not less than five days' notice to the Operating Company who shall attend and assist in making such

measurement and shall provide all particulars required by either the Scottish Ministers or the Performance Audit Group.

Where the Operating Company does not for any reason attend, then the measurement made by or on behalf of the Scottish Ministers shall be taken to be the correct measurement of such Operations.

9.2.3 Orders placed following an acceptance of a Lump Sum Quotation are not remeasurable.

10. VALUATION AND PAYMENT PROVISIONS

10.1 Valuation of Operations and Orders

10.1.1 The value of the Operating Company's Operations shall be determined by the following five principles in descending order of consideration for determination namely:

(i) No value. Where any Order requires the Operating Company to rectify or remedy any Operating Company Default, or consequence of any Operating Company Default, the Order shall be valued as having no value.

(ii) Remeasured and valued in accordance with the applicable rates and prices in Series:

- (a) 100 to 700,
- (b) 1100 to 1500,
- (c) 1700,
- (d) 2000,
- (e) 2300 to 2400,
- (f) 3000,
- (g) 3300,
- (h) 5000,
- (i) 6100 to 6500,
- (j) 6700 to 6800, and
- (k) 7000,

of Schedule 2, adjusted in accordance with the provisions of Clause 10.7.

(iii) where in the opinion of the Scottish Ministers the rates and prices in Series:

- (a) 100 to 700,
- (b) 1100 to 1500,
- (c) 1700,
- (d) 2000,
- (e) 2300 to 2400,
- (f) 3000,
- (g) 3300,
- (h) 5000,

- (i) 6100 to 6500,
- (j) 6700 to 6800, and
- (k) 7000,

of Schedule 2 do not apply, then by remeasurement and valuation using rates or prices deduced from the appropriate rates or prices in Series:

- (l) 100 to 700,
- (m) 1100 to 1500,
- (n) 1700,
- (o) 2000,
- (p) 2300 to 2400,
- (q) 3000,
- (r) 3300,
- (s) 5000,
- (t) 6100 to 6400, and
- (u) 6700 to 6800,

of Schedule 2, so far as shall be reasonable to do so and adjusted in accordance with the provisions of Clause 10.7.

- (iv) If the Scottish Ministers accept a Lump Sum Quotation submitted by the Operating Company for work, and have issued an Order for that work which states that the work is to be valued at the amount of the corresponding Lump Sum Quotation, the Order is valued accordingly. The value of the Order shall not be changed if the assumptions upon which the Lump Sum Quotation is based are shown by recorded information to have been wrong.
- (v) Where in the opinion of the Scottish Ministers none of the principles in Clauses 10.1.1 (i) to (v) apply, then by measurement and valuation in accordance with fair rates and prices in Series 6900 of Schedule 2.

10.1.2 Where the Scottish Ministers require the Operating Company to pay for supplementary services or payment of accounts, the Scottish Ministers may issue an Order for such Operations whereby all or any part of such an Order to pay for supplementary services or payment of accounts shall be valued in accordance with the applicable rates and prices in Schedule 2 Series 6500 and/or Series 7000.

10.1.3 For any Operations executed on the basis of Series 6200 and Series 6500 of Schedule 2, the Operating Company shall for such Operations produce and retain:

- (i) daily records of the hours worked by each employee,
- (ii) a verifiable register of the annual salaries of all employees engaged in such Operations,
- (iii) daily records showing the hours worked by Constructional Plant and the quantities of materials used in such Operations,
- (iv) invoices for materials used in such Operations, and
- (v) for works executed by supplementary service contractors, ensure that such supplementary service contractors produce and retain daily records of the

hours worked by each of its employees and shall provide a copy of such at any time to the Operating Company.

All such information, records, registers and all other like information referred to in this Clause 10.1.3 shall be retained and maintained in the Central Office during the Contract Period for inspection or audit at any time by the Scottish Ministers or the Performance Audit Group.

- 10.1.4 Notwithstanding the provisions of Clauses 10.1.1 to 10.1.3, the Scottish Ministers shall in exceptional circumstances and at their discretion be entitled to value Operations by any of the principles contained within the provisions of Clauses 10.1.1 to 10.1.3, providing the method of valuation is contained within the relevant Order. The provisions of this clause may not be used to value Operations for which a valuation can be correctly made under Clause 10.1.1 (ii) using existing rates and prices contained in Schedule 2 Part 2.
- 10.1.5 If requested in writing by the Scottish Ministers, the Operating Company shall provide to the Scottish Ministers such information as may be necessary to satisfy the Scottish Ministers in respect of any amount to be paid or to subsequently verify any payment previously made by the Scottish Ministers under the other provisions of this Contract.
- 10.1.6 For any part of the Operations executed in accordance with the provisions of Clause 7.2.1 (vi), the Operating Company shall, subject to the other provisions of this Contract, be reimbursed in respect of the price payable by it to the sub-contractor or third party or supplier after the deduction of any discount, rebate or allowance to which the Operating Company shall be entitled (whether at that time or subsequently) with the addition of the applicable Operating Company's Percentage Adjustment. The Operating Company's Percentage Adjustment shall be applied after discounts or rebates have been deducted.
- Any payment is subject to the Scottish Ministers being satisfied that the price payable to such sub-contractor or third party or supplier is fair and reasonable in all the circumstances.
- 10.1.7 The value of any Order shall not be determined in accordance with the rates and prices in Series 6500 unless the Scottish Ministers have notified the Operating Company of such method of valuation as part of the Order or have notified the Operating Company of such method of valuation in writing prior to such Operations commencing.
- 10.1.8 Subject to any other provisions of this Contract, the amount paid to the Operating Company for executing Operations during the Contract Period shall be the value of Operations determined in accordance with the applicable rates and prices in this Clause 10.1.

10.2 Payments to Sub-Contractors

- 10.2.1 Before making any payment under Clauses 10.3 the Scottish Ministers shall be entitled to receive from the Operating Company reasonable proof that all sums (less contractual deductions including but not limited to retentions provided for in the sub-contract) included in previous payments for the Operations provided by any sub-contractors of the Operating Company have been paid to such sub-contractors or discharged by the Operating Company.

In the absence of such proof, unless the Operating Company:

- (i) provides written details to the Scottish Ministers of any reasonable cause it may have for withholding, paying less or refusing to make such payment, and
- (ii) provides written proof to the Scottish Ministers that it has so notified in writing any such sub-contractor,

the Scottish Ministers shall be entitled to pay direct to any sub-contractor all payments (less contractual deductions including but not limited to retentions provided for in the sub-contract) which the Operating Company has failed to make to sub-contractors of the Operating Company.

10.2.2 The Scottish Ministers shall be entitled to deduct by way of retention or set-off the amount so paid by the Scottish Ministers from any sums due or which become due from the Scottish Ministers to the Operating Company.

10.3 Payments under this Contract

10.3.1 Subject to the other provisions of this Contract and or unless otherwise agreed in writing by the Scottish Ministers, the Operating Company shall submit the first Statement to the Scottish Ministers between the eighth and twelfth day of the first calendar month following the Commencement of Service Date and thereafter within 14 days after the end of each calendar month. Each Statement shall be in such form as may be prescribed in the Scottish Ministers' Requirements, shall set out the sum that the Operating Company considers will become due on the payment due date for that Statement and the basis on which that sum is calculated and show the actual value of the Operations executed up to the end of the calendar month in question and shall contain the following information:

- (i) the amounts to which the Operating Company considers itself entitled in connection with all other matters for which provision is made under this Contract separately identified for each Order,
- (ii) subject to compliance with Clause 10.3.2 below, the value of materials delivered to the Unit but not incorporated into the works,
- (iii) the amounts paid to date for each Order,
- (iv) the amount now considered due for payment for each Order,
- (v) the amounts paid to date for Core Operations separately identified for each Work Code,
- (vi) the amount now considered due for payment for Core Operations separately identified for each Work Code,
- (vii) deductions for retention,
- (viii) any other deductions made in accordance with this Contract,
- (ix) any amount under Clause 7.4.2, and
- (x) summary totals for all Orders under the above headings.

10.3.2 For payment of goods or materials included in Clause 10.3.1 (ii) above, the Statement shall include a list of any such goods or materials and their value that have not yet been delivered to the Unit, but of which the property has vested in the Scottish Ministers pursuant to Clauses 11.2.1 to 11.2.6. The property of goods and

materials delivered to the Unit must be vested in the Scottish Ministers to qualify for payment.

10.3.3 Within any Statement, the Operating Company shall only include items in respect of which:

- (i) all supporting measurement records are lodged within the contract control and management function of the Integrated Roads Information System,
- (ii) all inspection and testing stipulated in the relevant inspection and test plan has been completed,
- (iii) all results of such inspection and testing show that the work is fully compliant with the requirements of this Contract,
- (iv) all records of such inspection and testing are lodged within the contract control and management function of the Integrated Roads Information System,
- (v) rates and prices contained in Schedule 2, and
- (vi) rates and prices fixed or determined by the Director subsequent to the Contract Commencement Date and added to the contract control and management function of the Integrated Roads Information System.

10.3.4 Subject to the provisions of Clause 10.3.1, payment for the provision of:

- (i) the Management System and Quality Plan as consented to in writing by the Scottish Ministers, and
- (ii) the contract control and management function of the Integrated Roads Information System,

will only be made on first acceptance of same by the Scottish Ministers.

10.3.5 Within 28 days of the date of delivery of the Operating Company's Statement to the Scottish Ministers in accordance with Clause 10.3.1, the Scottish Ministers shall pay to the Operating Company the amount which, in the opinion of the Scottish Ministers on the basis of such Statement, shall be due to the Operating Company pursuant to Clause 10.3.1 less a retention as provided for in Clause 10.3.10.

10.3.6 The Scottish Ministers shall not be bound to make a payment for a sum less than £50,000 in payment against any Statement during any Annual Period.

10.3.7 The date on which a payment becomes due under this Clause 10.3 shall be 16 days after submission of the Statement in accordance with the provisions of Clauses 10.3.1 to 10.3.3 ("payment due date"), with the final date for payment being 28 days after the date of delivery of the Operating Company's monthly statement under Clause 10.3.1.

Not later than five days after the payment due date under this Clause 10.3.7 the Scottish Ministers or the Specified Person shall give a notice ("payment notice") to the Operating Company which payment notice shall, in respect of the relevant Statement, specify the sum that the Scottish Ministers or the Specified Person considers to have been due at the payment due date and the basis on which that sum has been calculated ("the notified sum"). It is immaterial that the notified sum may be zero.

Not later than one day before the final date for payment under this Clause 10.3.7 the Scottish Ministers or Specified Person may give a notice to the Operating Company

of the Scottish Ministers' intention to pay less than the notified sum ("pay less notice"). The pay less notice shall set out the sum due on the date the notice is served and the basis on which that sum is calculated. It is immaterial that the sum set out as due in the pay less notice may be zero.

The payment notice and the pay less notice are separate notices and shall not be combined.

Subject to any pay less notice given under this Clause 10.3.7, the Scottish Ministers shall, no later than the final date for payment, pay the Operating Company the notified sum.

10.3.8 Any additional payments sought under Clause 10.8 shall be listed separately against each Order and submitted at the same time as the Statement. Any such listing on a Statement is not a notification meeting the requirement of Clause 10.8.2.

10.3.9 Within 64 weeks of the Contract Termination Date, the Operating Company shall issue to the Scottish Ministers a Statement which in their opinion is the final value of the Operations executed under this Contract. The Statement shall set out the sum that the Operating Company considers will become due on the payment due date for that Statement and the basis on which that sum is calculated and show:

- (i) all amounts previously paid by the Scottish Ministers under this Contract,
- (ii) the amount of retention (if any) held by the Scottish Ministers,
- (iii) the value (if any) of any Non-Conformance Operations executed by the Scottish Ministers pursuant to Clauses 5.8.1 to 5.8.3,
- (iv) all sums due to the Scottish Ministers from the Operating Company to which the Scottish Ministers are entitled under this Contract, and
- (v) the balance (if any) due by the Scottish Ministers to the Operating Company or by the Operating Company to the Scottish Ministers as the case may be. Such balance shall, subject to the other provisions of this Contract, be paid to or by the Operating Company as the case may require.

The date on which payment becomes due shall be the date of notification in writing to the Scottish Ministers of the Statement by the Operating Company under this Clause 10.3.9 ("payment due date").

Not later than five days after the payment due date with under this Clause 10.3.9 the party by whom the balance is payable ("paying party") shall give a notice ("payment notice") to the other party which payment notice shall, in respect of the Statement, specify the sum that the paying party considers to have been due at the payment due date and the basis on which that sum has been calculated ("the notified sum"). It is immaterial the notified sum may be zero.

The final date for payment either to or by the Operating Company shall be the date falling 28 days following the date of such notification.

Not later than one day before the final date for payment under this Clause 10.3.9 the paying party may give a notice to the other party of its intention to pay less than the notified sum ("pay less notice"). The pay less notice shall set out the sum due on the date the notice is served and the basis on which that sum is calculated. It is immaterial that the sum set out as due in the pay less notice may be zero.

The Statement and the pay less notice are separate notices and shall not be combined.

Subject to any pay less notice given under this Clause 10.3.9, the paying party shall, no later than the final date for payment, pay the other party the notified sum.

10.3.10 Subject to the other provisions of this Contract, no retention shall be made pursuant to Clause 10.3.3 in respect of Operations.

However, where the Operating Company fails to deliver the Bond and Undertaking to the Scottish Ministers by the due date referred to in Clause 4.6.1, or where the Bond and Undertaking is not acceptable to the Scottish Ministers, the Scottish Ministers shall immediately accumulate a retention fund in their favour in lieu of the provisions of the Bond and Undertaking from any amount due to the Operating Company on and after the said date. The total of the retention fund accumulated shall not exceed £1,300,000.

Any such fund retained pursuant to this Clause 10.3.11 shall not be released until either:

- (i) the Operating Company provides the Bond and Undertaking pursuant to Clause 4.6.1, or
- (ii) if no Bond and Undertaking is provided, the later of the end of the Contract Period and the settlement of the final account pursuant to Clause 10.3.9.

Subject to the provisions of Clauses 10.3.10 and 10.3.11, the said retention fund referred to in this Clause 10.3.10 shall be retained from the Operating Company for the same period of time as that which would have been required from the guarantor under the Bond and Undertaking or until such time as the Operating Company provides a Bond and Undertaking in the terms set out in Clause 4.6.1 and that such Bond and Undertaking is acceptable to the Scottish Ministers.

Notwithstanding the other provisions of this Contract, the Operating Company shall not receive any further payments from the Scottish Ministers until such time as the aggregate payments due to the Operating Company under the other provisions of this Contract exceed the amount of the said retention fund retained by the Operating Company under this Clause 10.3.10.

Such retention fund held by the Scottish Ministers shall be used by the Scottish Ministers as if it was the sum of money referred to within the Bond and Undertaking and shall be drawn from by the Scottish Ministers in the event of every circumstance described within the terms of the Bond and Undertaking that would have required the guarantor of the Bond and Undertaking to pay money to the Scottish Ministers.

Within fourteen days of the:

- (iii) Scottish Ministers having received a proper and acceptable Bond and Undertaking pursuant to Clause 4.6.1, or
- (iv) issue to the Operating Company of the final value of the Operations pursuant to Clause 10.3.9,

and subject to the other provisions of this Contract, the Scottish Ministers shall pay any remaining balance of the retention fund to the Operating Company.

10.3.11 If the Scottish Ministers fail to make payment to the Operating Company in accordance with Clause 10.3.5 or payment (if any) in accordance with Clause 10.3.4 or if the Operating Company fails to make a payment (if any) to the Scottish Ministers in accordance with Clause 10.3.4, the party in Default shall pay to the other interest upon any payment overdue at a rate per annum equivalent to three

per cent above the Base Lending Rate. Interest shall be calculated daily and compounded annually on 31 March.

In the event of any variation in the said Base Lending Rate being announced whilst such payment remains overdue, the interest payable by the party in Default of payment to the other shall be correspondingly varied from the date of each change in Base Lending Rate.

Notwithstanding any other provision of this Contract, a payment due to be made by the one party to the other shall only be overdue for the purposes of this Clause 10.3.11 where such payment has not been made prior to the final date for such payment.

If the Operating Company fails to provide the Bond and Undertaking to the Scottish Ministers in terms of Clause 4.6.1 or where the Bond and Undertaking is not acceptable to the Scottish Ministers by the due date under that clause then any payment due to the Operating Company by the Scottish Ministers pursuant to the provisions of Clause 10.3, but is retained in a retention fund in lieu of an acceptable Bond and Undertaking under Clause 10.3.10, shall not be construed as being a late payment for the purposes of Clause 10.3.11.

10.3.12 Without prejudice to the other provisions of this Contract, the Scottish Ministers may, by means of a pay less notice under Clause 10.3.7 or Clause 10.3.9 (as appropriate), deduct from any payment due to the Operating Company the value of any part of the Operations with which they are dissatisfied and for that purpose (or for any other reason which in their opinion may seem proper) may deduct, correct or modify any sum previously paid by them to the Operating Company.

10.3.13 Payment by the Scottish Ministers of any sum due to the Operating Company shall be without prejudice to any rights that the Scottish Ministers may have against the Operating Company.

Such payment shall not constitute or be deemed to constitute any admission by the Scottish Ministers as to the performance by the Operating Company of any of its obligations under this Contract.

10.3.14 The Operating Company shall, from the Contract Commencement Date until the Contract Termination Date (howsoever arising), keep and maintain until the later of five years after the Contract Termination Date or five years after the final date of the final payment of any sums due to the Operating Company under this Contract have been made by the Scottish Ministers:

- (i) financial accounts and records of all expenditures incurred and payments received in executing the Operations,
- (ii) the contract control and management function of the Integrated Roads Information System, and
- (iii) all data entered on, or generated by, the contract control and management function of the Integrated Roads Information System,

all to the satisfaction of the Scottish Ministers.

10.3.15 On request, the Operating Company shall allow and permit the Scottish Ministers, any auditors of the Scottish Ministers or any other organisation or body which may from time to time have right and cause to audit the Scottish Ministers accounts, and

the Performance Audit Group, at any time during the period referred to in Clause 10.3.14:

- (i) inspect all such books of account and records as referred to in Clause 10.3.14, and
- (ii) have unrestricted access to the contract control and management function of the Integrated Roads Information System.

The Operating Company shall provide such further explanation in writing as may be required in relation to any matter arising out of or in connection with any such:

- (iii) inspection of such account and records, and
- (iv) unrestricted access to the contract control and management function of the Integrated Roads Information System,

as the Scottish Ministers, any auditor or the Performance Audit Group may require.

10.3.16 Nothing contained in this Clause 10.3 shall relieve the Operating Company of any of its obligations under this Contract.

10.3.17 If the Scottish Ministers fail to pay the Operating Company in full by the final date for payment as required by this Contract and the failure continues for 14 days after the Operating Company has given notice to the Scottish Ministers of his intention to suspend the performance of any or all his obligations under this Contract and the ground or grounds on which it is intended to suspend performance, the Operating Company may suspend such performance until payment is made in full. Where the right conferred by this Clause 10.3.17 is exercised, the Scottish Ministers shall be liable to pay the Operating Company a reasonable amount in respect of costs and expenses reasonably incurred by the Operating Company as a result of the exercise of the right.

10.4 Prompt Payment

10.4.1 Any sub-contract for Site Operations entered into by the Operating Company shall provide for timely payment of the sub-contractor on terms comparable to those detailed in Clause 15 of the *Civil Engineering Contractors Association Form of Sub-Contract for Use in Conjunction with the ICE Conditions of Contract 5th Edition* ('The Blue Form') dated October 1998, but subject always to the following modifications:

- (i) in sub-clause (3)(a), delete the words 'or otherwise as agreed',
- (ii) delete sub-clause (3)(b)(iv) in its entirety and replace by 'Not Used',
- (iii) in sub-clause (3)(c) line 1 delete "(iv)",
- (iv) in sub-clause (3)(f) line 2 delete the words "or in the event of payment being withheld pursuant to sub-clause 15(3)(b)(iv)",
- (v) delete sub-clause (3)(g).

10.4.2 For any other sub-contract for any part of the Operations, the Operating Company shall pay its sub-contractors within 30 days of the receipt by the Operating Company of a valid demand for payment.

10.5 Overpayment

10.5.1 Where payment has been made for any Statement and it is found that the payment includes any amount that is in excess of that to which the Operating Company is

entitled, the Operating Company shall deduct from the next Statement that it submits to the Scottish Ministers:

- (i) the difference between that amount and the due amount, and
- (ii) interest upon that difference, at the rate stated in Clause 10.3, calculated from the date of that payment until the date of repayment.

10.6 Money Recoverable under other Contracts

10.6.1 Wherever under this Contract any sum of money shall be recoverable from or payable by the Operating Company, without prejudice to the other provisions of this Contract and in addition to any other right or remedy that the Scottish Ministers may have, such sum may be deducted from or reduce the value of the amount of any sum or sums then due or which at any time thereafter may become due to the Operating Company under this Contract, or under any other contract with:

- (i) the Scottish Ministers,
 - (ii) any department,
 - (iii) office,
 - (iv) agency,
 - (v) authority, or
 - (vi) other such like organisations,
- of the Crown.

10.7 Contract Price Fluctuations

10.7.1 The amount payable by the Scottish Ministers to the Operating Company in any payment under this Contract (other than amounts due under this clause) shall only be increased or decreased in accordance with the provisions of Clause 10.7 to where there shall be any changes in the *Bulletin of Indices "Civil Engineering Formula - 1990 Series" and "Structural Steelwork Formula – 1990 Series"* published by the Building Cost Information Services (BICS). These are monthly indices used in conjunction with the Formula Methods of adjusting building, specialist engineering and civil engineering contracts to allow for changes in the costs of labour, plant and materials. Any adjustments arising from application of these indices are the Contract Price Fluctuation (CPF) amounts. Schedule 1, Annex 4 details the proportion of indices applicable to item categories as well as the CPF Item Category assigned for each type of work carried out under this Contract.

The net total of such increases and decreases shall be given effect to in determining any sums payable to the Operating Company.

10.7.2 For the purpose of this Contract:

- (i) Final Index Figure means any Index Figure appropriate to Clause 10.7.1 not qualified in the said Bulletin as provisional,
- (ii) Base Index Figure means the appropriate Final Index Figure applicable to the date 42 days prior to the latest date for the return of tenders, and
- (iii) Current Index Figure means the appropriate Final Index Figure to be applied to any payment made or due to be made by the Scottish Ministers pursuant to Clause 10.3 and shall be the appropriate Final Index Figure applicable to the date 42 days prior to the last day of the period to which the

payment relates. For any payments made after the earlier of the Contract Termination Date or Contract Expiry Date, the Current Index Figure shall be the appropriate Final Index Figure applicable to the date 42 days prior to the earlier of the Contract Termination Date or Contract Expiry Date. The Effective Value in respect of the whole or any part (for each Item Category) shall be the difference between:

- (a) the amounts in the appropriate categories given in Schedule 1, Annex 4 to which Contract Price Fluctuation applies and that in the opinion of the Scottish Minister, is due to the Operating Company either under Clause 10.3.1 (i), or in the case of the final payment, the amount (if any) due to the Operating Company under Clause 10.3.9 (but in each case before deducting sums previously paid on account), less any amounts for other items based on actual cost or current prices and any sums for increases or decreases in the Contract Price under this Clause 10.7, and
- (b) the amount calculated in accordance with Clause 10.7.2 (iii) (a) and included in the last preceding interim payment made by the Scottish Ministers in accordance with Clauses 10.3.1 to 10.3.10,

provided that in the case of the first payment, the Effective Value shall be the amount calculated in accordance with Clause 10.7.2 (iii) (a).

10.7.3 Any increase or decrease in the amounts otherwise payable under Clause 10.3 for items in each Item Category pursuant to Clause 10.7.2 shall be calculated by multiplying the Effective Value by a price fluctuation factor.

This shall be the net sum of the products obtained by multiplying each of the proportions given in Schedule 1, Annex 4 by a fraction, the numerator of which is the relevant Current Index Figure minus the relevant Base Index Figure and the denominator of which shall be the relevant Base Index Figure.

Where in Schedule 1, Annex 4 there is no Item Category assigned to a particular item in Schedule 2 Part 2, such item shall not be subject to adjustment in accordance with the provisions of Clause 10.7.

10.7.4 Provisional Index Figures in the bulletin referred to in Clause 10.7.1 may be used for the provisional adjustment of interim valuations but such adjustments shall be subsequently recalculated on the basis of the corresponding Final Index Figures.

10.7.5 Contract Price Fluctuation adjustment under Clause 10.7.1 shall not apply to any settled amounts arising from the settlement of disputes under Clause 18.

10.7.6 Contract Price Fluctuation adjustment under Clause 10.7.1 shall not apply to any adjustments to the Contract Price made under Clause 21.1 of this Schedule.

10.7.7 This Clause 10.7 shall not apply when valuing Orders based on Lump Sum Quotations.

10.8 Additional Payments and Claims

10.8.1 Where the Operating Company considers that the items within the Schedule of Rates and Prices are not applicable to the Operations undertaken or to be undertaken and considers that additional payment should be made, it shall:

- (i) comply with the requirements in Schedule 4 Part 1, and

- (ii) keep such Contemporary Records as may be necessary to substantiate any claim.

For the purposes of this clause, a new rate or price is one which is:

- (iii) neither described in Schedule 2 part 2,
- (iv) nor fixed nor determined by the Scottish Ministers subsequent to the Contract Commencement Date.

10.8.2 Where the Operating Company considers that any other additional payment should be made, or if the Operating Company is not satisfied with the rates fixed by the Scottish Ministers in accordance with Schedule 4 Part 1, the Operating Company shall:

- (i) submit a Claim Notification to the Scottish Ministers, and
- (ii) keep such Contemporary Records as may be necessary to substantiate any claim.

The Claim Notification shall be submitted in the format shown in Annex 6 of this Part and shall be given as soon as is practicable and not later than 28 days after the Operating Company became aware, or should have become aware, of the event or circumstance.

If the Operating Company fails to submit a Claim Notification within such period of 28 days, the Operating Company shall not be entitled to additional payment and the Scottish Ministers shall be discharged from all liability in connection with the claim.

10.8.3 A Claim Notification shall be sent separately from any other communication.

10.8.4 Within 91 days of the Claim Notification, or such other period agreed in writing by the Scottish Ministers, the Operating Company shall submit to the Scottish Ministers a full and detailed claim which includes all supporting information and a justification of its entitlement to the additional payment and the amount considered due. Compliance in full by the Operating Company with the terms of this Clause 10.8.4 shall be a condition precedent to the payment of any claim for additional payment.

10.8.5 On receipt of the detailed claim, supporting information and justification of the additional payment considered due, together with any other information subsequently requested and received within the timescales given by the Scottish Ministers, the Scottish Ministers shall review and discuss the submissions with the Operating Company.

Within the later of 182 days of the Claim Notification or 42 days of the latest date for receipt of information specified by the Scottish Ministers, the Scottish Ministers shall state what (if any) additional payment they consider is due or to be paid in accordance with the Contract on completion of the relevant Operations and notify the Operating Company accordingly. Any such additional payment shall become due 16 days after the date of the Scottish Ministers notification pursuant to this Clause 10.8.5 with the final date for payment being 28 days after the date of the Scottish Ministers notification pursuant to this Clause 10.8.5.

10.8.6 The additional payment (if any) notified will be in the form of determined rates and prices and corresponding quantities. Alternatively payments may be stated as lump sums.

The notification shall also include the item descriptions for the new rates, prices and lump sums. Unless the item description specifically states otherwise, the new rates and prices will be applicable for Operations anywhere in the Unit.

The notification shall be accompanied by full supporting particulars demonstrating the reasoning behind the Scottish Ministers' determination of the contract provisions.

- 10.8.7 Each Party shall give effect to the notification unless and until it is revised under Clause 18 of this Schedule.
- 10.8.8 The Scottish Ministers may upon receipt of a Claim Notification instruct the Operating Company to keep such Contemporary Records or further Contemporary Records as the case may be as are reasonable and may be material to the claim. The Operating Company shall keep such Records and shall permit the Scottish Ministers to inspect all Records kept pursuant to this clause and shall supply the Scottish Ministers with copies thereof as and when they shall so instruct.
- 10.8.9 Any instruction given under this Clause 10.8 is not an admission of liability by the Scottish Ministers.
- 10.8.10 The requirements of this clause are in addition to those of any other clauses which may apply to a claim. If the Operating Company fails to comply with this Clause 10.8 or any other clause relating to any claim then any additional payment shall take account of the extent (if any) to which failure has prevented or prejudiced proper investigation of the claim, unless the claim is excluded under the last paragraph of Clause 10.8.2.
- 10.8.11 If the Scottish Ministers do not make the notification required by Clause 10.8.5, within the timescales stated, the Operating Company may notify a Dispute using the procedures given in Clause 18 of this Schedule.

10.9 Valuation of Claims

- 10.9.1 Any additional payment due shall be determined by the Scottish Ministers in accordance with the following principles, in the following order of application, to individual elements of work contained within the claim:
- (i) where work is of the same character and carried out under similar conditions to items within the contract control and management function of the Integrated Roads Information System, by using rates and prices contained in Schedule 2 Part 2 or rates and prices fixed or determined subsequent to the Contract Commencement Date,
 - (ii) where work is not of a similar character or not carried out under similar conditions the rates and prices contained in Schedule 2 Part 2 or rates and prices fixed or determined subsequent to the Contract Commencement Date shall be used as a basis for valuation of the amount due as far as is reasonable,
 - (iii) where there are no items contained in Schedule 2 Part 2 or rates and prices fixed or determined subsequent to the Contract Commencement Date to form the basis for valuation, by a fair valuation.

Series 6500 in Schedule 2 Part 2 may only be used in the valuation of the amount due if an Order so states or the Scottish Ministers notifies the Operating Company in writing before Operations commence.

10.10 On-Account Payments

10.10.1 Normally the Operating Company will not be entitled to any on-account payment of any disputed amounts prior to the fixing or determination of rates and prices by the Scottish Ministers.

10.10.2 The Operating Company will not be entitled to interest on any claimed amounts between the date of completion of the relevant Operations and the date of determination by the Scottish Ministers.

10.11 Scheme Completion Date and Scheme Closure Date

10.11.1 Not later than 56 days after the Scheme Completion Date the Operating Company shall enter the Scheme Closure Date within the contract control and management function of the Integrated Roads Information System.

By entering a Scheme Closure Date in the contract control and management function of the Integrated Roads Information System, the Operating Company certifies that:

- (i) the payment claimed for any such Scheme is the final and conclusive payment claimed, and
- (ii) subject to the provisions of Clause 10.3.12, no further payment of whatsoever nature will be claimed in respect of or in connection with the Scheme, and
- (iii) any such final and conclusive payment claimed for such Scheme:
 - (a) is based on accurate final quantities (where applicable),
 - (b) has full supporting documentation, and
 - (c) has been properly claimed in accordance with this Contract.

10.11.2 If at any time subsequent to the Scheme Closure Date the Scottish Ministers reasonably believes that the basis of the final and conclusive payment claimed or paid may be incorrect, he may, after notifying the Operating Company, open up and review the final Scheme value due or paid by the Scottish Ministers.

10.11.3 For Core Operations, the Operating Company shall enter a Core Operation Closure Date for each of the Core Operations within 14 days of the end of the Financial Year.

By entering a Core Operation Closure Date in the contract control and management function of the Integrated Roads Information System, the Operating Company certifies that:

- (i) the payment claimed for the Core Operation for the preceding Financial Year is the final and conclusive payment claimed,
- (ii) subject to the provisions of Clause 10.3.12, no further payment of whatsoever nature will be claimed in respect of or in connection with the Core Operation, and
- (iii) any such final and conclusive payment claimed for such Core Operation:
 - (a) has full supporting documentation, and
 - (b) has been properly claimed in accordance with this Contract.

- 10.11.4 If at any time subsequent to the Core Operation Closure Date the Scottish Ministers reasonably believe that the basis of the final and conclusive payment claimed or paid may be incorrect, the Scottish Ministers may, after notifying the Operating Company, open up and review the final annual Core Operation value due or paid by the Scottish Ministers.
- 10.11.5 The Scottish Ministers shall be entitled at any time to recover from the Operating Company as a debt under this Contract any value that has been incorrectly claimed by the Operating Company and, subject to the other provisions of this Contract, the Scottish Ministers may deduct this debt from any payments due to the Operating Company.
- 10.11.6 Interest shall be paid by the Operating Company in accordance with Clause 10.3.11 on any incorrectly claimed amounts.
- 10.11.7 If the Operating Company does not enter either a Scheme Closure Date or a Core Operations Closure Date into the contract control and management function of the Integrated Roads Information System within the prescribed period, the closure dates shall be 56 days or 14 days respectively after the Scheme Completion Date or end of the Financial Year in which the Core Operations in question were undertaken. In these circumstances:
- (i) the final payment claimed shall be that recorded in the contract control and management function of the Integrated Roads Information System on the Closure Date and shall not be changed by the Operating Company after that date, and
 - (ii) the Scottish Ministers are not obliged to consider any supporting documentation submitted by the Operating Company after the Closure Date in their assessment of the final Scheme value.

11. PROPERTY IN MATERIALS AND PLANT AND VESTING OF GOODS AND MATERIALS AND CARE OF PROPERTY BELONGING TO THE SCOTTISH MINISTERS

11.1 Property in Materials and Plant

- 11.1.1 For the purpose of Clauses 11.1.1 to 11.1.9 inclusive:
- (i) the expression "Plant" shall mean any Constructional Plant, plant, equipment, temporary works materials and equipment, appliances and things required for carrying out Operations but excluding any vehicles engaged solely in transporting any labour, Constructional Plant, plant, equipment or materials to or from the Unit. "Plant" does not include things intended to form, or forming, part of the Unit, and
 - (ii) the expression "agreement for hire" excludes any agreement for hire purchase.
- 11.1.2 All Plant, goods and materials owned by the Operating Company or by any company in which the Operating Company has a controlling interest shall, when on the Unit or being used for the execution of the Operations, be deemed to be the property of the Scottish Ministers.
- 11.1.3 In the event of a forfeiture and with a view to securing the continued availability of any hired Plant for the purpose of executing the Operations, the Operating Company

shall not bring on to the Unit any hired Plant unless the agreement for the hire of such Plant contains a provision that the owner of such Plant shall:

- (i) on request in writing made by the Scottish Ministers within seven days after the date on which any forfeiture has become effective, and
- (ii) on the Scottish Ministers undertaking to pay all hire charges in respect of such Plant from such date,

hire such Plant to the Scottish Ministers on the same terms as such Plant was hired to the Operating Company, except that the Scottish Ministers shall be entitled to permit the use of such Plant by any other contractor employed by them for the purpose of completing the Operations under the other terms of this Contract.

11.1.4 Where the Scottish Ministers enter into any agreement for the hire of Plant pursuant to Clause 11.1.3, all sums properly paid by the Scottish Ministers under the provisions of any such agreement and all expenses incurred by them (including stamp duties) in entering into such agreement, are deemed for the purpose of the other provisions of this Contract to be part of the cost of completing the Operations.

11.1.5 Upon any written request made at any time by the Scottish Ministers in relation to any item of Plant, the Operating Company shall forthwith in writing notify to them the name and address of the owner thereof, provide a copy of the terms under which such Plant was hired to the Operating Company and, in the case of hired Plant, certify in writing that the agreement for the hire thereof contains a provision in accordance with the requirements of Clause 11.1.3.

11.1.6 If the Operating Company shall fail to remove any Plant, goods or materials as required pursuant to Clause 4.12.1 within such reasonable time after execution of the Operations as may be allowed by the Scottish Ministers, then the Scottish Ministers may at their option:

- (i) sell or otherwise dispose of any such items which are the property of the Operating Company, and
- (ii) return any such items that are not the property of the Operating Company to the owner thereof at the Operating Company's expense,

provided always that the Scottish Ministers shall, after deducting from any proceeds of any sale the costs, charges and expenses in connection with such sale or return as aforesaid, pay the balance (if any) to the Operating Company.

To the extent that the proceeds of any such sale are insufficient to meet all such costs, charges and expenses of the Scottish Ministers, the excess shall be a debt due from the Operating Company to the Scottish Ministers. The debt due shall be deductible or recoverable from any monies due or that may become due to the Operating Company under this Contract or may be recovered by the Scottish Ministers from the Operating Company at law.

11.1.7 Subject to the provisions of Clauses 12.1.1 and 12.1.3 and Clauses 17.2.1 to 17.3.2, the Scottish Ministers shall not at any time be liable for the loss of, or damage to, any of the:

- (i) Plant,
- (ii) goods, or
- (iii) materials,

which have been deemed to become the property of the Scottish Ministers.

11.1.8 The Operating Company shall, where entering into any sub-contract for the execution of any part of the Operations, incorporate in such sub-contract the provisions of Clauses 11.1.1 to 11.1.9 inclusive in relation to Plant, goods or materials brought on to the Unit by the sub-contractor.

11.1.9 Clauses 11.1.1 to 11.1.9 inclusive:

- (i) shall not be deemed to imply any consent or approval or acceptance by the Scottish Ministers of the materials or other matters referred to therein, and
- (ii) shall not prevent the rejection of any such materials at any time by the Scottish Ministers.

11.2 Vesting of Goods and Materials not on the Unit

11.2.1 Where an Order identifies goods or materials for which payment may be made before the same are delivered to the Unit, the Operating Company may with a view to securing payment pursuant to Clause 10.3 for any such goods and materials, transfer the title in the same to the Scottish Ministers before delivery to the Unit provided that such goods and materials have been:

- (i) manufactured,
- (ii) passed any specified factory testing,
- (iii) prepared, or
- (iv) made substantially ready for incorporation in the Site Operations and that the said goods and materials:
 - (a) shall be the property of the Operating Company, or
 - (b) the Contract for the supply of the same expressly provides that the property therein shall pass unconditionally to the Operating Company.

11.2.2 The intention of the Operating Company to transfer the property in any goods or materials to the Scottish Ministers pursuant to Clause 11.2 shall be evidenced by the Operating Company taking or causing the supplier of the said goods or materials to take the following actions, namely:

- (i) provide to the Scottish Ministers documentary evidence that the property in the said goods or materials has been vested in the Operating Company,
- (ii) suitably mark or otherwise plainly identify the said goods and materials in order to show that:
 - (a) their destination is the Unit,
 - (b) that they are the property of the Scottish Ministers, and
 - (c) (where they are not stored at the premises of the Operating Company) to whose order they are held,
- (iii) set aside and store the said goods and materials so marked or identified to the satisfaction of the Scottish Ministers, and
- (iv) deliver to the Scottish Ministers a schedule listing and giving the value of every item of the goods and materials so set aside and stored and inviting them to inspect the same.

11.2.3 When the Scottish Ministers shall consent in writing, ownership of the said goods and materials for the purposes of this Clause 11.2 shall vest in and become the absolute property of the Scottish Ministers.

Thereafter such goods and materials shall be in the possession of the Operating Company for the sole purpose of delivering them to the Scottish Ministers and incorporating them in the Operations, provided always that:

- (i) consent by the Scottish Ministers for the purposes of Clause 11.2 or any payment made by them for goods and materials pursuant to Clause 10.3:
 - (a) shall be without prejudice to the exercise of any power of the Scottish Ministers contained in this Contract to reject any goods or materials which are not in accordance with the provisions of this Contract, and
 - (b) upon any such rejection, the property in the rejected goods or materials shall immediately revert in the Operating Company,
- (ii) notwithstanding any other provisions of this Contract, the Operating Company shall be responsible for:
 - (a) any loss or damage to such goods and materials,
 - (b) for the cost of storing, handling and transporting the same, and
 - (c) effecting such additional insurance as may be necessary to cover the risk of such loss or damage from any cause.

11.2.4 Neither the Operating Company nor a sub-contractor nor any other person shall have a lien on any goods or materials which have vested in the Scottish Ministers under Clause 11.2.3 for any sum due to the Operating Company, sub-contractor or other person.

The Operating Company shall take all such steps as may reasonably be necessary to ensure that the title of the Scottish Ministers and the exclusion of any such lien shall be brought to the notice of sub-contractors and other persons dealing with any such goods or materials.

11.2.5 Upon cessation of the employment of the Operating Company under this Contract before the completion of the Operations for any reason, the Operating Company shall deliver to the Scottish Ministers any goods or materials the property in which has vested in the Scottish Ministers by virtue of Clause 11.2.3.

Where the Operating Company shall fail to do so, the Scottish Ministers may:

- (i) enter any premises of the Operating Company or of any sub-contractor,
- (ii) remove such goods and materials, and
- (iii) recover the cost of so doing from the Operating Company.

11.2.6 The Operating Company shall incorporate provisions equivalent to those provided in Clause 11.2 in every sub-contract in which provisions are made for payment in respect of goods or materials before the same have been delivered to the Unit.

11.3 Care of Property Belonging to the Scottish Ministers

11.3.1 Where the Operating Company has taken possession of any goods, plant or materials that are the property of the Scottish Ministers including any goods, plant or materials that have been temporarily taken down or removed then notwithstanding

any other provision of this Contract, the Operating Company shall be responsible for:

- (i) any loss or damage to such goods, plant and material, and
- (ii) effecting such additional insurance as may be necessary to cover the risk of such loss or damage from any cause.

SCHEDULE 1

PART 4 – INDEMNITIES AND INSURANCE

12. CARE OF THE UNIT, OPERATIONS, INDEMNITY AND INSURANCE

12.1 Care of the Unit and the Operations

12.1.1 Where the Scottish Ministers execute work on the Unit with their own or other contractors' workpeople, they shall for such work:

- (i) have regard for the safety of all persons upon the Unit, including but not limited to users of the Unit,
- (ii) keep the Unit in an orderly state appropriate to the avoidance of danger to such persons, and
- (iii) require such other contractors to have the same regard for safety and the avoidance of danger.

12.1.2 The excepted risks that the Operating Company shall not be liable for under this Clause 12.1 are any loss or damage to the extent that the same is due to:

- (i) riot, war, invasion, act of foreign enemies, or hostilities (whether war be declared or not),
- (ii) civil war, rebellion, revolution, insurrection, or military or usurped power,
- (iii) ionising radiations or contamination by radioactivity from any nuclear fuel or from any nuclear waste, from the combustion of nuclear fuel, radioactive, toxic, explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof,
- (iv) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds,
- (v) the use or occupation by the Scottish Ministers, their agents or servants, any contractor other than the Operating Company (not being employed by the Operating Company), or the public, of any part of the Unit and subject to the other provisions of this Contract, and
- (vi) any defect in the design, construction or maintenance of the Unit but excluding loss or damage resulting from a Non-Conformance by the Operating Company.

12.1.3 In the event of any loss, damage or injury from any cause whatsoever (except loss, damage or injury due to any of the excepted risks set out in Clause 12.1.2) to Operational Items while the Operating Company is responsible for the care of any Operational Items or during the execution of the Operations, the Operating Company shall at its own cost replace, repair, rectify, or indemnify and keep indemnified the Scottish Ministers against such loss, damage or injury so that, at completion of relevant Orders and in any case at the Contract Expiry Date, the Unit is in good order and condition and complies with the other provisions of this Contract, and so that the Scottish Ministers have no liability in relation to the loss, damage or injury referred to in this Clause 12.1.3.

12.1.4 In the event of loss, damage or injury arising from any of the excepted risks set out in Clause 12.1.2, the Operating Company shall, subject to an Order, repair and make good the same as aforesaid at the expense of the Scottish Ministers.

12.1.5 Notwithstanding any other provisions of this Contract, the Operating Company shall indemnify the Scottish Ministers against any costs, losses and damages arising as a consequence of any Default by the Operating Company that results in the occurrence of an Incident.

12.1.6 The Operating Company shall be liable for any loss or damage to the Operations occasioned by it in the course of any activity carried out by it for the purpose of completing any outstanding Operations or of complying with its obligations under Clauses 5.5 and 5.8.

12.2 Damage to Persons and Property

12.2.1 Notwithstanding any other term of this Contract and without prejudice and in addition to any other right or remedy that the Scottish Ministers may have, the Operating Company shall, except if and insofar as this Contract expressly provides otherwise, and subject to the exceptions set out in Clause 12.2.2, indemnify and keep indemnified the Scottish Ministers against all losses, actions, proceedings, claims, costs, damages, demands and expenses (including but not limited to all legal costs and disbursements), incurred by or made against the Scottish Ministers in respect of any injury to or death of any person, or loss of use of or damage to any property (other than the Operations), including surface or other damage to land adjacent to the Unit suffered by any persons who own or occupy such land, that may arise out of, in connection with or in consequence (whether directly or indirectly) of the execution of the Operations and the remedying of any Defects therein.

12.2.2 The exceptions referred to in Clause 12.2.1 that are the responsibility of the Scottish Ministers are:

- (i) death of, or injury to, persons and loss of, or damage to, property that results from any negligent act of, or omission or breach of any statutory duty by, the Scottish Ministers or any contractor, subcontractor, or supplier of any tier, (but not the Operating Company and not a contractor being employed by the Operating Company),
- (ii) any claims, demands, proceedings, damages, costs, charges and expenses in respect of or in relation to (i) above,
- (iii) damage to crops adjacent to the Unit (but only insofar as possession or access has not been given to the Operating Company),
- (iv) the use or occupation of land provided by the Scottish Ministers for the purposes of the execution of the Operations (including consequent losses of crops) or interference, whether temporary or permanent, with any right of way, light, air or water or any other form of servitude or wayleave that are the unavoidable result of the execution of the Operations in accordance with this Contract,
- (v) the right of the Scottish Ministers to execute any part of the Operations on, over, under, in or through any land, and
- (vi) damage that is the unavoidable result of the execution of the Operations (except where the Operating Company executes a Design as part of an Order and where subsequently the Site Operations and Defects Correction Operations for such Design are executed either by the Operating Company or under a Works Contract).

- 12.2.3 The Scottish Ministers shall, subject to the provisions of Clauses 12.2.5 and 12.2.6, indemnify the Operating Company from and against all claims, demands, proceedings, damages, costs, charges and expenses for the exceptions referred to in Clause 12.2.2.
- 12.2.4 The Operating Company's liability to indemnify the Scottish Ministers pursuant to Clause 12.2.1 shall be reduced in proportion to the extent that the negligent act or omission of the Scottish Ministers, or any contractor other than the Operating Company (not being employed by the Operating Company), may have contributed to the said death, injury, loss or damage.
- 12.2.5 The Scottish Ministers' liability to indemnify the Operating Company pursuant to Clause 12.2.3 shall be reduced in proportion to the extent that the act or neglect of the Operating Company may have contributed to the said death, injury, loss or damage.
- 12.2.6 The Scottish Ministers shall not be liable for, or in respect of, any damages or compensation payable at law in respect or in consequence of any accident or injury to any work person or person in the employment of the Operating Company, or any contractor, subcontractor, or supplier of any tier, except to the extent that such accident or injury results from, or has been contributed to, by the negligent act, omission or Default of the Scottish Ministers.

12.3 Insurance Generally

- 12.3.1 Upon execution of this Contract and prior to the Operating Company commencing the execution of any Operations, and without limitation to its liability under any other provisions of this Contract or at law, the Operating Company shall take out and maintain the insurances specified in Clause 3.1 of Schedule 1, Annex 5.
- 12.3.2 The Operating Company shall not take any action or fail to take any action (including failure to disclose any fact) or permit anything to be done or not to be done that would entitle any insurer to:
- (i) refuse to pay any sum, or
 - (ii) delay payment of any claim under any of the insurance, or
 - (iii) render any sum paid out under any of the insurance repayable in whole or in part.
- 12.3.3 All insurances shall insofar as is possible be subject to Scots Law and the exclusive jurisdiction of the Scottish Courts.

12.4 Underwriting Information, Placing Documents, Insurance Policies and Copies

- 12.4.1 The Operating Company shall, if requested by the Scottish Ministers, provide within seven days of such request copies of all information given to insurers at any time during the placement, alteration or currency of any insurance policy.
- 12.4.2 The Operating Company shall provide to the Scottish Ministers all insurance policies, endorsements, attachments, brokers' placing slips, market reform contracts, market reform contract endorsements and any other documents necessary, or reasonably requested by the Scottish Ministers, to evidence that the required insurances are in place.

Each document shall be stamped, initialled and dated by all underwriters. Copies of original documents shall be certified in a manner acceptable to the Scottish Ministers.

- 12.4.3 The insurance documents specified in Clause 12.4.2 shall be provided:
- (i) within one day of the Contract Commencement Date,
 - (ii) prior to the expiry of an existing insurance, and
 - (iii) within seven days of receiving a written request.
- 12.4.4 The requirements in Clause 12.4.2 for the provision of documents do not apply to professional indemnity insurance, for which a cover note issued by the insurance broker to the Operating Company detailing the period of insurance, limit of indemnity, participating insurers and their shares of the insurance, that the specific requirements of Table 3.1.1/A contained in Schedule 1, Annex 5 are catered for and any unusual terms and conditions is sufficient evidence of the existence of the insurance.
- 12.4.5 The Operating Company shall provide to the Scottish Ministers any amendments and replacements of any of the insurance documents referred to in this Clause 12.4 and of other relevant documents previously given to the Scottish Ministers. The amended or replacement documents shall be provided within seven days of issue, whether or not requested by the Scottish Ministers.
- 12.4.6 The Operating Company shall provide to the Scottish Ministers evidence from the insurers that the premiums payable have been paid to the insurers and that the insurances are in full force and effect.
- 12.4.7 The Operating Company shall provide, and take all steps and give all necessary instructions to procure the provision of:
- (i) the said policies and the other documents referred to in this Clause 12.4, and
 - (ii) such additional evidence of compliance with this Clause 12 as may be required by the Scottish Ministers.
- 12.4.8 The Operating Company shall procure, and take all steps necessary to ensure, that any information given and received in relation to any insurance policy required under this Contract (and any information held by third parties acting on behalf of the Operating Company) is retained for a period of not less than five years after the end of the Contract Period.
- 12.5 Rights of Subrogation, Non-Vitiation, Changes to Policy Provisions, Waiver of Disclosure Obligation and Notice of Cancellation**
- 12.5.1 Except for the professional indemnity insurance requirement, the employers' liability insurance requirement and the motor insurance requirement, all of the insurance required under the provisions of this Contract shall be subject to:
- (i) the waiver of all duties of disclosure, and
 - (ii) the waiver of any rights of subrogation,
- insofar as the Scottish Ministers and their servants, agents and suchlike persons are concerned.
- 12.5.2 Except for the contractors' all risks insurance requirement, professional indemnity insurance requirement, the employers' liability insurance requirement and the motor insurance requirement all of the insurance required under the provisions of this Contract shall allow that actions between the insured parties shall be treated as though a separate insurance had been issued to each of them.

- 12.5.3 Except for the professional indemnity insurance requirement, all of the insurance required under the provisions of this Contract shall be subject to a non-vitiation provision, in order that the actions of the Operating Company or any other insured shall not prejudice the insurance, insofar as the Scottish Ministers are concerned.
- 12.5.4 All of the insurance required under Clause 3 of Schedule 1, Annex 5 shall be subject to undertakings from the insurers and the Operating Company:
- (i) to notify the Scottish Ministers in writing of any intention or request to amend the terms and conditions of the said insurance,
 - (ii) to obtain confirmation of the acceptance of these amendments from the Scottish Ministers, such acceptance not to be unreasonably withheld,
 - (iii) to provide to the Scottish Ministers in writing not less than 30 days' notice of cancellation or non-renewal of the said insurance, and
 - (iv) in the case of non-renewal by the Operating Company, to allow the Scottish Ministers the opportunity to renew the insurances in accordance with Clause 12.6.

12.6 Failure to Provide Suitable Evidence of Insurance

- 12.6.1 If, pursuant to Clause 12.4, the Operating Company fails to produce, when required, satisfactory evidence to the Scottish Ministers that there is in force any of the insurance required under this Contract, the Scottish Ministers may:
- (i) effect and keep in force any such insurance,
 - (ii) secure the renewal of such insurance,
 - (iii) pay any such premium as may be necessary for such purpose, and
 - (iv) deduct any amount so paid from any monies due, or which may become due, to the Operating Company or recover the same as a debt due to the Scottish Ministers from the Operating Company, together with all recovery costs and expenses whatsoever incurred by the Scottish Ministers and their agents, servants and suchlike persons.
- 12.6.2 Where the Operating Company fails to comply with any condition imposed by any insurance policy taken out pursuant to this Clause 12, or Schedule 1, Annex 5, or any other provisions of this Contract, the Operating Company shall indemnify the Scottish Ministers against all losses and claims arising from such failure.
- 12.6.3 Notwithstanding any other provisions of this Contract, the Scottish Ministers will take action in accordance with Clause 15 of this Schedule if the Operating Company fails to provide the Scottish Ministers with suitable evidence of insurance satisfying the requirements stated in this Clause 12, or in Schedule 1, Annex 5, or in any other provisions of this Contract.

SCHEDULE 1

PART 5 – MANAGEMENT SYSTEM AND CHANGE PROPOSALS

13. MANAGEMENT SYSTEM

13.1 Management System

13.1.1 For the term of this Contract, the Operating Company shall establish, document, implement, maintain and continually improve the effectiveness of the Management System in accordance with the requirements of Schedule 5 Part 1 and the other provisions of this Contract.

The purpose of the Management System is to ensure and demonstrate that all aspects of the Operations and all other matters for which the Operating Company is responsible under the terms of this Contract are executed in accordance with the terms of this Contract. Documented procedures in the Management System shall be such that, when followed, they ensure the effective management of the Operations.

13.1.2 The Operating Company shall provide a Quality Plan that meets but is not limited by the requirements of Schedule 5 Part 1 to the Scottish Ministers for their written consent when produced or updated or when requested by the Scottish Ministers.

13.1.3 By no later than 60 days prior to the Commencement of Service Date and prior to any Site Operations commencing, whichever is the earlier, the Operating Company shall submit its developed and detailed:

- (i) Management System, and
- (ii) Quality Plan,

to the Scottish Ministers for their written consent. At the time of submission, any software and computer programmes to be used by the Operating Company that are necessary for the operation of the systems shall be ready for use in the manner and detail required as stated in other provisions of this Contract.

13.1.4 The Operating Company shall periodically, as necessary for continued compliance with the provisions of this Contract, amend the Management System and Quality Plan and submit such amendments to the Scottish Ministers for their written consent.

13.1.5 During the execution of Operations, the Operating Company's performance under the Management System, including the Quality Plan, shall be examined and thereafter audited by the Performance Audit Group.

The Performance Audit Group will undertake regular and periodic:

- (i) inspection,
- (ii) monitoring,
- (iii) spot checking,
- (iv) auditing, and
- (v) other examination and audit processes as it deems necessary,

of the Management System, the Quality Plan and all procedures and systems contained therein.

- 13.1.6 The Operating Company shall not commence, or permit the commencement of, any aspect of the Operations or any other matters for which the Operating Company is responsible under this Contract before those parts of the Management System which concern any such aspect of the Operations or such other matters have been completed.

For the purposes of this clause, a part of the Management System shall be considered complete when it has been consented to in writing by the Scottish Ministers. Such consent shall not be unreasonably delayed and a response to submissions under Clause 13 of this Schedule shall be given by the Scottish Ministers within 21 days of receipt.

13.2 Failure by Operating Company to Perform its Obligations

- 13.2.1 Notwithstanding any other provisions of this Contract, where, in the opinion of the Scottish Ministers, the Operating Company fails satisfactorily to execute all or any of its obligations described in Clause 13.1, the Scottish Ministers shall notify the Operating Company of the Default in writing.

- 13.2.2 Where, in the opinion of the Scottish Ministers, the Operating Company does not within a reasonable time take reasonable steps to rectify a Non-Conformance, the Scottish Ministers shall notify the Operating Company in writing.

Where the Scottish Ministers have so notified the Operating Company pursuant to this clause, they may thereupon make such arrangements and incur such costs and expenses as they consider reasonable for rectifying such Non-Conformance of the Operating Company and for securing compliance with the requirements of this Contract.

Notwithstanding any other provisions of this Contract, where audits by the Scottish Ministers or the Performance Audit Group identify a Non-Conformance by the Operating Company, the Scottish Ministers shall be entitled to carry out additional audits of the Operations.

- 13.2.3 Such actions by the Scottish Ministers pursuant to this clause shall not entitle the Operating Company to any extra payment, or any extension of time, for completion of the Operations.

The Operating Company shall be liable for such actions of the Scottish Ministers under this clause as though, for such purpose, the Operating Company had taken such actions itself.

- 13.2.4 The Scottish Ministers shall particularise and notify in writing to the Operating Company on a monthly basis the amounts of any costs and expenses whatsoever incurred by the Scottish Ministers or by persons authorised to act on their behalf pursuant to this clause.

All such amounts shall be recoverable as sums of money due from the Operating Company to the Scottish Ministers. Such sums shall be deducted from the next payment due to the Operating Company pursuant to the other provisions of this Contract.

- 13.2.5 Where the Operating Company fails to submit changes to the Management System required pursuant to Clause 13.1 of this Schedule, the Scottish Ministers may in writing notify the Operating Company of changes that are necessary for compliance with the requirements of this Contract.

In any such event, the Operating Company shall introduce such changes into the Management System forthwith.

In any such event, the Scottish Ministers shall be entitled to recover from the Operating Company:

- (i) all costs and expenses whatsoever (including professional fees, staff costs, overheads and administrative costs),
- (ii) all abortive costs, and
- (iii) other sums,

that have been incurred where they have been acting as though they were the Operating Company.

All consequences on the Operating Company arising from the actions of the Scottish Ministers pursuant to this clause shall be the responsibility of the Operating Company.

Where the Performance Audit Group has given written notice to the Operating Company, pursuant to the provisions of Schedule 5 Part 5 of this Contract, of an intention to execute an audit of any aspect of the Operations and where the Operating Company fails to provide the necessary staff, access, records and facilities, the Scottish Ministers shall be entitled to recover from the Operating Company all abortive costs and expenses and any other sums properly incurred by the Performance Audit Group and the Scottish Ministers.

Without prejudice to the other rights and remedies that the Scottish Ministers may have, the Scottish Ministers shall be entitled to recover such costs and expenses from the next payment or any subsequent payment thereafter due to be paid to the Operating Company pursuant to Clause 10 of this Schedule.

- 13.2.6 In taking any actions under Clause 13.2 of this Schedule, the Scottish Ministers shall for the Operating Company's Default as described therein be entitled to act as though they were the Operating Company.

13.3 Application to Subcontracts

- 13.3.1 The Operating Company shall ensure that a condition is inserted in each subcontract and order for goods and services forming part of the Operations whereby subcontractors and suppliers shall institute, maintain and operate, for the term of this Contract, a Management System complying with the requirements of Schedule 5 Part 1 and the other provisions of this Contract, for the purpose of ensuring and demonstrating that such goods and services comply with this Contract.

- 13.3.2 The Operating Company shall also ensure that a condition is inserted in each subcontract to provide for the Scottish Ministers access and facilities meeting the requirements of Clause 5.1.1 and of a standard sufficient to enable them to take such actions as they may consider necessary under this Clause 13 of this Schedule.

13.4 Laboratories and Testing Schedules

- 13.4.1 All materials and workmanship shall be of the respective kinds described in any Order and in accordance with the Scottish Ministers' Requirements.

Such materials and workmanship shall be subjected to the samples and tests required or reasonably implied by the terms of this Contract and set out in the method statements forming part of the Management System or any Order.

13.4.2 Except as may be provided otherwise by this Contract, every sample and test required by this Contract shall be undertaken by a laboratory holding accreditation granted in respect of such sampling and testing:

- (i) by the United Kingdom Accreditation Service (UKAS), or
- (ii) by the European co-operation for Accreditation of Laboratories (EAL).

13.4.3 By no later than 60 days prior to the Commencement of Service Date, the Operating Company shall provide to the Scottish Ministers a schedule of the tests and inspections that the Operating Company then considers to be necessary for the anticipated execution of Operations.

Within 21 days of receipt of the schedule of tests and inspections, the Scottish Ministers shall either accept the schedule or inform the Operating Company of reasons why the coverage of the schedule is not adequate to ensure achievement of the requirements of the Scottish Ministers. In the latter event, the Operating Company shall submit a revised schedule for acceptance within 14 days of the Scottish Ministers' reply.

If no reply is received from the Scottish Ministers within 21 days of receipt of any submission of a schedule of tests and inspections, the Operating Company may remind the Scottish Ministers accordingly. If, seven days after the reminder is issued, no reply has been received from the Scottish Ministers, the schedule is deemed to be acceptable.

Thereafter, the said schedule shall be maintained by the Operating Company and supplemented as necessary from time to time to include such additional tests and inspections as may be required for compliance with any Order.

13.4.4 Inspection and test schedules and documentation for recording compliance shall be provided under the Quality Plan and relevant copies of such schedules and documentation shall be provided to the Scottish Ministers prior to commencement of the activity concerned.

13.4.5 Where work items are required to be sampled, tested and/or inspected in accordance with this Contract then such sampling, testing and/or inspection is acknowledged by the Operating Company to be and is deemed for all purposes to be a material and essential part of the work item and the Operating Company shall become entitled to include within any Statement under Clause 10.3.1 the relevant work item only when the relevant sampling, testing and/or inspection has been carried out and the test results demonstrate that the work item has been completed and is in accordance with this Contract. The Operating Company acknowledges that it is important for the Scottish Ministers to have records which demonstrate that work items have been carried out in accordance with this Contract.

The Scottish Ministers shall be under no obligation to pay for and the Operating Company shall not seek payment for a work item which is required to be sampled, tested and/or inspected in accordance with this Contract and which work item is either untested or has not yet passed the relevant test.

The Operating Company shall not carry out a work item that covers up an untested work item or which would make an untested work item inaccessible. In order for the untested work item to be tested the Scottish Ministers shall be entitled to instruct the Operating Company (at the Operating Company's cost) to remove or open up any such offending work item that the Operating Company carries out. The Scottish

Ministers shall be under no obligation to pay for and the Operating Company shall not seek payment for any such offending work item until the untested work item has passed its test (provided always that the cost of opening up or removing the offending work item and repairing or reinstating the offending work item shall be met by the Operating Company).

13.4.6 Where the Scottish Ministers consider it necessary to undertake any tests under their own direction, independently of the Operating Company, the Operating Company shall provide such assistance, instruments, machines, labour, materials, temporary traffic management and safety measures and other resources as required for examining, measuring and testing any work and the quality, weight and quantity of any materials used, and shall supply samples of materials before incorporation in the Operations for testing as may be selected and required by the Scottish Ministers.

13.4.7 The provision of samples and testing shall be the responsibility of the Operating Company where such test is required by the other provisions of this Contract.

Such tests shall include, but shall not be limited to, tests under load and tests to ascertain whether the Design of any finished or partially finished work is fit for the purposes that it was intended to fulfil.

13.4.8 Where any test is instructed by the Scottish Ministers which is in addition to the requirements of this Contract, or is specifically instructed as part of an Order, the Scottish Ministers will only be responsible for the costs of the testing if the test shows the workmanship or materials to be in accordance with both the provisions of this Contract and the relevant Order.

13.5 Operating Company Weekly Non-Conformance Reports

13.5.1 The Operating Company shall produce a report, to be issued to the Performance Audit Group at weekly intervals from the commencement of the Mobilisation Period to the Contract Expiry Date, which shall schedule:

- (i) the number,
 - (ii) the nature, and
 - (iii) details (sufficient to explain the nature and extent of the Non-Conformance),
- of the Non-Conformances which have been recorded in the Management System by the Operating Company.

The weekly report shall also include the accumulated total of outstanding Non-Conformances which have not been closed out by the Operating Company in accordance with the requirements of the Management System at the time of preparing the report.

14. OPERATING COMPANY PROPOSALS FOR CHANGE TO THE SCOTTISH MINISTERS' REQUIREMENTS

14.1 Process

14.1.1 The Operating Company may submit to the Scottish Ministers an Operating Company Change Proposal in relation to the Scottish Ministers' Requirements at any time following the first anniversary of the Commencement of Service Date.

Such Operating Company Change Proposal shall be in writing and refer expressly to this clause.

An Operating Company Change Proposal shall either:

- (i) improve the efficiency of the Operations with a financial saving to the Scottish Ministers, or
- (ii) improve the efficiency of the Operations at no additional cost to the Scottish Ministers, or
- (iii) improve the efficiency of the Operations at additional cost to the Scottish Ministers.

14.1.2 Any Operating Company Change Proposal shall be accompanied by a full and detailed:

- (i) explanation of the reasons for the proposed change,
- (ii) explanation of how any risks associated with the proposed change shall be allocated,
- (iii) explanation of how any trials of any proposed innovation shall be financed,
- (iv) statement of any consideration that the Operating Company is seeking for making the innovation available to the Scottish Ministers, including but not limited to the release of any Intellectual Property Rights in the innovation,
- (v) explanation of the benefits arising to the Scottish Ministers from the proposed change,
- (vi) demonstration that such proposed change has no detrimental effect on the:
 - (a) environmental impact,
 - (b) safety,
 - (c) quality, and
 - (d) performance,of the Operations and the Unit,
- (vii) demonstration that such proposed change is not prejudicial in any way to the safety of users of the Unit, or any other person affected by, or involved in, the performance of the Operations,
- (viii) explanation of any consequential changes required to any of the Scottish Ministers' Requirements, and
- (ix) substantiation that such proposed change would be acceptable to any third party whom the Operating Company is obliged to consult in regard to, or whose consent is required for the implementation of, such proposed change.

14.1.3 Any Operating Company Change Proposal shall also include proposed changes to the Schedule of Rates and Prices in Schedule 2 Parts 1 and 2. The proposed changes submitted shall only be related to the Operating Company Change Proposal submitted.

Each rate or price change or additional rate or price proposed shall be accompanied by a submission detailing its evaluation and assessment.

If an Operating Company Change Proposal leads to cost savings resulting from a change to the Scottish Ministers' Requirements, the savings shall be shared equally between the Scottish Ministers and the Operating Company.

Any additional costs of Operations resulting from the acceptance of an Operating Company Change Proposal shall be borne by the Scottish Ministers.

For the purpose of this Clause 14 of this Schedule, costs mean the costs to the Scottish Ministers as calculated by application of the principles referred to in Clause 10.1 of this Schedule, together with other expenses incurred by the Scottish Ministers as a result of the Operating Company Change Proposal.

14.1.4 In the case of a proposal where the savings are shared equally between the Operating Company and the Scottish Ministers, the proposed new rates and prices shall include the share of the savings due to the Operating Company.

14.1.5 All the costs and expenses of whatsoever nature associated with the preparation and implementation of any proposed change to the Scottish Minister's Requirements as a result of an Operating Company Change Proposal shall be the responsibility of the Operating Company.

Such costs shall include any costs and expenses incurred by the Scottish Ministers in coming to a decision whether or not to accept the proposal.

All such costs incurred by the Scottish Ministers will be deducted by the Scottish Ministers from payments due to the Operating Company.

14.1.6 The acceptance of an Operating Company Change Proposal shall be at the discretion of the Scottish Ministers. If the Scottish Ministers do not accept the Operating Company Change Proposal, they shall inform the Operating Company in writing within 14 days of receipt of all satisfactory supporting information or the completion of any trials or demonstrations, whichever is the later.

Where the Scottish Ministers are prepared to accept any such change to the Scottish Ministers' Requirements, an Operating Company Change Proposal is implemented following the unconditional acceptance by the Operating Company of an Order from the Scottish Ministers issued under this Clause 14 of this Schedule.

14.1.7 The Order issued to implement a change to the Scottish Ministers' Requirements may include:

- (i) reference to this sub-clause,
- (ii) a statement of the changes made to the Scottish Ministers' Requirements,
- (iii) the effective date for such changes to the Scottish Ministers' Requirements,
- (iv) changes made to the Schedule of Rates and Prices in Schedule 2 Parts 1 and 2, and
- (v) a statement that the Order is not effective until either the effective date stated in the Order or the date when the Scottish Ministers receive unconditional acceptance in writing from the Operating Company, whichever is the later.

SCHEDULE 1

PART 6 – DEFAULT, TERMINATION AND FRUSTRATION

15. DEFAULT AND STEP-IN RIGHTS PROVISIONS

15.1 Rights on Default without Prejudice to Termination Rights

15.1.1 The Scottish Ministers' rights under this clause shall be without prejudice to, and in addition to, the provisions of, and their rights under, Clauses 13 and 16.

15.2 Remedial Notices

15.2.1 Where the Operating Company commits any Default which is capable of remedy, the Scottish Ministers may, subject to the provisions of Clauses 5.6.1 and 5.6.2, issue a Remedial Notice requiring the Operating Company to remedy such Default.

The Scottish Ministers, having reasonable regard to the nature of the Default, shall specify in a Remedial Notice the Remedial Period during which the Default shall be remedied.

The Operating Company shall remedy the Default during the Remedial Period.

15.2.2 The Operating Company shall only be entitled to dispute a Remedial Notice or the reasonableness of the Remedial Period if it gives written notice of such a Dispute to the Scottish Ministers within 14 days of receipt of such Remedial Notice.

15.3 Notices of Non-Conformance

15.3.1 In addition to the rights of the Scottish Ministers under Clauses 15.2 of this Schedule, the Performance Audit Group may issue to the Operating Company a Notice of Non-Conformance in respect of any Non-Conformance, provided that the Scottish Ministers, in exercise of their discretion, have not at that time issued a Remedial Notice in respect of that Non-Conformance.

A Notice of Non-Conformance shall contain details of the Non-Conformance, a reference to the contractual basis of the Non-Conformance, a period of time or a date by which the Non-Conformance is to be corrected, and, if appropriate, other information and requirements of the Scottish Ministers applicable to the correction of the Non-Conformance.

A Notice of Non-Conformance will be valid if it contains a description of the Non-Conformance and the date when the existence of the Non-Conformance became known to either the Scottish Ministers or the Performance Audit Group.

15.3.2 On receipt of a Notice of Non-Conformance, the Operating Company shall within any timescale referred to in such Notice of Non-Conformance:

- (i) remedy the Default,
- (ii) correct the Defect,
- (iii) take action to achieve the required standard of service,
- (iv) perform its obligation in accordance with the Contract in a timely manner and without delay, or
- (v) process the Non-Conformance in accordance with the Management System,

whichever is relevant to the Notice of Non-Conformance. The Operating Company shall, within any timescale referred to in such Notice of Non-Conformance, submit a report of the resolution of the Non-Conformance to the Performance Audit Group for its consideration.

- 15.3.3 Where a Non-Conformance has not been resolved to the satisfaction of the Performance Audit Group or the Performance Audit Group considers the Operating Company's report of the resolution of the Non-Conformance to be unsatisfactory, the Performance Audit Group shall give its reasons to the Operating Company within 14 days of receipt of the unsatisfactory report. Within seven days of the Performance Audit Group's notification, the Operating Company shall notify the Performance Audit Group of the further action that the Operating Company will take in relation to the Non-Conformance, together with the timescales for such action.

If the Performance Audit Group remains dissatisfied by the Operating Company's proposals or the resolution of the Non-Conformance, the Performance Audit Group shall so advise the Director.

The Director shall consider the report of the Performance Audit Group and, if satisfied that the Operating Company has committed a Default, the Scottish Ministers shall issue a Remedial Notice. If the Default has been remedied by the Scottish Ministers and further remedial action is not required, a Remedial Notice may nevertheless be issued to record the Default.

- 15.3.4 The Operating Company shall maintain a register of Notices of Non-Conformance.

A copy of the register shall be provided by the Operating Company at weekly intervals to the Director together with a report on the progress made by the Operating Company in resolving each Non-Conformance.

The rights of the Scottish Ministers under Clause 15.2 to issue a Remedial Notice shall not be affected by the issue, or the absence of issue, of a Notice of Non-Conformance in relation to any matter or to any action taken or not taken by the Operating Company.

15.4 Scottish Ministers' Step-in Rights – Defaults

- 15.4.1 Where, by the expiry of the Remedial Period specified in a Remedial Notice, the Operating Company has failed to remedy the Default and the Scottish Ministers do not opt to exercise their option to terminate this Contract under Clause 16.1.3, the Scottish Ministers shall be entitled to remedy such Default themselves or to employ other persons to remedy such Default, provided that they first notify the Operating Company in writing of their intention to do so.

- 15.4.2 If the Scottish Ministers opt to remedy an Operating Company's Default, they may take such actions as they consider prudent or necessary as a consequence of such Default. Such action may include instructing others to remedy the Default on behalf of the Scottish Ministers.

- 15.4.3 The Scottish Ministers shall be entitled to recover from the Operating Company all and any proper and reasonable costs and expenses incurred by the Scottish Ministers, or incurred on their behalf, to remedy such Default under this Clause 15.4. Costs payable by the Operating Company under this clause include any payments made by the Scottish Ministers to third parties as a result of the Operating Company's Default. If the Operating Company's Default leads the Scottish Ministers to believe that there may be further Defaults by the Operating Company which at the

time have not been discovered by the Scottish Ministers or the Performance Audit Group, the Scottish Ministers may take such other additional actions, or instruct others to take such additional actions on their behalf, as they consider prudent or necessary to establish the extent of any further Defaults.

- 15.4.4 For the purpose of this Clause 15.4, the additional actions may include actions taken for an indefinite period as a result of the Scottish Ministers' concern that a Default or Defaults may otherwise occur or continue to occur.

Any costs and expenses properly incurred by the Scottish Ministers, or on their behalf, as a consequence of such additional actions shall be payable by the Operating Company.

- 15.4.5 Any compensation, costs and expenses properly incurred by the Scottish Ministers, or on their behalf, as a result of their breach of an obligation to others, arising as a consequence of the Operating Company's Default, shall be payable by the Operating Company.

- 15.4.6 In addition to any payments due to the Scottish Ministers under this Clause 15.4 as a consequence of a Default by the Operating Company, the Operating Company shall pay to the Scottish Ministers "the Non-Execution Adjustment".

The Non-Execution Adjustment is calculated by multiplying the sum of all other amounts due under this Clause 15.4 by the Non-Execution Adjustment percentage.

The Non-Execution Adjustment percentage is 12.5%.

15.5 Lane Occupation Charges

- 15.5.1 Where, during the execution of any part of the Site Operations, the Operating Company has in place temporary traffic management schemes resulting in Lane Occupation and has either:

- (i) abandoned the execution of the Site Operations for a period exceeding 24 hours to the extent that no material progress has (in the opinion of the Scottish Ministers) been achieved in that period in the execution of the Site Operations, or
- (ii) not (in the opinion of the Scottish Ministers) progressed with due skill, care and diligence and this has (in the opinion of the Scottish Ministers) resulted in a delay to the execution of the Site Operations,

the Scottish Ministers shall be entitled to charge the Operating Company a Lane Occupation Charge, for each calendar day or part thereof that the said Site Operations have been abandoned or delayed, at the appropriate charge rates as set out in Schedule 1, Annex 3.

15.6 Scottish Ministers' Redress – Failure to Comply with Audit Requirements

- 15.6.1 Notwithstanding any other failure by the Operating Company in the performance of its obligations under this Contract, where, in accordance with the requirements of Schedule 5 Part 5, the Scottish Ministers or the Performance Audit Group:

- (i) have served due notice of an intention to execute an audit, or
- (ii) execute an ad-hoc unannounced audit,

and the Operating Company:

- (iii) fails to allow access to the Scottish Ministers or the Performance Audit Group on any date identified in such notice, or
- (iv) fails to provide suitable resources (including but not limited to staff), or
- (v) fails to provide the information required under this Contract to be available for the audit, or
- (vi) fails to provide and make available information that should be available in accordance with the provisions of this Contract, or
- (vii) withholds information from the Scottish Ministers or the Performance Audit Group, or
- (viii) provides information that is found to be incorrect in that it does not comply with the requirements of this Contract,

the Operating Company shall be liable for all abortive and additional costs, including but not limited to the costs of:

- (ix) carrying out additional audits, and
- (x) procuring additional audit resources to re-execute such audits, and
- (xi) procuring all necessary information that should be properly made available by the Operating Company at such audits,

incurred by the Scottish Ministers and the Performance Audit Group associated with any such failure.

15.7 Recovery of Scottish Ministers' Costs

15.7.1 The Scottish Ministers shall be entitled to recover from the Operating Company all losses, expenses, abortive costs and additional costs referred to in this Clause 15.

Without prejudice to the other rights and obligations that the Scottish Ministers may have, the Scottish Ministers shall be entitled to and shall recover such losses, costs and expenses from the next payment or subsequent payments thereafter due to be paid to the Operating Company pursuant to the other provisions of this Contract.

15.8 No Waiver

15.8.1 A waiver by the Scottish Ministers of any Default of the Operating Company shall not constitute a waiver of any subsequent Default.

Failure by the Scottish Ministers at any time to enforce any provisions of this Contract, to require strict performance by the Operating Company of any of the provisions of this Contract or to exercise any right or remedy to which they are entitled hereunder shall not be construed as a waiver of any such provision. Such failure shall not affect the validity of this Contract or any part thereof or the right of the Scottish Ministers to enforce any provision in accordance with its terms.

15.9 Other Rights

15.9.1 The rights of the Scottish Ministers under this Clause 15 are in addition and without prejudice to any other right the Scottish Ministers may have to claim the amount of any loss or damage suffered by the Scottish Ministers on account of the acts or omissions of the Operating Company (whether or not pursuant to any bond, guarantee or surety held by the Scottish Ministers) in connection with any part of the

execution of the Operations or on account of any other matter for which it is liable in connection with this Contract.

16. TERMINATION PROVISIONS

16.1 Termination of this Contract

16.1.1 The Scottish Ministers may at any time, by notice in writing to the Operating Company, terminate this Contract with immediate effect in the event that any one of the following occurs:

- (i) there has been a change of control, including but not limited to a cumulative change of ownership as defined in Section 719 of the *Corporation Tax Act 2010*, in the Operating Company or any company that is the ultimate holding company of the Operating Company,
- (ii) the Operating Company passes a resolution that it be wound up or it calls a meeting to consider such resolution, or a petition is presented or a court makes an order that the Operating Company be wound up or that a provisional liquidator be appointed to the Operating Company,
- (iii) the Operating Company has proposed, made or implemented any composition or arrangement with, or for the benefit of, any or all of its creditors,
- (iv) a liquidator, administrator, receiver, receiver and manager, administrative receiver, has been appointed (whether on an interim basis or otherwise) to manage its affairs or in respect of any part of the property that may from time to time have comprised the property and undertaking of the Operating Company,
- (v) circumstances arise which would entitle a court, a secured creditor or any other party to appoint such a liquidator, administrator, receiver and manager, administrative receiver to manage its affairs or in respect of any part of the property that may from time to time have comprised the property and undertaking of the Operating Company,
- (vi) a petition has been presented or an application has been made to court for an administration order in respect of the Operating Company or a notice of intention to appoint an administrator of the Operating Company has been given or filed,
- (vii) proceedings have been commenced under any law, regulation or procedure relating to the reconstruction or adjustment of debts of the Operating Company,
- (viii) the Operating Company has stopped or suspended payment of its debts or the Operating Company is unable or capable of being deemed unable to pay its debts within the meaning of Section 123 of the *Insolvency Act 1986*,
- (ix) diligence or any other process is levied on an asset of the Operating Company or a judgement, order or award is granted against the Operating Company, and
- (x) action is taken by the Registration of Companies to strike the Operating Company off the register under Sections 1000, 1002 or 1003 of the *Companies Act 2006*.

- 16.1.2 When the Operating Company is a partnership (a "Partnership Operating Company"), the Scottish Ministers may at any time, by notice in writing to the Partnership Operating Company, terminate this Contract with immediate effect where:
- (i) sequestration or steps taken to commence sequestration proceedings in relation to the Partnership Operating Company have been effected whether under or in terms of Sections 6 and 7 of the *Bankruptcy (Scotland) Act 1985* or otherwise,
 - (ii) any of the events, are applicable to the Partnership Operating Company specified in Clauses 16.1.1 (iii) and 16.1.1 (ix) have occurred in respect of any partner in the Partnership Operating Company, or
 - (iii) the Partnership Operating Company is otherwise dissolved or wound up, whether under or in terms of Sections 19, 26, 32, 33, 34 or 35 of the *Partnership Act 1890* or otherwise.
- 16.1.3 Without prejudice to any other right or remedy which the Scottish Ministers may have, the Scottish Ministers may at any time by notice in writing terminate this Contract with immediate effect in the event that:
- (i) the Operating Company has failed to remedy a Default within the Remedial Period specified in any relevant Remedial Notice issued by the Scottish Ministers, or
 - (ii) the Operating Company commits a Default that is not capable of remedy.
- 16.1.4 If the Operating Company fails to submit to the Scottish Ministers, in acceptably documented form:
- (i) the Management System, and
 - (ii) the contract control and management function of the Integrated Roads Information System,
- no later than 60 days before the Commencement of Service Date and prior to any Operations commencing on Site, the Scottish Ministers shall be entitled to terminate this Contract at any time thereafter by written notice to the Operating Company.
- For the purposes of this clause, an acceptable Management System and an acceptable contract control and management function of the Integrated Roads Information System is one that is immediately available for use in the manner and detail stated elsewhere in this Contract.
- 16.1.5 In addition to any other right or power to terminate this Contract stated elsewhere in the Contract, the Scottish Ministers may at their discretion terminate this Contract by issuing a written notice of termination to the Operating Company. The effective date of termination shall be stated on the notice of termination and shall not be earlier than 85 days after the date of receipt of the notice of termination by the Operating Company.
- 16.1.6 Nothing in Clauses 16.1.1 to 16.1.5 shall affect or prejudice in any way any right to terminate this Contract that the Scottish Ministers may have by virtue of any other term of this Contract, statute, or remedy at law.
- 16.1.7 Where this Contract is terminated pursuant to any of Clauses 16.1.1 to 16.1.4 and the Scottish Ministers then make other arrangements for the execution of the

Operations, the Scottish Ministers shall be entitled to recover from the Operating Company and the Operating Company shall pay the cost of:

- (i) making those arrangements (including but not limited to the full costs of the preparation of tendering documents and the running of the tendering procedure and award process), and
- (ii) any additional expenditure incurred by the Scottish Ministers in procuring the execution of the Operations over and above that which would reasonably have been expected to be incurred under this Contract in obtaining the execution of the Operations during the unexpired portion of this Contract.

In the event that the Scottish Ministers have extended the Contract Period as provided for elsewhere in this Contract, the Operating Company shall pay to the Scottish Ministers such costs and additional expenditure in respect of such extended period or periods.

16.1.8 Following the issue of a notice of termination, the Scottish Ministers shall not be liable to pay to the Operating Company any sums due in accordance with this Contract until the later of the Contract Expiry Date and the date when the Scottish Ministers have established and calculated to their satisfaction:

- (i) the sums that may be due from the Operating Company to the Scottish Ministers in accordance with the provisions of this Clause 16.1, including the costs of completion of the Operations,
- (ii) damages for delay in completion (if any), and
- (iii) all other expenses incurred by or on behalf of the Scottish Ministers.

Thereafter, the Operating Company shall be entitled to receive any sums that would otherwise have been due to the Operating Company less any amounts payable to the Scottish Ministers under this Contract.

Any such sums due under this Clause 16.1.8 shall become payable on the later of the Contract Expiry Date and the date on which the sum due was established in accordance with this Clause 16.1.8. The final date for payment shall be the date falling 28 days following the date that has been so ascertained.

If such amount exceeds the sum that would otherwise have been payable upon demand, the Operating Company shall pay to the Scottish Ministers the amount of such excess. The sum shall be deemed to be a debt due by the Operating Company to the Scottish Ministers, and such sum shall be recovered accordingly in terms of this Clause 16.1.8.

Any monies due from the Operating Company to the Scottish Ministers pursuant to the provisions of this Clause 16.1 shall, subject to the other provisions of this Contract, take account of the value of any monies remaining to the Scottish Ministers in relation to the Bond and Undertaking, and retention in lieu, in accordance with the other provisions of this Contract.

16.1.9 All depots and areas leased, or made available, to the Operating Company by the Scottish Ministers shall be vacated promptly on termination and returned to the Scottish Ministers within 14 days, after which time the Scottish Ministers may enter the depots and areas and take possession of all remaining Constructional Plant, equipment and materials. Any costs incurred by the Scottish Ministers in clearing

such depots and areas of rubbish, unsuitable materials, equipment and Constructional Plant shall be reimbursed by the Operating Company.

16.1.10 The provisions of any clause of this Contract necessary for its interpretation or enforcement shall survive the expiry or termination of this Contract.

17. FRUSTRATION AND WAR PROVISIONS

17.1 Frustration

17.1.1 Where this Contract is frustrated by any supervening event other than war that may occur independently of the will of the Parties, the Operating Company may abandon the Contract if execution of the Operations is not possible for 28 days from the start of the supervening event. In such an event the sum payable by the Scottish Ministers to the Operating Company for Operations executed shall be the same as that which would have been payable under Clause 17.4 in the event of abandonment pursuant to Clause 17.2.

17.2 War

17.2.1 Where during the currency of this Contract there is an outbreak of war (whether war is declared or not) in which the United Kingdom is engaged on a scale involving general mobilisation of the armed forces of the Crown:

- (i) the Operating Company shall for a period of 28 days, reckoned from 00.01 hours on the day after the order for general mobilisation is given, continue so far as reasonably possible to execute the Operations in accordance with this Contract, and
- (ii) if the execution of the Operations has not been achieved before the said period of 28 days has expired, the Operations shall thereupon be deemed to be abandoned, unless the Operating Company and the Scottish Ministers otherwise in writing agree.

17.3 Removal of Constructional Plant

17.3.1 Upon such abandonment of the Operations pursuant to Clauses 17.1 or 17.2, the Operating Company shall with all due diligence remove from the Unit all Constructional Plant.

17.3.2 Where the Operating Company fails to remove all such Constructional Plant from the Unit, the Scottish Ministers shall be entitled to remove and dispose of it at the cost of the Operating Company.

17.4 Payment on Abandonment of Operations

17.4.1 Upon abandonment of the Operations pursuant to Clauses 17.1 or 17.2, the Scottish Ministers shall pay to the Operating Company (except where such amounts have not already been the subject of earlier payments made to the Operating Company):

- (i) the Contract value of all parts of the Operations carried out before the date of abandonment,
- (ii) the sums payable for any mobilisation or setting up costs for any Operations, so far as such part of the Operations have been executed,
- (iii) the cost of materials and goods properly ordered for the Operations which have been delivered to the Operating Company or of which the Operating Company has a liability to accept delivery (such materials shall become the

property of the Scottish Ministers once such payment has been effected by the Scottish Ministers),

- (iv) an amount of any expenditure properly incurred by the Operating Company in the expectation of executing the whole of the Operations for any Order, where such expenditure has not already been recovered by any other payments referred to in this Clause 17.4,
- (v) an amount of any expenditure properly incurred by the Operating Company in the expectation of executing the whole of the Core Operations, where such expenditure has not already been recovered by any other payments referred to in Clause 17.4, and
- (vi) all proper costs of removal referred to in Clause 17.3.

To this end and without prejudice to the provisions of this Clause 17.4, the provisions of Clause 10.3 shall apply to this clause as if the date of such abandonment was the date of expiry of the Non-Conformance Liability Period.

17.4.2 Where, at any time before the end of the 28 day period referred to in Clause 17.2, any part of the Operations has been executed so far as to be usable, all provisions of this Contract shall have full force and effect except that the Operating Company, in lieu of fulfilling its obligations under Clauses 5.5 and 5.8, shall be entitled at its option to allow against the sum due to it under the provisions of this Contract the cost (calculated at the prices ruling at the beginning of the said period of 28 days) as notified in writing to the Operating Company by the Scottish Ministers that the Operating Company would have been liable for under the said clauses had they continued to be applicable.

17.4.3 The Scottish Ministers shall not be entitled, pursuant to this Clause 17.4, to withhold payment under Clause 10.3 of the retention money or any part thereof.

17.4.4 Except as stated in Clause 17.4.2, this Contract shall continue to have full force and effect.

SCHEDULE 1

PART 7 – DISPUTES RESOLUTION

18. DISPUTES RESOLUTION

18.1 Disputes

18.1.1 As soon as the Scottish Ministers or Operating Company become aware of any matter which if not resolved might become a dispute, they shall so notify the other party in writing.

The Director and the Operating Company shall meet at the earliest opportunity and no later than seven days after such notification to try to resolve the matter.

If the matter is not resolved within a reasonable period of time the parties shall define in writing those parts of the matter that remain unresolved.

If Notice of Dispute is thereafter to be served by either party, the serving of such Notice shall not be unreasonably delayed.

18.1.2 Disputes shall be resolved in accordance with the provisions set out in this Clause 18. The disputes resolution procedures are adjudication and arbitration.

Where any dispute or difference arises between the Parties either Party may serve notice in writing (hereinafter referred to as a "Notice of Dispute") at any time on the other to refer the Dispute to a disputes resolution procedure. Either Party may then refer such dispute to adjudication.

18.1.3 The Notice of Dispute shall contain but not be limited to the following:

- (i) date of the notice,
- (ii) a concise summary of the nature and background of the dispute and the issues arising,
- (iii) the relevant clauses in the conditions of contract which the party giving notice believes gives the basis of entitlement,
- (iv) a statement of the relief claimed,
- (v) the date of the relevant Claim Notification (if relevant),
- (vi) if not previously appointed, suggested name (or names) for an Adjudicator.

18.1.4 Within 21 days of the issue of the Notice of Dispute the Party issuing the Notice of Dispute shall provide the other Party with the following information to the extent that it is in their possession:

- (i) the date of any Scottish Ministers' determination of the relevant claim,
- (ii) a reference to any agreed record of a meeting between the Scottish Ministers and the Operating Company in which the subject matter of the Dispute has been raised,
- (iii) a statement of any matters that the Scottish Ministers and the Operating Company have already agreed in relation to the procedure for determination of the Dispute, and

- (iv) two copies of all documents that have an important and direct bearing on issues in relation to the Dispute and on which the claimant to the Dispute intends to rely.
- 18.1.5 For the purposes of this Contract the Dispute shall be that stated in the Notice of Dispute and for the purposes of all matters arising concerning this Contract the word "Dispute" shall be construed accordingly.
- 18.1.6 Unless the Contract has already been terminated or abandoned pursuant to the other provisions of this Contract, the existence of a Dispute shall not alter the obligations of the Parties under this Contract.
- 18.1.7 The Dispute shall be referred to and decided in the first instance by the Adjudicator acting as an independent Adjudicator but not as an arbiter.
- 18.1.8 Any decision of the Adjudicator shall be final and binding upon the Parties, unless and until there is either:
- (i) a final determination by legal proceedings, or
 - (ii) a subsequent amicable settlement between the parties specifically setting aside the decision of the Adjudicator, or
 - (iii) the Dispute is referred to arbitration and an arbitral award has been made.
- 18.1.9 Unless this Contract has already been terminated by the Scottish Ministers the Operating Company shall in every case continue to proceed with the Operations with all due diligence regardless of the nature of any Dispute.
- 18.1.10 Where either Party intends to register any decision of an Adjudicator in the Books of Council and Session for preservation and execution the other party, shall on being requested to do so, forthwith consent to such registration by subscribing the decision before a witness.
- 18.2 Adjudication**
- 18.2.1 The Adjudication Procedure is given in Schedule 1, Annex 1.
- 18.2.2 Unless the Parties agree otherwise in writing:
- (i) any concessions made by one Party to the Adjudicator, or
 - (ii) any concessions or agreements (other than a settlement agreement) that are made in the course of discussions pursuant to settlement of a Dispute,
- shall be without prejudice and shall not be raised by either Party in any subsequent arbitration or other legal proceedings.
- 18.3 Arbitration**
- 18.3.1 If the Parties agree a dispute may be settled directly by arbitration and the requirements of Clauses 18.2 and 18.2 concerning adjudication may be waived. In which case, either Party may serve a notice in writing on the other to refer the Dispute to the arbitration of a single arbiter. Such notice shall be referred to as a "Notice of Arbitration".
- 18.3.2 Where the Adjudicator's decision pursuant to Clause 18.2:
- (i) is not accepted by either of the Parties, or
 - (ii) where the Adjudicator has failed to make a decision in accordance with the procedure and timescales set out in Schedule 1, Annex 1, or

- (iii) where, subsequent to the Adjudicator's decision concerning the Dispute, where the Adjudicator's decision is not accepted by one of the Parties and the Parties have failed to reach an amicable settlement between themselves,

either Party may serve a notice in writing on the other to refer the Dispute to the arbitration of a single arbiter by a Notice of Arbitration.

18.3.3 The Notice of Arbitration shall contain the following:

- (i) date of the notice,
- (ii) description of the dispute,
- (iii) the relevant findings in the in the adjudicator's decision which the party giving notice disputes,
- (iv) the amount disputed,
- (v) the date of the relevant adjudicator's decision,
- (vi) if not previously appointed, suggested name (or names) for an arbiter, and
- (vii) if applicable, the date of agreement between the parties that the dispute shall be settled directly by arbitration.

18.3.4 The arbiter shall be agreed in writing between the Parties or (failing such written agreement between the Parties, within 30 days of either Party serving on the other a written notice to concur in the appointment of an arbiter) a person to be appointed on the application of either Party to the President for the time being of the Institution of Civil Engineers.

18.3.5 If an arbiter:

- (i) declines the appointment, or
- (ii) after appointment shall be removed by order of a competent court, or
- (iii) shall be incapable of acting, or
- (iv) dies,

and the Parties do not within 30 days of the vacancy arising fill the vacancy then the President of the Institution of Civil Engineers may on the application in writing of either Party appoint an arbiter to fill the vacancy.

18.3.6 Any such reference to arbitration shall be deemed to be a submission to arbitration within the meaning of the *Arbitration (Scotland) Act 2010* as the case may be or any statutory re-enactment or amendment thereof of the time being in force.

18.3.7 The award of the arbiter shall be final and binding on the Parties.

18.3.8 The Adjudicator shall not be eligible for appointment as an arbiter unless the Parties both agree otherwise in writing.

SCHEDULE 1

PART 8 – STATUTORY, CONTRACTUAL AND LEGAL REQUIREMENTS

19. STATUTORY, CONTRACTUAL AND LEGAL REQUIREMENTS

19.1 New Roads and Street Works Act 1991

- 19.1.1 For the purposes of this Contract all expressions common to the *New Roads and Street Works Act 1991* and Clauses 19.1.1 to 19.1.3 shall have the same meaning as that assigned to them by the *New Roads and Street Works Act 1991* unless the context otherwise shall require a different meaning.
- 19.1.2 In respect of the *New Roads and Street Works Act 1991* the Scottish Ministers have delegated and do hereby delegate to the Operating Company those Statutory Functions in respect of the *New Roads and Street Works Act 1991* as stated in Schedule 7 Part 5 of this Contract.
- 19.1.3 Thereafter the Scottish Ministers shall notify the Operating Company from time to time in writing of any changes required in respect of such delegated Statutory Functions.
- 19.1.4 The changes to the Statutory Functions referred to in Clause 19.1.3 are deemed to be incorporated into Schedule 7 Part 5 of this Contract.

19.2 Patent Rights

- 19.2.1 The Operating Company shall indemnify and hold the Scottish Ministers harmless against all liability, loss, damage, costs, expenses and claims suffered or incurred by the Scottish Ministers or any third party arising from use of any Intellectual Property Rights arising from or in association with this Contract including, but not limited to, any claims or proceedings raised against the Scottish Ministers for infringement of Intellectual Property Rights owned by a third party.
- 19.2.2 The Operating Company shall obtain and maintain all necessary licences and permissions associated with Intellectual Property Rights owned or used by the Operating Company under this Contract.

19.3 Royalties

- 19.3.1 Subject to the other provisions of this Contract the Operating Company shall pay all:
- (i) tonnage royalties and other such payments,
 - (ii) other royalties,
 - (iii) rent,
 - (iv) other payments, and
 - (v) compensation (if any),
- for supplying materials required for Operations.

19.4 Interference with Adjoining Land and Properties

- 19.4.1 The Operations shall be executed so as not to interfere with:
- (i) the convenience of the public,
 - (ii) access to public or private roads, footpaths or properties,

- (iii) occupation of adjoining land or properties,
whether in possession of the Scottish Ministers or any other person.
- 19.4.2 The Operating Company shall take all necessary measures to prevent damage, loss, injury or nuisance caused by, or in connection with, the Operations.
- 19.4.3 All parts of the Operations shall be carried out without unreasonable noise and disturbance and the Operating Company shall be responsible for any liability on account of noise or other disturbance or nuisance created whilst executing Operations under this Contract.
- 19.4.4 The Operating Company shall take all necessary precautions in connection with any watercourses, drains, waterways and bodies of water to prevent any:
- (i) interference with the supply to or abstraction from such sources,
 - (ii) silting,
 - (iii) erosion of their beds or banks, and
 - (iv) pollution of the water,
- which would affect adversely the quality or appearance thereof or cause injury or death to animal, aquatic or plant life.
- 19.4.5 The Operating Company shall indemnify and keep indemnified the Scottish Ministers against any claims, demands, proceedings, damages, costs, charges and expenses whatsoever in relation to any of the matters, liabilities and responsibilities referred to in, and/or in respect of breach of Clauses 19.4.1 to 19.4.4, 19.5.1 and 19.5.2.
- 19.5 Avoidance of Damage to Roads**
- 19.5.1 The Operating Company shall use all reasonable means to prevent any of the roads and bridges on the routes leading to the Unit from being subjected to extraordinary traffic within the meaning of Section 96 of the *Roads (Scotland) Act 1984* by any traffic of the Operating Company or any of its contractors, agents, representatives, suppliers and sub-contractors of any tier.
- 19.5.2 The Operating Company shall be liable for all claims for damage to any road or bridge on routes leading to, or within, the Unit caused by extraordinary traffic, as defined in Clause 19.5.1.
- Such liability shall include any claims as may be made by any competent authority directly against the Scottish Ministers pursuant to any Legislation and the Operating Company shall negotiate and pay all claims arising wholly out of such damage.
- 19.5.3 In undertaking Operations, the Operating Company shall select routes and use vehicles and restrict and distribute loads so that:
- (i) any extraordinary traffic, as defined in Clause 19.5.1, as shall inevitably arise from the moving of manufactured articles, fabricated articles, equipment, and material to or from and to the Unit shall be limited as far as reasonably possible, and
 - (ii) no unnecessary damage or injury is caused to such roads and bridges.
- 19.5.4 The Operating Company is responsible for, and paying the cost of, the strengthening of bridges and altering or improving any road to facilitate the movement of Construction Plant and associated Operations.

19.5.5 Should any damage occur to any bridge or road in the execution of the Operations, the Operating Company shall notify the Scottish Ministers in writing of the event as soon as it becomes aware of such damage or of a claim from an authority entitled to make such claim.

19.5.6 Where under any Legislation a haulier is required to indemnify the relevant authority against damage, the Scottish Ministers shall not be liable for any claim in respect hereof or in relation thereto.

In all other cases the Scottish Ministers shall negotiate the settlement of and pay all sums due in respect of such claim. The Scottish Ministers shall indemnify the Operating Company in respect thereof and shall be liable for all associated claims.

Should any claim, in the opinion of the Scottish Ministers, be due to any failure on the part of the Operating Company to observe and perform its obligations under Clause 19.5.1, then the amount notified in writing to the Operating Company by the Scottish Ministers to be due to such failure shall be paid by the Operating Company to the Scottish Ministers or deducted from any sum due, or that may become due, to the Operating Company.

19.5.7 Without prejudice to the provisions of Clauses 19.5.1 to 19.5.4, the Operating Company shall comply with, and ensure that its contractors, agents, representatives, suppliers and sub-contractors of any tier, shall comply with the requirements of the relevant road order for routeing of vehicles.

In specifying routeing requirements, the Scottish Ministers do not warrant in any way that such Route(s) shall be available in full or in part for the whole or any part of the Contract Period.

The Operating Company shall provide, erect and maintain in good condition traffic signs of a type consented to by the Scottish Ministers giving effect to these routeing requirements.

19.6 Fossils and Antiquities

19.6.1 All fossils, coins, articles of value or antiquities, and structures or other remains or things of geological or archaeological interest discovered in the Unit by the Operating Company or its contractors, agents, representatives, suppliers and sub-contractors of any tier are deemed to be the absolute property of the Scottish Ministers.

The Operating Company shall take reasonable precautions to prevent its work people or any other persons from removing or damaging any such article or thing. Immediately upon discovery thereof and before removal, the Operating Company shall notify the Scottish Ministers in writing of such discovery and shall execute at the expense of the Scottish Ministers any Order for the treatment or disposal of same.

19.7 Operations within Government or Local Authority establishments

19.7.1 Where Operations are undertaken within the boundaries of a Government or local authority establishment, the Operating Company shall comply with any statutory and other procedures, rules and regulations of such establishment that apply to such Operations.

19.8 Data Protection Act – Operating Company's Indemnity

- 19.8.1 The Operating Company shall (and shall ensure that its contractors and sub-contractors (of all tiers) shall) comply in all respects with the *Data Protection Act 1998* and any related legislation.
- 19.8.2 Where the Operating Company has obtained, without the consent of the Scottish Ministers, personal data within the meaning of the *Data Protection Act 1998* and where it has directly or indirectly breached the Act, it shall indemnify the Scottish Ministers against all resulting losses and claims.

19.9 Non Corrupt Practices

- 19.9.1 The Operating Company shall not:
- (i) offer or give or agree to the giving to any person any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this Contract or any other contract with the Scottish Ministers or for showing or forbearing to show favour or disfavour of any person in relation to this Contract or any other contract with the Scottish Ministers, or
 - (ii) enter into this Contract or any other contract with the Scottish Ministers in connection with which commission has been paid or agreed to be paid by it or on its behalf or to its knowledge unless before the contract is made particulars of any such commission and of the terms and conditions of any agreement for the payment thereof have been disclosed in writing to the Scottish Ministers.
- 19.9.2 Any breach of the prohibitions referred to in this Clause 19.9 or the commission of any offence under the *Prevention of Corruption Acts 1889 to 1916* and the *Bribery Act 2010* by the Operating Company in relation to this or any other contract with the Scottish Ministers shall entitle the Scottish Ministers to terminate the Contract in accordance with Clause 16 of this Schedule.

Thereupon the provisions of Clause 16 of this Schedule shall have effect as if such breach or offence was expressed as a reason for termination by the other provisions of this Contract. The termination shall be as if made under Clause 16.1.2 and the subsequent procedures and entitlements shall be the same as that for termination under Clause 16.1.2.

In that case the Operating Company shall not be entitled to payments on this Contract or contracts beyond those (if any) provided for by the other provisions of this Contract.

In addition to the costs and expenses recoverable by the Scottish Ministers as provided for in the other provisions of this Contract, the Scottish Ministers shall also be entitled to recover from the Operating Company any other costs or losses incurred by the Scottish Ministers consequent upon such termination under Clause 19.9 and to receive from the Operating Company such sums that, in the opinion of the Scottish Ministers, represents the amount or value of any gift consideration paid or agreed to be paid in breach of this Clause 19.9.

19.9.3 In every sub-contract for any part of the Operations the Operating Company shall incorporate provisions that:

- (i) impose on the sub-contractor liabilities substantially similar to those imposed on the Operating Company by Clauses 19.9.1 and 19.9.2, and
- (ii) entitle the Operating Company to determine the sub-contract on terms equivalent to those contained in the other provisions of this Contract.

19.9.4 The Operating Company will be held liable for the actions or lack of action of any sub-contractor of any tier should a sub-contractor breach the requirements of this Clause 19.9.

19.9.5 In the event of any breach by any sub-contractor of any tier of any of the liabilities referred to in Clause 19.9.3, the Operating Company shall without prejudice to any of its obligations under this Contract take action in accordance with the terms of the sub-contract to exercise its rights against the sub-contractor.

Failure by the Operating Company to take action shall be a reason for termination of this Contract by the Scottish Ministers in accordance with Clause 16 of this Schedule.

When the Operating Company exercises its rights against a sub-contractor in accordance with this Clause 19.9, it shall make no claim nor agree to any claim being made on its behalf against the Scottish Ministers for any consequential delays and extra costs arising from the terms of this Contract.

19.9.6 Any dispute as to the amount recoverable by the Scottish Ministers from the Operating Company under this Clause 19.9 shall be settled in the manner provided by Clause 18 of this Schedule.

19.10 Privacy of Information

19.10.1 The Operating Company shall only give information concerning this Contract for publication in accordance with the provisions of this Contract as stated in Schedule 3 Part 5.

19.11 Secrecy

19.11.1 Notwithstanding any other provisions of this Contract, the provisions of the *Official Secrets Acts 1911 to 1989* shall apply to this Contract and to the Operating Company.

The Operating Company shall use all reasonable endeavours to ensure that all persons employed by it in connection with this Contract are aware that these statutory provisions apply to them during the continuance and after the completion or earlier termination of this Contract.

19.11.2 Information concerning this Contract and any information obtained either by:

- (i) the Operating Company in the course of the execution of this Contract, or
- (ii) by any person employed by it in connection with this Contract in the course of such employment,

shall be confidential and shall be used by the Operating Company and by any such person solely for the purpose of this Contract.

Subject to the provisions of Clause 19.10, such information shall not at any time be disclosed by the Operating Company or by any such person without the prior written consent of the Scottish Ministers.

19.12 Intellectual Property Rights and Ownership of the Information

19.12.1 For the purposes of this Clause 19.12, "Information" means all Intellectual Property Rights in and ownership of all data, Designs, drawings, inventions, ideas, photographs, reports, software, specifications, and other materials or works, Operations or activities, of whatsoever nature, both existing and occurring during the Contract:

- (i) conceived,
- (ii) developed,
- (iii) made, or
- (iv) otherwise produced,

by the Operating Company (or its contractors, agents, representatives, suppliers and sub-contractors of any tier) or given to the Operating Company by anyone or brought to the attention of the Operating Company (or its contractors, agents, representatives, suppliers and sub-contractors of any tier) by anyone (whether in electronic form, on paper or in any other form) in the course of or arising from the execution of the Operations.

The Information includes the other information referred to or specified in the other provisions of this Contract.

The Information is hereby assigned to and vests in and is the property of the Scottish Ministers.

19.12.2 By entering into this Contract, the Operating Company shall (and shall procure that all of its contractors, agents, representatives, suppliers and sub-contractors of any tier) assign, make over and transfer all right, title, and interest, present and future, to the Information and the Intellectual Property Rights in the Information to the Scottish Ministers.

The Operating Company shall execute or procure the execution of any deed or document and do all other things necessary to ensure that all such right, title, and present and future interest in and to the Information and the Intellectual Property Rights in such vest in the Scottish Ministers.

19.12.3 The Operating Company shall assist the Scottish Ministers in connection with any application to record or register any Intellectual Property Rights in respect of this Contract or any of the Information and shall do all such acts and things as the Scottish Ministers shall require in writing in connection with any such assistance.

19.12.4 The Operating Company irrevocably appoints the Scottish Ministers to be its agent and in its name and on its behalf to do all such acts and things and to sign all such deeds and documents as may be necessary in order to provide to the Scottish Ministers the full benefit of the provisions of this Clause 19.12.

19.12.5 The Operating Company hereby confirms that, it shall procure that any third parties it may appoint as contractors, agents, representatives, suppliers or sub-contractors, shall appoint the Scottish Ministers to act as agent on behalf of such third parties in accordance with the provisions of this Clause 19.12. For the purposes of this Clause 19.12.5, a certificate signed by the Director shall be conclusive evidence that:

- (i) any act or thing done by the Scottish Ministers, or
- (ii) any deed or document executed by the Scottish Ministers,

falls within the authority of the Scottish Ministers to act as agent in accordance with the provisions of this Clause 19.12.

The Operating Company shall (and shall procure that all of its contractors, agents, representatives, suppliers and sub-contractors) warrant and undertake that they shall:

- (iii) be free to assign all right, title and interest, present and future in and to such Information and the Intellectual Property Rights therein to the Scottish Ministers in accordance with this Clause 19.12 without any third party claims, liens, charges or encumbrances of any kind, and
- (iv) be free of any duties or obligations to third parties that may conflict with the terms of this Clause 19.12.

19.12.6 The Operating Company shall warrant that the Information shall not infringe any Intellectual Property Rights of which a third party is the proprietor.

19.12.7 Notwithstanding and without prejudice to any other provision of this Contract, or to the application of the *Official Secrets Acts 1911 to 1989*, the Operating Company shall keep and shall ensure that its agents, employees, and representatives, keep the Information secret and confidential and shall:

- (i) not at any time for any reason whatsoever disclose them to any third party,
- (ii) use them, or
- (iii) permit them to be so disclosed or used,

except as shall be permitted by the other provisions of this Contract to enable the Operating Company to execute the Operations.

19.12.8 Notwithstanding the other provisions of this Contract, the Operating Company shall indemnify and keep indemnified the Scottish Ministers and any employee or representative of the Scottish Ministers against all actions, charges, claims, costs, demands, expenses, losses, and suits incurred by or brought against the Scottish Ministers, or any employee or representative of the Scottish Ministers, arising from or in connection with, or incurred by reason of, any breach of this Clause 19.12 by the Operating Company and any infringement or alleged infringement of any Intellectual Property Rights by reason of the use or possession of the Information, or any part of it, by the Scottish Ministers, or any employee or representative of the Scottish Ministers, including without prejudice to the generality of the foregoing:

- (i) any legal expenses incurred by the Scottish Ministers or any member, employee or representative of the Scottish Ministers,
- (ii) any sums paid to any third party by way of damages or in settlement of any claim by a third party in respect of any such infringement or alleged infringement, and

- (iii) the actual cost of any such substitute or replacement for any item that the Scottish Ministers are unable to use in consequence of any such infringement or alleged infringement.

19.12.9 The Scottish Ministers shall permit the Operating Company to use all data, reports, drawings, specifications, Designs, photographs, ideas, inventions, software, and any other materials or works in respect of which the Intellectual Property Rights are vested in it but only for the purposes of and to the extent necessary for the proper provision of the Operations in accordance with this Contract and for no other purpose whatsoever, unless the Scottish Ministers shall have given consent in writing to the Operating Company that permits the use of such for another purpose.

19.12.10 The rights and obligations of the Parties under this Clause 19.12 shall survive the expiry or the termination of this Contract howsoever arising.

19.13 Freedom of Information

19.13.1 The Scottish Ministers may need to disclose or publish all information submitted to them.

Without prejudice to the foregoing generality, the Scottish Ministers may disclose information in compliance with the *Freedom of Information (Scotland) Act 2002*, the *Environmental Information Regulations (Scotland) 2004* and judicial orders and any similar or related legislation that may exist in other jurisdictions ("Information Acts"). The decisions of the Scottish Ministers regarding the disclosure, or otherwise, of information shall be final and conclusive under the terms of the Information Acts.

Additionally, the Scottish Ministers may also disclose all information submitted to them in accordance with this Contract to the Scottish and United Kingdom parliaments and to any other department, office or agency of Her Majesty's governments in Scotland and the United Kingdom and their servants and agents. The Operating Company acknowledges that, when making such disclosures, the Scottish Ministers are unable to impose any restriction upon the information that they provide and that such disclosure shall be deemed not to be a breach of this Contract.

19.13.2 Information regarding the Intellectual Property Rights of each of the Parties shall be deemed commercially sensitive information for the purposes of the Information Acts.

19.13.3 The Operating Company shall (and shall procure that all of its contractors, agents, representatives, suppliers and sub-contractors of any tier) assist the Scottish Ministers at no additional charge in meeting any reasonable requests for information in relation to this Contract which are made to the Scottish Ministers in connection with the Information Acts. The Scottish Ministers may, from time to time, serve on the Operating Company an information notice requiring the Operating Company within such time and in such form as is specified in the information notice, to furnish to the Scottish Ministers such information as the Scottish Ministers may reasonably require relating to such requests for information. The Operating Company acknowledges that in responding to such requests for information, the Scottish Ministers shall be entitled to provide information relating to this Contract.

20. THE CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS

20. THE CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS

20.1 The Construction (Design and Management) Regulations

- 20.1.1 For the purpose of this Clause 20 of this Schedule the terms "client", "construction phase plan", "health and safety file" "designer", "Principal Designer", "Principal Contractor" and "contractor" shall have the meanings assigned to them in the CDM Regulations.
- 20.1.2 The Operating Company shall undertake the client's duties in respect of the CDM Regulations although the legal responsibility will remain with the Scottish Ministers.
- 20.1.3 For the purposes of this Contract the Operating Company shall appoint a named person as the Client's Representative, in accordance with the requirements of Schedule 6 Part 2, as a single point of contact to ensure the OC fully undertakes the client's duties under the CDM Regulations.
- 20.1.4 The Client's Representative shall act independently of the Operating Company's commercial management of the Contract. The Operating Company shall respect the need for independence and ensure that the named person can act independently.
- 20.1.5 The Client's Representative may not be changed without prior agreement of the Scottish Ministers. Such agreement shall be sought by the Operating Company not less than 28 days prior to the proposed date of the change.
- 20.1.6 If subsequent to the appointment of the Client's Representative the Scottish Ministers are dissatisfied with the work of the Client's Representative, the Operating Company shall procure a replacement within 28 days of the Scottish Ministers notification. If the Operating Company fails to procure a replacement, the Scottish Ministers may make their own appointment and the costs of such appointment will be deducted from amounts payable to the Operating Company under Clause 10 of this Schedule.
- 20.1.7 The Operating Company shall be responsible for acting as Principal Designer (even when only one contractor is appointed) and shall appoint other organisations to be designer(s) as shall be required during the Contract Period for Operations.
- 20.1.8 The Operating Company shall be responsible for acting as Principal Contractor and shall appoint other organisations to be contractor(s) as shall be required during the Contract Period for Operations.
- 20.1.9 The Operating Company shall notify the Scottish Ministers in writing of the appointment of designer(s) and/or contractor(s) and any changes made during the Contract Period for Operations.
- 20.1.10 Where the CDM Regulations apply to Works undertaken by a Works Contractor, the Operating Company is appointed to act in the role of Principal Designer for Works Contracts. The Works Contractor will be appointed to act in the role of Principal Contractor for Works Contracts.
- 20.1.11 When taking any actions in any role for which it is responsible under the CDM Regulations, the Operating Company shall record in writing that such actions are being taken in accordance with the provisions of the CDM Regulations and the role under which the actions are taken.
- 20.1.12 Any action required by the Principal Designer and/or Principal Contractor pursuant to Clauses 20.1.7 to 20.1.11, with particular reference to any alteration or

amendment to the construction phase plan, shall not entitle the Operating Company to any additional payment or extension of time for such provision and action.

20.1.13 The Operating Company shall comply with the requirements of Schedule 6 Part 2 in the respect of the client's duties under the CDM Regulations.

SCHEDULE 1

PART 9 – TAX MATTERS INCLUDING VAT

21. TAX PROVISIONS

21.1 Tax Matters

21.1.1 The rates and prices contained in the Schedule of Rates and Prices, in Schedule 2 Part 2, are deemed to take account of the levels and incidence 42 days prior to the date for the return of Tenders of:

- (i) the taxes, levies, contributions, premiums, or refunds, which shall be by law payable by or to the Operating Company in respect of their workpeople engaged on this Contract,
- (ii) any landfill tax payable by the Operating Company pursuant to the *Finance Act 1996* and *Landfill Tax Regulations* thereof for the time being in force, and
- (iii) any aggregates levy payable by the Operating Company or his sub-contractors pursuant to the *Finance Act 2001* or any statutory re-enactment or amendment thereof for the time being in force.

The rates and prices contained in the Schedule of Rates and Prices shall not take account or be deemed to take account of any level or incidence of the matters, referred to in paragraphs (i), (ii) and (iii) above, foreseeable or known to take effect at some later date.

21.1.2 If after the date 42 days prior to the date for return of Tenders there shall occur any change in the level or incidence of any such taxes, levies, contributions, premiums, or refunds, (but excluding income tax and any levy payable under the *Industrial Training Act 1982* thereof for the time being in force) the Operating Company shall so notify in writing the Scottish Ministers.

Notwithstanding any other provisions of this Contract the Operating Company shall provide all the necessary information which in the opinion of the Scottish Ministers is necessary to demonstrate any proposed adjustment to the Contract Price resulting from any such change. Such information shall include, but should not be limited to, proof of payments actually made before and after the change for which the Operating Company seeks additional reimbursement.

All payments to the Operating Company by the Scottish Ministers after the provision of such information shall take account of the net amount of such additions or deductions to which such information relates.

21.1.3 Clause 21.1.2 shall only apply to a matter whose effect on prices is not be included in the calculation of any of the indices referred to in Clause 10.7 of this Schedule.

21.2 Value Added Tax

21.2.1 The Operating Company is deemed not to have allowed in the Schedule of Rates for any Value Added Tax that may be chargeable on any taxable supplies made to the Scottish Ministers made under this Contract.

21.2.2 The Operating Company shall not include in any Statement submitted under Clause 10 any element on account of Value Added Tax in any item or claim contained in or submitted with any such Statement.

- 21.2.3 Without prejudice to the provisions of Clause 21.2.4, the Operating Company shall concurrently with the submission of every Statement referred to in Clause 21.2.2 provide to the Scottish Ministers a written assessment showing those supplies of goods and services and the values thereof included in each said Statement and on which Value Added Tax is properly chargeable by Her Majesty's Revenue and Customs on the supply to the Scottish Ministers of any goods or services by the Operating Company under this Contract at a rate other than zero.
- 21.2.4 In addition to the payments due to the Operating Company by the Scottish Ministers pursuant to the other provisions of this Contract, the Scottish Ministers shall separately identify and pay to the Operating Company any Value Added Tax properly chargeable by the Operating Company on the supply to the Scottish Ministers of any goods or services by the Operating Company under this Contract.
- 21.2.5 If any dispute arises between either the Scottish Ministers or the Operating Company and Her Majesty's Revenue and Customs and in connection with any Value Added Tax chargeable or alleged to be chargeable in connection with this Contract, including but not limited to the execution of the Operations, the Scottish Ministers and the Operating Company shall provide each other with any support and assistance as may be necessary to resolve such dispute.
- 21.2.6 Clause 18 does not apply to any disputes arising under Clauses 21.2.1 to 21.2.3.

21.3 Construction Industry Scheme

- 21.3.1 The Operating Company is deemed a Construction Industry Scheme contractor and shall be required to register accordingly with Her Majesty's Revenue and Customs.
- 21.3.2 In accordance with the requirements of the Construction Industry Scheme, the Operating Company shall verify the employment status of all subcontractors employed by it during the Contract Period in order to pay such subcontractors correctly.
- 21.3.3 The Operating Company shall record the gross amount of:
- (i) each payment it makes to a subcontractor, excluding any Value Added Tax,
 - (ii) the amount of any deduction it makes from a payment before it is paid to the subcontractor, and
 - (iii) if a deduction was made, the amount of any materials costs, excluding any Value Added Tax.
- 21.3.4 The Operating Company shall keep such records for at least six years after the end of the tax year to which they relate. If requested by the Scottish Ministers during the period stated in this clause, the Operating Company shall make such records available to the Scottish Ministers.

SCHEDULE 1

PART 10 – TUPE

22. TRANSFER OF UNDERTAKINGS

22.1 Transfer of Undertakings

22.1.1 Employees of the operating company engaged by the Scottish Ministers before the Commencement of Service Date, who performed operations which are equivalent or substantially similar to the Operations to be undertaken by the Operating Company (and/or any contractor or subcontractor of any tier), are eligible to transfer to the Operating Company by operation of the TUPE Regulations.

22.1.2 The Parties acknowledge that, at the Contract Commencement Date, the "TUPE Regulations" are likely to apply to this contract so that the transferring employees become the employees of the Operating Company on the Commencement of Service Date.

Before and with effect from the Commencement of Service Date the Operating Company warrants that it will (and it will procure that any contractor or subcontractor of any tier will) comply with its obligations under the TUPE Regulations.

The Parties acknowledge that where the TUPE Regulations apply at the Contract Termination Date the Operating Company (and/or any contractor or subcontractor of any tier) has further obligations under the TUPE Regulations and the Operating Company warrants that it will (and it will procure that any contractor or subcontractor of any tier will) comply with those obligations.

22.1.3 The Scottish Ministers shall not be liable for any failure of the Operating Company or any contractor or sub-contractor (of any tier) to fulfil its obligations under the TUPE Regulations prior to the Contract Commencement Date.

The Operating Company will pay, provide and settle in full all remuneration and benefits of any kind which are due to the Contract Personnel. These will be paid or provided no later than the date such remuneration and/or benefits are due, or if such remuneration and/or benefits are due after the Contract Termination Date, the Operating Company shall make a payment to the Scottish Ministers equivalent to such remuneration and/or benefits on the Contract Termination Date.

22.1.4 At any time during the existence of this Contract or after its expiry or termination, the Operating Company shall provide to the Scottish Ministers in writing such Contract Personnel Information as the Scottish Ministers may require.

Such information shall be provided within eight weeks of receipt of any request, or such other reasonable period as agreed by the Scottish Ministers, and in such formats as may be specified by the Scottish Ministers.

22.1.5 The Operating Company shall supply the TUPE Information as described in Table 22.1.5/A, whether requested or not to the Scottish Ministers in writing (or in such format as may be specified by the Scottish Ministers), at least 24 months before the end of the Contract Expiry Period. The TUPE Information is only to include details relating to those of the Contract Personnel who are employees of the Operating Company (and/or any contractor or subcontractor of any tier) and will be organised by reference to the particular employer.

Table 22.1.5/A – TUPE Information Required

Required Information
Number of employees
Each employee post title
Location of each employee post
Written Statement of Employee Particulars (as defined in TUPE Regulations) for each employee
Salary or wage, including additional benefits and earnings (e.g. overtime and bonuses)
Accommodation and travel allowances paid as part of employment package (excludes information on reimbursement of "as incurred expenses")
Frequency of salary or wage payments
Date of commencement of last period of service
Period of notice for each employee to terminate employment
Pension scheme terms and conditions
Training records and qualifications
Long term sick leave records
Disciplinary records
Details of any entitlement to enhanced rights on being made redundant (whether it is an entitlement to a cash payment or a pension benefit)
Details of the percentage of the total time employed that each employee is engaged in performance of the Operations
Continuous service date
Copies of rules of any pension scheme which any employee is a member of
Maternity leave, paternity leave and parental leave records
Details of any current, outstanding or anticipated grievances or disputes.

- 22.1.6 After the TUPE Information has been provided, the Operating Company shall notify the Scottish Ministers in writing of any change to any part of the TUPE Information and shall co-operate with any reasonable requests made by the Scottish Ministers or any prospective tenderer or incoming operating company concerning the TUPE Information both within 14 days of a change or receipt of a request, whichever is the earlier (such information described as the Updated TUPE Information).
- 22.1.7 The Operating Company warrants that the TUPE Information, the Updated TUPE Information and Contract Personnel Information, will be complete and accurate as at the date it is disclosed.
- 22.1.8 The Operating Company irrevocably waives, and procures that its contractors, and subcontractors of any tier, irrevocably waive, the right of confidentiality and any other right that it or they may have in respect of the TUPE Information, the Updated TUPE Information, or the Contract Personnel Information.

22.1.9 The Scottish Ministers may disclose any of the TUPE Information, Updated TUPE Information and Contract Personnel Information to any prospective tenderer and incoming operating company and will ensure that, prior to such disclosure, the prospective tenderer or the incoming operating company undertakes not to disclose (unless required by law to do so) such information to any other person other than a person who:

- (i) is a servant, agent or legal adviser of the prospective tenderer or incoming operating company, and
- (ii) has undertaken not to disclose that information unless required by law to do so.

If after the Contract Termination Date:

- (iii) any contract of employment relating to an individual who is named in the TUPE Information provided under Clause 22.1.13 but who has been identified by the Operating Company as not being eligible to transfer, or who has incorrectly been identified as being eligible to transfer by the Operating Company under Clause 22.1.13, shall have effect as if originally made between the Scottish Ministers (or an incoming operating company) and the individual or any individual claims that their contract has this effect (together "the Undisclosed Employees"), or
- (iv) any collective agreement shall have effect as if originally made between the Scottish Ministers (and/or an incoming operating company) and any party to the collective agreement or any party claims that a collective agreement has this effect (together "the Undisclosed Agreements"),

the Scottish Ministers (or an incoming operating company) may forthwith terminate the Undisclosed Agreements and/or employment of the Undisclosed Employees.

22.1.10 The Operating Company shall indemnify and keep indemnified the Scottish Ministers or (if the Scottish Ministers so direct) any incoming operating company in respect of any claims, costs (including Scottish Ministers' costs), expenses, payments, damages, compensation awards and liabilities arising from:

- (i) any claim by any person that the transfer of his employment at the Commencement of Service Date to the Operating Company (or any contractor or subcontractor of any tier) involves or would involve a substantial change in working conditions to his material detriment or a claim that it gives or would give him grounds to claim constructive dismissal or any objection to the transfer by a Transferring Employee,
- (ii) the employment of the Contract Personnel and the Undisclosed Employees by the Operating Company (or any contractor or subcontractor of any tier),
- (iii) the employment of the Undisclosed Employees, the termination of the employment of the Undisclosed Employees or the termination of the Undisclosed Agreements, in each case by the Scottish Ministers or an incoming operating company,
- (iv) any act or omission by the Operating Company (or any contractor or subcontractor of any tier) in relation to the Contract Personnel,
- (v) any claim (including any entitlement of any Contract Personnel or Undisclosed Employee consequent on such a claim) by any trade union or

staff association or employee representative arising from or connected with any failure by the Operating Company (or any contractor or subcontractor of any tier) to comply with any legal obligation to such trade union or staff association or employee representative (whether under the TUPE Regulations or otherwise),

- (vi) any failure by the Operating Company (and/or any contractor or subcontractor of any tier) to comply with its obligations under Clause 22 of this Schedule, and
- (vii) any failure by the Operating Company or any contractor or subcontractor of any tier, to comply with its obligations under regulations 11 and 13 of the TUPE Regulations whether on or before the Contract Commencement Date or on or before the end of the Contract Period.

22.1.11 The Operating Company shall indemnify the Scottish Ministers and be liable for any additional employment costs incurred by the Scottish Ministers and any successor organisation to the Operating Company resulting from inaccurate or incomplete information submitted to the Operating Company under this Clause 22. Employment costs referred to in this clause shall also include costs of terminating employment of individuals and costs resulting from the Scottish Ministers' and the successor's organisation's representation at employment tribunals.

22.1.12 The Operating Company shall be liable for any costs incurred by the Scottish Ministers and any successor organisation to the Operating Company due to the non-disclosure by the Operating Company of any collective agreements that are subject to TUPE Regulations.

22.1.13 Within the period six months prior to the Contract Expiry Date, the Operating Company shall not (and shall procure that any contractor or sub-contractor of any tier) shall not (a) alter the terms and conditions of the Contract Personnel (b) other than with the consent of the Scottish Ministers, increase the number of total Contract Personnel assigned to the Operations or (c) change the identity of the Contract Personnel unless such person is replaced with an individual of equivalent or greater level or skill and experience within six months prior to the Contract Expiry Date without the agreement of the Scottish Ministers. The requirements of this clause shall also apply following:

- (i) any event given in Clause 16.1 which enables the Scottish Ministers to terminate the contract, or
- (ii) following the issue of a notice of termination under Clause 16.1 of Schedule.

The requirements of this clause do not apply to changes arising in order to comply with nationally agreed settlements or legal requirements.

22.1.14 Within 21 days of any notice of termination the Operating Company shall provide the Scottish Ministers with the Contract Personnel Information and the TUPE Information. The Operating Company shall identify those employees whose details are included in the TUPE Information but who are not eligible to transfer by operation of the TUPE Regulations to the Scottish Ministers or an incoming operating company.

22.1.15 The provisions of this Clause 22 shall apply during the existence of this Contract and after its expiry or termination, howsoever arising.

SCHEDULE 1

PART 11 – SPECIAL REQUIREMENTS OF RELEVANT ORGANISATIONS

23. SPECIAL REQUIREMENTS OF RELEVANT ORGANISATIONS

23.1 Relevant Organisations

23.1.1 "Relevant Organisation" means any of the authorities, undertakers and other organisations listed in Table 23.1.1/A and includes their successor organisations and any subsidiary or parent undertakings (within the meaning of Section 1162 of the *Companies Act 2006* save that for the purposes of subsection (2) of that Section an undertaking shall be treated as a member of another undertaking if any shares in that other undertaking are held by a person or that person's nominee by way of security or in connection with the taking of security granted by the undertaking) of such organisations.

Table 23.1.1/A – Relevant Organisations

British Waterways
British Telecommunications Group plc
The Civil Aviation Authority
The Coal Authority
Government establishments
The Health and Safety Executive
Historic Scotland
National Grid plc
Network Rail Infrastructure Limited
Scotia Gas Networks plc
Scottish and Southern Energy plc
Scottish Environment Protection Agency
Scottish Government Rural and Environment Directorate
Scottish Natural Heritage
Scottish Power Ltd
Scottish Water Limited
Thus Group plc
Traffic Scotland
Virgin Media Ltd

23.2 Compliance with Relevant Organisation's Requirements

23.2.1 The Operating Company shall be responsible for making its own arrangements for undertaking Operations which involve or impinge upon the interests of any Relevant Organisation.

When making arrangements for, and when undertaking, such Operations the Operating Company shall comply with the Special Requirements of all applicable Relevant Organisations.

23.2.2 The Operating Company shall be responsible for making all necessary applications for track Possessions, canal stoppages and closures of public rights of way.

23.2.3 The Operating Company shall also comply with any reasonable requirements of the Relevant Organisation that are specific to any particular Order.

23.2.4 Compliance with the requirements referred to in Clause 23.2.3 shall not relieve the Operating Company of any of its other obligations and liabilities under this Contract.

Fulfilment of such other obligations and liabilities shall not relieve the Operating Company of its responsibility to comply with the Special Requirements of the Relevant Organisation.

This is Annex 1 to Schedule 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCHEDULE 1

SCHEDULE 1 ANNEX 1 – Adjudication Procedure

1. ADJUDICATION PROCEDURE

1.1.1 Where an Adjudicator has been named in the Contract, or agreed by the Scottish Ministers and the Operating Company prior to the issue of the Notice of Dispute, the Party issuing the Notice of Dispute shall at the same time send to the Adjudicator a copy of the Notice of Dispute and a request for confirmation, within two days of the date of issue of the Notice of Dispute, that the Adjudicator is able and willing to act.

Where an Adjudicator has not been so named or agreed, the Party issuing the Notice of Dispute may include with the Notice of Dispute the names of one or more persons with their addresses who have agreed to act, any one of whom would be acceptable to the Party issuing the Notice of Dispute, for selection by the other Party. The other Party shall select and notify the Party issuing the Notice of Dispute and the selected Adjudicator within two days of the date of issue of the Notice of Dispute.

If a request for confirmation is not received or a selection is not made, both as described above, or the Adjudicator does not accept or is unable to act, then either Party may request the Institution of Civil Engineers to nominate an Adjudicator within five days of receipt of the request. The request shall be in writing, accompanied by a copy of the Notice of Dispute and the appropriate fee.

1.1.2 The Adjudicator shall have power to open up, review, and revise any:

- (i) decision,
- (ii) opinion,
- (iii) instruction,
- (iv) direction,
- (v) notice (with the exception of statutory notices),
- (vi) objection, or
- (vii) certificate,

of any person given or made pursuant to this Contract relating in any way to the Dispute save as otherwise expressly provided within this Contract.

1.1.3 The Adjudicator shall have power to appoint suitably qualified and experienced independent professional advisors as he may reasonably require (and any necessary secretarial assistance as is necessary) to advise him on any issues and the Adjudicator shall have proper regard to such advice in reaching his decision.

1.1.4 Where after consideration of the written submissions of the Scottish Ministers and the Operating Company the Adjudicator shall be of the opinion that:

- (i) such written submissions shall be insufficient for him to reach a decision, or

- (ii) clarification of the precise question that is being addressed to him is required,

then he shall so notify in writing the Scottish Ministers and the Operating Company forthwith and in that event he shall be entitled to determine the further procedures which he considers necessary to enable him to resolve the Dispute.

The Adjudicator shall be required to reach a decision in writing in accordance with the timetable hereinafter provided.

In the event of the Adjudicator failing to do so either the Scottish Ministers or the Operating Company may serve a fresh notice in terms of paragraph 1.1.1 of this Schedule 1, Annex 1 and request another Adjudicator to act in accordance with the provisions of this Schedule 1, Annex 1. Such Adjudicator shall provide a reasoned decision in writing to the Scottish Ministers and the Operating Company.

1.1.5 The Adjudicator shall have power:

- (i) to hold a hearing or other such meeting to take oral evidence from the Scottish Ministers and the Operating Company,
- (ii) to fix the date time and place of any meetings, hearings or inspections that he deems appropriate giving the Scottish Ministers and the Operating Company reasonable notice thereof and declaring that the Scottish Ministers and the Operating Company may appoint representatives to appear on their behalf at any hearing,
- (iii) to examine any witness or conduct an inspection of any property or thing relevant to the Dispute in the absence of any other representative of the Scottish Ministers or the Operating Company or any other person,
- (iv) to allow at his discretion refuse or limit the appearance of witnesses whether witnesses of fact or expert witnesses,
- (v) to allow any witness who gives oral evidence at a hearing to be questioned by the Scottish Ministers and the Operating Company under the control of the Adjudicator.

The Adjudicator may put questions at any stage of the examination of the witness and such witness shall be obliged to answer:

- (vi) to allow at his discretion the evidence of any witness to be presented in written form either as a signed statement or by a duly sworn affidavit. Either the Scottish Ministers or the Operating Company may make representations that such a witness shall attend for oral examinations at a hearing.

If the Adjudicator so orders and if the witness thereafter fails to attend the Adjudicator may place such weight on the evidence as he considers fit or exclude it altogether.

The Adjudicator shall:

- (vii) at any time permit either the Scottish Ministers or the Operating Company to amend any submission,
- (viii) continue with the reference to the adjudication in default of appearance or of any act by either the Scottish Ministers or the Operating Company in like

manner as a Judge of the Court of Session may continue with proceedings in that Court when either the Scottish Ministers or the Operating Company shall fail to comply with an order of that Court or requirement of rules of Court including power to strike out any claim defence counter claim or other submission and to make any decision consequent upon any such striking out in the event that either the Scottish Ministers or the Operating Company shall fail within the timescale specified in this procedure or in any order to do any act required by this procedure or to comply with any order of the Adjudicator,

- (ix) order either the Scottish Ministers or the Operating Company to produce to the other and to the Adjudicator for inspection and to supply copies of any documents in that party's possession custody or power which in the event of a Dispute the Adjudicator determines to be relevant.

Subject to the rules of privilege and in the event of privilege being claimed the Adjudicator shall have power hereunder to decide this question:

- (x) to order either the Scottish Ministers or the Operating Company to answer interrogations on the application to the other party,
- (xi) to require the Scottish Ministers or the Operating Company to submit if required in advance of any meeting or hearing or inspection a list of questions that they require him to treat with special attention,
- (xii) to order the inspection preservation storage or interim custody of any property or thing relevant to the Dispute under the control of either Scottish Ministers or the Operating Company,
- (xiii) to order samples to be taken observations to be made and experiments to be tried that may in the Adjudicator's discretion be necessary or expedient for the purpose of obtaining full information or evidence,
- (xiv) to require the Scottish Ministers and the Operating Company to provide written statements of their respective cases in relation to particular issues to provide written answers and to provide reasons for any disagreement,
- (xv) to award simple interest to the successful party to the adjudication on any sums held to be due from one party to the other from any date including any date prior to the date of reference to adjudication.

The rate of interest shall be at the discretion of the Adjudicator:

- (xvi) to ensure that all meetings hearings or inspections shall be in private unless the Scottish Ministers and the Operating Company agree otherwise, and
- (xvii) to allow the Scottish Ministers and the Operating Company to appoint representatives to appear on their behalf subject to such proof of authority as the Adjudicator may require.

1.1.6 Notwithstanding any of the foregoing nothing in this procedure shall be taken as conferring power upon the Adjudicator to order:

- (i) either the Scottish Ministers,
- (ii) the Operating Company, or
- (iii) a representative of either the Scottish Ministers or the Operating Company,

to give evidence (whether in person or by way of documentary or similar evidence) that could not be ordered if the proceedings were before the Court of Session.

1.1.7 The Adjudicator may correct his decision so as to remove a clerical or typographical error arising by accident or omission.

1.1.8 The Dispute shall be referred to the Adjudicator within seven days of the notice referred to in paragraph 1.1.1 of this Schedule 1, Annex 1. The Adjudicator shall issue his decision in writing to both the Scottish Ministers and the Operating Company within 28 days of referral of the Dispute to him or such longer period after referral as shall be agreed by the Scottish Ministers and the Operating Company. The period of 28 days may be extended by up to 14 days with the consent of the Party that issued the Notice of Dispute.

The Adjudicator may make separate decisions on different issues at different times.

1.1.9 The Adjudicator's decision shall be binding until the Dispute shall be finally determined by legal proceedings by agreement or by arbitration as provided in Clause 18.3 of this Schedule 1.

1.1.10 The Adjudicator shall act impartially and may take the initiative in ascertaining the facts and the law necessary to determine the Dispute.

1.1.11 The Adjudicator shall not be liable for anything done or omitted in the discharge of his functions as Adjudicator unless the act of omission shall be in bad faith and any employee or agent of the Adjudicator shall similarly not be liable.

1.1.12 The costs of and incidental to retaining the Adjudicator and any referral in terms of this procedure and the appointment of the Adjudicator shall be within his award and failing which shall be borne equally between the Scottish Ministers and the Operating Company.

1.1.13 Unless otherwise ordered by the Adjudicator or agreed between the Scottish Ministers and the Operating Company all notices required for the adjudication procedure shall be in writing.

All notices required by this procedure shall be issued in accordance with Clause 2.11 of Schedule 1 Part 1.

1.1.14 Unless the intended recipient shall prove otherwise:

- (i) documents sent by first class post shall be deemed to have been received two working days after posting,
- (ii) Electronic Copy faxes or deliveries shall be deemed to have been received at the time transmission ceases, and
- (iii) hand delivered documents shall be deemed to have been received at the time of delivery to the address stated on their face.

References in the adjudication procedure to receipt of documents shall be construed accordingly.

1.1.15 Notices shall be effective from the time of receipt.

Periods of time measured with reference to the giving sending or serving of a document shall be measured with reference to the time that the document shall have been received.

- 1.1.16 Unless otherwise ordered by the Adjudicator or agreed in writing between the Scottish Ministers and the Operating Company all notices and other documents received on a day which is not a Working Day or after 17:00 hours on any Working Day shall be deemed to have been received on the following Working Day.
- 1.1.17 Unless otherwise agreed by both the Scottish Ministers and the Operating Company any meetings called by the Adjudicator at which both the Scottish Ministers and the Operating Company shall be in attendance shall be held in Scotland.
- 1.1.18 In relation to this Schedule 1, Annex 1 – Adjudication Procedure, time periods stated in days exclude Christmas Day, Good Friday and bank holidays in Scotland. Saturdays and Sundays are included.

This is Annex 2 to Schedule 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCHEDULE 1

SCHEDULE 1 ANNEX 2 – Form of Model Bond and Undertaking

BOND AND UNDERTAKING

by

To be inserted
(hereinafter referred to as the "Guarantor")

to

The Scottish Ministers

WHEREAS

[*to be inserted*] (hereinafter referred to as the "Operating Company") and the Scottish Ministers have entered into a contract dated [*to be inserted*] for the management and maintenance of the Scottish Trunk Road Network for the <Name of Unit> Unit (hereinafter referred to as "the Contract");

NOW THEREFORE [*to be inserted*] AND THE SCOTTISH MINISTERS HAVE AGREED AS FOLLOWS:

1. Subject to Clause 4 hereof, we, [*to be inserted*] (hereinafter referred to as the "Guarantor") give you The Scottish Ministers our guarantee and undertake and bind and oblige ourselves to pay to you The Scottish Ministers within 10 Working Days of your first demand:
 - (a) in the event of termination of the Contract, the sum of up to £1,300,000 except in the event of termination pursuant to Clause 16.1.4 of Schedule 1 where such termination shall not be as a result of a Default by the Operating Company, or
 - (b) in the event of any failure by the Operating Company to pay to you when due any sum or sums due under the Contract, the full amount of such sum or sums,

provided that such demand for payment in writing, delivered by hand, by post or by courier service, shall be accompanied by notification by you or on your behalf that such termination has occurred and that the amount of loss incurred or likely to be incurred by you resulting from such termination, or that such sum or sums have not been paid, or that such sum or sums are due to The Scottish Ministers as the case may be.

2. The Bond and Undertaking shall expire and the Guarantor's liability hereinafter shall be released and discharged absolutely, at the end of the Contract Period or settlement of the final account whichever is the later except in respect of any demand in writing made before such date.

3. This Bond and Undertaking shall not be prejudiced by any alteration or variation in the terms of the Contract or any time or indulgence given by The Scottish Ministers to the Operating Company.
4. The Guarantor's liability under this Bond and Undertaking shall not exceed in aggregate the sum of £1,300,000.
5. This Bond and Undertaking and the benefit thereof shall not be assigned by any of the parties hereto without the prior written consent of all the parties hereto.
6. This Bond and Undertaking shall be governed by and construed in accordance with the laws of Scotland and the parties hereto submit to the jurisdiction of the Scottish Courts:

IN WITNESS WHEREOF these presents consisting of this page 2 of 2 and the preceding page 1 of 2 are duly signed and witnessed:

Dated this _____ day of _____

Signature in the capacity of

Name (print in BLOCK CAPITALS)

Witness signature

Witness name (print in BLOCK CAPITALS)

Duly authorised to sign a Bond Guarantee or Undertaking for and on behalf of:

.....

Postal Address

.....

Telephone No: Facsimile No:

This is Annex 3 to Schedule 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCHEDULE 1

SCHEDULE 1 ANNEX 3 – Lane Occupation Charges

The Lane Occupation Charges that will be applied by the Scottish Ministers pursuant to Clause 15.5.1 are as follows:

Trunk Road	Lane Occupation Charge (per calendar day or part thereof)
All Trunk Roads on the Unit	£1,500.00

Any payments due to the Scottish Ministers from the Operating Company for Lane Occupation Charges shall be effected by means of a deduction from any sum due by the Scottish Ministers to the Operating Company pursuant to the other provisions of this Contract.

Lane occupation charges are not reduced for when the duration of the Lane Occupation is of less than a calendar day.

This is Annex 4 to Schedule 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCHEDULE 1

SCHEDULE 1 ANNEX 4 – Contract Price Fluctuations

1. PROPORTION OF THE INDICES APPLICABLE TO ITEM CATEGORIES

1.1.1 For the purpose of calculating the Price Fluctuation Factor the proportions of each applicable index shall (irrespective of the actual constituents of the work) be obtained from the table below: The applicable indices are given in Clause 10.7.1 of Schedule 1.

Table 1.1.1/A – Index Proportions applicable to Item Categories

	Item Category A	Item Category B	Item Category C	Applicable Index
(i)	0.60	0.30	0.20	Index 1 in respect of labour and supervision costs subject to adjustment.
(ii)	0.25	0.30	0.25	Index 2 in respect of costs of provision and use of providing and maintaining Operating Company's equipment which shall be subject to adjustment.
(iii)	The following proportions for materials named which shall be subject to adjustment by reference to the relevant indices referred to in Clause 10.7.1.			
	Item Category A	Item Category B	Item Category C	
	0.00	0.02	0.00	for Aggregates (Index 3)
	0.00	0.05	0.00	for Bricks and Clay Products (Index 4)
	0.00	0.01	0.00	for Cements (Index 5)
	0.00	0.03	0.00	for Ready Mix Concrete (Index 6)
	0.00	0.02	0.00	for Cast and Spun Iron Products (Index 7)
	0.00	0.00	0.00	for Plastic Products (Index 8)
	0.00	0.02	0.35	for Coated Macadam (Index 9) and Bituminous Products
	0.05	0.05	0.05	for Derv Fuel (Index 10)
	0.00	0.05	0.05	for Gas Oil Fuel (Index 11)
	0.00	0.02	0.00	for Timber (Index 12)

Item Category A	Item Category B	Item Category C	
0.00	0.01	0.00	for Steel for Reinforcement (Index 13)
0.00	0.02	0.00	for Metal Sections (Index 14)
0.00	0.00	0.00	for Steel Sheet Piling (Index 15)
0.00	0.00	0.00	for Structural Steelwork (Index S3) for Civil Engineering Works
0.10	0.10	0.10	For all other costs which shall not be subject to any adjustment

Total 1.00 1.00 1.00 Note: The total of proportions must equal unity

2. ITEM CATEGORY ASSIGNMENT

2.1.1 The following table shows the applicable item category for each type of work identified in Schedule 2. Contract price fluctuation is only applicable to item categorised as A, B, or C.

Table 2.1.1/A – CPF Category Assignment to Work Series and Sections

Series in Schedule 2	Section – (Item Number)	Item Description	Item Category
(1)	(2)	(3)	(4)
<u>Series 100</u>		Preliminaries	
	01	Recovery Vehicles	A
	02	Mobilisation	A
<u>Series 200</u>		Site Clearance	
	01	Site Clearance	A
	02	Take up or down and set aside for re-use or remove to store	A
	03	Take Up or Down and Remove to Licensed Facility	A
<u>Series 300</u>		Fencing	
	01	Fencing, Gates and Stiles	B

Series in Schedule 2	Section – (Item Number)	Item Description	Item Category
(1)	(2)	(3)	(4)
	02	Remove from store and Re-erect Fencing, Gates and Stiles	A
	03	Repairs to Existing Fencing – Renew Components	B
<u>Series 400</u>		Road Restraint Systems (Vehicle and Pedestrian)	
	01	Safety Barriers and Transitions	B
	02	Terminals	B
	03	Reconstruction of Concrete Ramps at Terminal Sections	B
	04	Connection to Existing Systems	B
	05	Vehicle Parapets	B
	06	Pedestrian Parapets and Pedestrian Guardrails	B
	07	Remove from Store and Re-erect Safety Barriers, Vehicle Parapets, Pedestrian Parapets, Pedestrian Guardrails and Pedestrian Handrails.	A
	08	Concrete foundations to Re-erected Posts	B
	09	Remove from Store Wire Rope Safety Fence	A
	10	Concrete foundations to Re-erected Posts for Wire Rope Safety Fence	B

Series in Schedule 2	Section – (Item Number)	Item Description	Item Category
(1)	(2)	(3)	(4)
	11	Renew Wire Rope Safety Fence Components	B
	12	Post Extension Units for Wire Rope Safety Fence	B
	13	Raising Existing Sockets for Posts for Wire Rope Safety Fence	A
	14	Repairs to Safety Barriers, Vehicle Parapets, Pedestrian Parapets and Pedestrian Guardrails	Not Eligible
	15	Temporary Safety Barriers	B
	16	Painting of Safety Barriers, Pedestrian Guardrails and Handrails	B
<u>Series 500</u>		Drainage and Service Ducts	
	01	Drains and Service Ducts	B
	02	Filter Drains	B
	03	Filter Material Contiguous with Filter Drain	B
	04	Fin Drains	B
	05	Connections	B
	06	Chambers and Gullies	B
	07	Headwalls and Outfall Works	B
	08	Soft Spots and Other Voids	A
	09	Renewal, Raising or Lowering of Covers and Gratings on Existing Chambers and Gullies	A

Series in Schedule 2	Section – (Item Number)	Item Description	Item Category
(1)	(2)	(3)	(4)
	10	Renewal of Rodding Eyes	B
	11	Grouting	B
	12	Excavation in Hard Material	A
	13	Concrete Bagwork	B
	14	Protection to Existing Sewer, Drain or Service Duct	B
	15	Drain Surveys	A
	16	Setting up Closed Circuit Television Equipment for Drain Survey	A
	17	Drain Survey by Closed Circuit Television Camera	A
<u>Series 600</u>		Earthworks	
	01	Excavation	A
	02	Excavation in Hard Material	A
	03	Deposition of Fill	A
	04	Disposal of Material	A
	05	Imported Fill	B
	06	Compaction of Fill	A
	07	Geotextiles	B
	08	Soft Spots and Other Voids	A
	09	Topsoiling and Storage of Topsoil	B
	10	Lining of Watercourses	B
	11	Gabion Walling and Mattresses	B
	12	Trial Pits	A
	13	Siding out of Carriageways, Footways and Paved Areas	A

Series in Schedule 2	Section – (Item Number)	Item Description	Item Category
(1)	(2)	(3)	(4)
<u>Series 700</u>		Pavements	
	01	Sub-base	B
	02	Pavement	C
	03	Regulating Course	C
	04	Surface Treatment	C
	05	Milling	A
	06	Reinstatement of Paved Areas	C
	07	Thin Bonded Repairs	B
	08	Full Depth Repairs and Joint Repairs to Existing Concrete Carriageway	B
	09	Pavement Reinforcement	B
	10	Grip Testing	A
<u>Series 1100</u>		Kerbs, Footways and Paved Areas	
	01	Kerbs, Channels, Edgings, Combined Kerbs and Channels, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems	B
	02	Additional Concrete for Kerbs, Channels, Edgings, Combined Kerbs and Channels, Combined Drainage and Kerb Blocks, and Linear Drainage Channel Systems	B

Series in Schedule 2	Section – (Item Number)	Item Description	Item Category
(1)	(2)	(3)	(4)
	03	Remove from Store and Relay Kerbs, Channels, Edgings, Combined Kerbs and Channels, Combined Drainage and Kerb Blocks, and Linear Drainage Channel Systems	A
	04	Footways and Paved Areas	C
	05	Remove from Store and Relay Paving Flags and Blocks	A
	06	Access Steps	B
	07	Cold Milling (Planing)	A
	08	Reinstatement of Footways and Paved Areas	C
	09	Patching of Footways	C
<u>Series 1200</u>		Traffic Signs and Road Markings	
	01	Traffic Sign Faces	B
	02	Traffic Sign Posts	B
	03	Traffic Sign Bases	B
	04	Sign Lighting Units	B
	05	Sign Bracket Arms	B
	06	Remove from Store and Re-erect Traffic Sign Faces, Traffic Sign Posts, Sign Lighting Units, Sign Bracket Arms	A
	07	Road Markings	B
	08	Removal of Road Markings	A
	09	Road Studs	B
	10	Remove from Store and Re-install Road Studs	A

Series in Schedule 2	Section – (Item Number)	Item Description	Item Category
(1)	(2)	(3)	(4)
	11	Marker Posts	B
	12	Permanent Bollards	B
	13	Remove from Store and Re-erect Bollards	A
	14	Passively Safe Chevrons	B
	15	Node Markers	B
	16	Numbering of Traffic Signs	A
	17	Snow Poles	B
<u>Series 1300</u>		Road Lighting Columns And Brackets, CCTV Masts And Cantilever Masts	
	01	Road Lighting Columns and, Brackets, Wall Mountings, CCTV Masts and Cantilever Masts	B
	02	Remove from Store and Re-erect Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts	A
	03	Luminaires	B
	04	Replace Lamps	B
	05	Numbering of Existing Road Lighting Columns	A
<u>Series 1400</u>		Electrical Work for Road Lighting and Traffic Signs	
	01	Trench for Cable or Duct	A
	02	Cable and Duct	B
	03	Terminations and Renew Terminations	B

Series in Schedule 2	Section – (Item Number)	Item Description	Item Category
(1)	(2)	(3)	(4)
	04	Feeder Pillars	B
	05	Earth Electrodes	B
	06	Chambers	B
	07	Disconnection of Cables	A
	08	Equipotential Bonding	B
	09	Temporary Overhead Feed to Road Lighting Units	B
	10	Remove from Store and Re-erect any Type of Feeder Pillar	A
<u>Series 1500</u>		Motorway Communications	
	01	Loop Detector Installations	B
<u>Series 1700</u>		Structural Concrete	
	01	In situ Concrete	B
	02	Precast Concrete	B
	03	Surface Finish of Concrete – Formwork	B
	04	Steel Reinforcement for Structures	B
	05	Structural Concrete Repairs	B
	06	Backfilling to Structures with Foamed Concrete	B
<u>Series 2000</u>		Waterproofing for Structures	
	01	Waterproofing	B
	02	Surface Impregnation	A
	03	Removal of Existing Waterproofing	A

Series in Schedule 2	Section – (Item Number)	Item Description	Item Category
(1)	(2)	(3)	(4)
<u>Series 2300</u>		Bridge Expansion Joints and Sealing of Gaps	
	01	Replacement of Bridge Deck Expansion Joints	B
	02	Sealing of Gaps	B
<u>Series 2400</u>		Brickwork, Blockwork and Stonework	
	01	Brickwork	B
	02	Blockwork and Stonework	B
	03	Remove from Store and Relay Brickwork, Blockwork and Stonework	A
	04	Rebedding Precast Concrete Copings	B
	05	Repointing	B
<u>Series 3000</u>		Landscape and Ecology	
	01	Ground Preparation and Cultivation	A
	02	Seeding and Turfing	B
	03	Planting Cell-Grown Stock	B
	04	Planting Trees	B
	05	Planting Shrubs	B
	06	Planting Wild Flowers	B
	07	Planting Bulbs	B
	08	Mulching	B
	09	Weed Control	A
	10	Thinning and Coppicing of Trees	A
	11	Scrub Control	A
	12	Tree Surgery	A

Series in Schedule 2	Section – (Item Number)	Item Description	Item Category
(1)	(2)	(3)	(4)
	13	Removal of Branches	A
	14	Tree Felling	A
	15	Tree Guards, Tubes and Ties	B
<u>Series 3300</u>		Site Investigation	
	01	Rotary Coring of Existing Pavement	A
	02	Rotary Coring of Existing Structures	A
	03	Inspection Patches on Bridge Structures	A
	04	Structural Investigations	A
	05	Falling Weight Deflectometer Tests	A
	06	Dynamic Cone Penetrometer Tests	A
<u>Series 5000</u>		Maintenance Painting of Steelwork	
	01	Surface Preparation	A
	02	Protective System	B
<u>Series 6100</u>		Core Operations	
	01	Schedule 1	A
	02	Schedule 3	A
	03	Schedule 4	A
	04	Schedule 5	A
	05	Schedule 6	A
	06	Schedule 7	A
	07	Schedule 8	A
	08	Manage and Maintain Grip Tester	A
<u>Series 6200</u>		Professional Services	
	01	Professional Services	A

Series in Schedule 2	Section – (Item Number)	Item Description	Item Category
(1)	(2)	(3)	(4)
<u>Series 6300</u>		Procurement and Management of Works Contracts	
	01	Procurement of Works Contracts	Not Eligible
	02	Management of Works Contracts	Not Eligible
<u>Series 6400</u>		Adjustment to Schedule of Rates and Prices	
	01	Adjustment for Time Bands	Category A, B or C as applied to the item being adjusted
	02	Adjustment for Works Within and Below Non-Tidal Open Water or Tidal Water	Category A, B or C as applied to the item being adjusted
<u>Series 6500</u>		Time Work Schedule	
	01	Labour	A
	02	Plant	A
	03	Materials	Not Eligible
	04	Supplementary Services	Not Eligible
<u>Series 6700</u>		Changes in Scope of Operations	
	01	Changes in the Extent of the Unit Impacting on Core Operation items in Series 6100	A
<u>Series 6800</u>		Miscellaneous	
	01	Anti-Graffiti Coatings	B
	02	Vehicle Restraint Systems	B
	03	Drainage	A
	04	Cleaning of Street Furniture	A

Series in Schedule 2	Section – (Item Number)	Item Description	Item Category
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>
	05	Landscape Maintenance	A
	06	Validate Network Inventory	A
<u>Series 6900</u>		Fair Rates and Prices	
	01	Labour	Not Eligible
	02	Plant	Not Eligible
	03	On cost Uplift for Overheads, Profit/margin etc. (including allowance for traffic management)	Not Eligible
<u>Series 7000</u>		Lump Sum Prices	
	01	Payment of Accounts	Not Eligible
	02	Lump Sum Quotations	Not Eligible

This is Annex 5 to Schedule 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCHEDULE 1

SCHEDULE 1 ANNEX 5 – Insurance Requirements

1. GENERAL

1.1.1 Subject to the other provisions of this Contract this Annex specifies the:

- (i) indemnities that shall be provided by the Operating Company to the Scottish Ministers,
- (ii) minimum amount of insurance that the Operating Company shall be required to effect and maintain in force throughout the entirety of this Contract, and
- (iii) maximum excesses (that being the portion of each claim for which the Insurer(s) shall not be liable to the Operating Company or which the Operating Company shall pay to insurers in respect of a legal liability claim),

in respect of the insurance that shall be provided by the Operating Company under the other provisions of this Contract.

2. INDEMNITY REQUIREMENTS

2.1.1 In respect of each and every claim or series of claims arising out of any one incident and unlimited during the Contract Period an amount equal to the total costs and expenses of any and every kind arising out of an event that falls to be indemnified as a result of any indemnity that shall be required to be given by the Operating Company within this Contract including but not limited to the indemnities referred to in Schedule 1 Part 4.

3. INSURANCE REQUIREMENTS

3.1.1 Notwithstanding any other provisions of this Contract prior to the commencement of any Operations the Operating Company shall be required to provide evidence to the Scottish Ministers that the insurance referred to in Tables 3.1.1/A and 4.1.1/A of this Schedule 1, Annex 5 shall be in full force and effect.

Table 3.1.1/A – Required Insurances

Reference Number	Description of Insurance
1.	Contractor's all risks insurance shall be provided by the Operating Company (including terrorism cover) to the full replacement or reinstatement value of: <ul style="list-style-type: none">(i) the permanent and temporary works forming any part of the Operations,(ii) Constructional Plant used in the execution of the Operations,

Reference Number	Description of Insurance
	<p>(iii) any materials that shall be or are intended to be incorporated into the works whether on Site, off Site, or in transit to or from Site, anywhere in continental Europe, including roll on roll off ferries,</p> <p>(iv) any plant required for the works whether on Site, off Site, or in transit to or from Site, anywhere in continental Europe, including roll on roll off ferries,</p> <p>for the period of this Contract including any Defects Correction Period and/or any Defects Liability Period.</p> <p>The insurance that shall be provided by the Contractor shall be written in the names including but not limited to those of the Scottish Ministers and the Operating Company and shall include sub-contractors of any tier of the Operating Company.</p> <p>The insurance shall include the endorsements referred to in Clauses 5.1.1 and 5.1.3 of this Schedule 1, Annex 5.</p>
2.	<p>Public liability insurance in respect of loss or damage to any property, including that of the Scottish Ministers and for the avoidance of doubt including Crown Property or death or injury to any person.</p> <p>The minimum limit of indemnity provided by the Operating Company shall be £155,000,000 in respect of each and every occurrence and unlimited in the period of insurance.</p> <p>The insurance shall be written in the names including but not limited to those of the Scottish Ministers and the Operating Company and shall include the endorsements referred to in Clauses 5.1.1 to 5.1.3 inclusive of this Schedule 1, Annex 5.</p>
3.	<p>Professional indemnity insurance for all Operations including:</p> <p>(i) any Design executed by the Operating Company,</p> <p>(ii) any review of the insurances of a Works Contractor, as required by Schedule 6 Part 1, carried out by or on behalf of the Operating Company, and</p> <p>(iii) for the Operating Company's business in general.</p> <p>The minimum Limit of Indemnity provided by the Operating Company shall be £10,000,000 in respect of each and every occurrence and unlimited in the period of insurance but shall be limited to £10,000,000 in the aggregate in respect of Pollution losses including gradual pollution.</p>

Reference Number	Description of Insurance
	<p>The insurance that shall be provided by the Operating Company shall cover the acts of the Operating Company and the Operating Company's liability for the acts of any of its contractors and sub-contractors of any tier in accordance with the other provisions of this Contract.</p> <p>The insurance that shall be provided by the Operating Company shall include the endorsements referred to in Clause 5.1.1 of this Schedule 1, Annex 5.</p>
4.	<p>Employers' liability insurance with a Limit of Indemnity adequate to satisfy the requirements of the <i>Employers Liability Compulsory Insurance Act 1969</i> and any subsequent legislation.</p> <p>The insurance that shall be provided by the Operating Company shall include the endorsements referred to in Clause 5.1.1 of this Schedule 1, Annex 5.</p>
5.	<p>Contractor's pollution legal liability insurance including consequential clean-up of any part of the Unit.</p> <p>Such insurance shall be for a minimum Limit of Indemnity of £10,000,000 in respect of any one loss and in the aggregate in the period of insurance.</p> <p>The insurance shall be written in the names including but not limited to those of the Scottish Ministers and the Operating Company and shall include the endorsements referred to in Clauses 5.1.1 to 5.1.3 inclusive of this Schedule 1, Annex 5.</p>
6.	<p>Comprehensive motor insurance in respect of all vehicles used by the Operating Company and its sub contractors of any tier in the execution of this Contract.</p> <p>The insurance shall include the endorsements referred to in Clause 5.1.1 of this Schedule 1, Annex 5.</p>

4. EXCESSES

4.1.1 In respect of each insurance that shall be provided by the Operating Company as required by this Contract the amount that the insurer for such insurance shall not be liable for in respect of each and every claims or series of claims arising out of one event shall not exceed.

Table 4.1.1/A – Maximum Excesses

Reference Number	Type of Insurance	Excess
1.	Contractors All Risks	<p>£10,000 in respect of each and every loss other than:</p> <p>(i) Defective Design Materials and Workmanship where the</p>

Reference Number	Type of Insurance	Excess
		amount shall be £150,000 in respect of each and every loss, and (ii) Contractor's Plant where the amount shall be 10 percent of each and every loss (with a minimum in respect of each and every loss of £10,000).
2.	Public Liability (i) Personal Injury Claims (ii) Property Damage Claims	Nil £10,000 in respect of each and every loss or series of losses arising out of one event.
3	Professional Indemnity	£250,000 in respect of each and every loss or series of losses arising out of one event.
4.	Employers Liability	Nil
5.	Contractors Pollution Legal Liability	£50,000 in respect of each and every loss or series of losses arising out of one event.
6.	Comprehensive Motor	£1,000

5. INSURANCE POLICY REQUIREMENTS

5.1.1 All the insurance referred to in Table 3.1.1/A of this Schedule 1, Annex 5 shall be endorsed by the insurers to the effect that:

- (i) such insurance shall be subject to Scots Law and the jurisdiction of the Scottish Courts, and
- (ii) the insurers for such insurance shall provide not less than 30 days written notice to the Scottish Ministers prior to any cancellation non-renewal or modification to any such policy for any such insurance.

5.1.2 The insurance referred to in reference numbers 2 and 5 of Table S1A6/3.1 of this Schedule 1, Annex 5 shall be endorsed to the effect that actions between the Insured parties shall be treated as though a separate insurance had been issued to each of them.

5.1.3 The insurance referred to in reference numbers 1, 2 and 5 of Table S1 A6/3.1 of this Schedule 1, Annex 5 shall be endorsed such that insurers for any such insurance accept the following provisions.

- (i) Waiver of Duty of Disclosure
 - (a) to waive their rights to receive from the Scottish Ministers disclosure of material circumstances or information,

- (b) to avoid the insurance for any non-disclosure of material circumstances or information by the Scottish Ministers or his servants or agents, and
 - (c) to avoid the insurance and/or claim damages against the Scottish Ministers for any misrepresentation made by or on behalf of the Scottish Ministers.
- (ii) **Waiver of Rights of Subrogation**

To waive all rights of subrogation and/or claims for contributory negligence against the Scottish Ministers.
- (iii) **Joint Insured Clause**

That all the provisions of the insurance (except the sums/insured limits of liability) shall operate as if there was a separate insurance policy with and covering each named insured without right of contribution from any other insurance which shall be carried by an insured.

Without limitation to the foregoing this shall be on the basis that including but not limited to the non-compliance with any insurance term condition or warranty or the non-disclosure and/or misrepresentation of material circumstances or information by the Operating Company or any other co-insured under any such insurance shall not affect the rights and/or interests of the Scottish Ministers under the insurance.
- (iv) **Non-Vitiating Clause**

That a vitiating act committed by one under any insurance shall not prejudice the right to indemnity of any other Insured who has an insurable interest in such insurance and who has not committed a vitiating act.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

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SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

CHAPTER I

Definitions

Definitions given in Volume 4 Section 1 Chapter I of the Manual of Contract Documents for Highway Works hereby apply unless amended otherwise and as stated below.

Delete all references to "Bill of Quantities" and replace with "Schedule of Rates and Prices".

Delete all references to "Contractor" and replace with "Operating Company".

Delete sub paragraph 1(c) and insert the following sub paragraph 1(c):

1(c) "Schedule of Rates and Prices" means a list of items giving brief identifying descriptions.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

CHAPTER II

General Principles

General Principles given in Volume 4 Section 1 Chapter II of the Manual of Contract Documents for Highway Works hereby apply except as stated below.

Delete all references to "Bill of Quantities" and replace with "Schedule of Rates and Prices".

Delete all references to "Contractor" and replace with "Operating Company".

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

CHAPTER III

Preparation of Schedule of Rates

Preparation of Schedule of Rates shall be in accordance with Preparation of Bills of Quantities given in Volume 4 Section 1 Chapter III of the Manual of Contract Documents for Highway Works apply unless amended otherwise and as stated below.

Delete all references to "Bill of Quantities" and replace with "Schedule of Rates and Prices".

Delete all references to "Contractor" and replace with "Operating Company".

Preambles to Schedule of Rates and Prices

Delete preambles set down in Volume 4 Section 1 Chapter III of the Manual of Contract Documents for Highway Works and replace with the following:

General Directions 1 The Schedule of Rates and Prices has been prepared generally in accordance with the principles used in the Method of Measurement for Highway Works published by The Stationery Office as Section 1 of Volume 4 of the Manual of Contract Documents for Highway Works as amended by this Part of this Schedule.

The relevant publication date of each page of the Method of Measurement for Highways Works is given in the Schedule of Pages and Relevant Publication Dates.

2 In the Schedule of Rates and Prices the sub-headings and item descriptions identify the work covered by the respective items, read in conjunction with the matters listed against the relevant marginal headings "Item coverage" in Chapter IV of the Method of Measurement for Highway Works, these Preambles and the amendments to the Method of Measurement immediately following these Preambles. The nature and extent of the work and, where relevant, its frequency of execution, is to be ascertained or assessed by reference to the Scottish Ministers' requirements and the Conditions of Contract. The rates and prices entered in the Schedule of Rates and Prices shall be deemed to be the full inclusive value of the work covered by the several items including the following, unless expressly stated otherwise:

- (i) Labour and costs in connection therewith.
- (ii) The supply of materials, goods, storage and costs in connection therewith including delivery to anywhere within the Unit. Taking delivery of materials and goods supplied by others, unloading, storage, and costs in connection therewith.
- (iii) Plant and costs in connection therewith.

- (iv) Fixing, erecting and installing or placing of materials and goods in position.
- (v) Temporary works including design of temporary works.
- (vi) The effect on the phasing of the Operations or any element of the Operations to the extent set forth or reasonably implied.
- (vii) General obligations, liabilities and risks involved in the execution of the Operations set forth or reasonably implied in the documents on which the Tender is based.
- (viii) Establishment charges including temporary accommodation at individual Site Operations and all accommodation, depots, stores and other similar facilities required by the Operating Company for the duration of this Contract, overheads and profit.
- (ix) Waste.
- (x) Testing and measuring in accordance with this contract including supplying results of tests and measurements including providing test certificates.
- (xi) Attendance and transport for sampling and testing carried out by the Overseeing Organisation.
- (xii) Checking, inspecting, examining, measuring and verifying goods, materials and workmanship including supplying results, reports and certificates.
- (xiii) Traffic safety and traffic management measures as required by this contract.
- (xiv) All travelling connected with Operations.
- (xv) Complying with the Quality Management requirements of this contract and providing certificates of conformity.
- (xvi) Providing land for plant, stores, working space, borrow pits or spoil dumps required.
- (xvii) Communication system.
- (xviii) Insurance provision.
- (xix) All obligations activities duties and responsibilities of the Operating Company set out in this Contract commencing at the end of the Final Annual Period until such time as such obligations activities duties and responsibilities have been executed by the Operating Company.
- (xx) Complying with Schedule 3 Parts 1 and 3.
- (xxi) Vehicles, communication system and operatives for the Overseeing Organisation.

		(xxii) Consultation approvals consents and any other thing required from to or with the appropriate bodies to obtain access and method of working for rebuilding including but not limited to Historic Scotland to enable timescales for rebuilding to be achieved.
		(xxiii) Site Operations information signs and/or boards on all Sites.
		(xxiv) Access provision maintenance and removal including design of accesses.
		(xxv) Temporary diversion of traffic.
Mobilisation	3	Items for mobilisation are contained within Series 100 Preliminaries sub series 03.
Measurement	4	<p>The measurement of quantity against each item shall be computed from the dimensions stated in the Design or physically measured in the absence of such dimensions unless stated otherwise in the Method of Measurement.</p> <p>The measurement of quantity against each item shall be computed net to the nearest whole number, except for:</p> <ol style="list-style-type: none">1. measurement of tonnage, hectares and kilometres in which cases the quantities shall be to three decimal places,2. measurement of hours for which the quantity shall be to the nearest quarter hour,3. measurement of mobilisation items which shall be a % of the item sum to the nearest whole percentage point,4. measurement of months shall be to the nearest whole percentage point. <p>The Schedule of Rates and Prices contains adjustment items.</p> <p>The purpose of the adjustment item is to vary the content of the original item to which the adjustment applies.</p> <p>Separate item coverage has not been included in the amendments to the method of measurement for adjustment items.</p> <p>Where adjustment items have been included in the Schedule of Rates and Prices they shall be deemed to include the same features and item coverage of the original Schedule of Rates and Prices item to which they apply.</p>
Pricing of Items	5	Each individual item shall have a rate or price entered against it, except where noted below.

Rates and prices shall be expressed to two decimal places. The minimum value to be assigned to the items in the Schedule of Rates and Prices shall be £0.01, except where noted below.

Items where the unit of measurement is 'sum', will have a rate preset to '1' and must not be altered.

For items where the unit is percentage, a percentage value (positive, negative or '0') shall be inserted and shall not be expressed as a decimal equivalent. For example, five percent shall be entered as '5' and not '0.05'.

Where a percentage value is entered as 0% or is negative any costs and associated charges will be deemed to be included in the other rates and prices.

Where items have pricing options dependent on quantity bandings, all options shall have a rate or price entered.

Schedule of Rates and Prices 6 Where provision has been made in the Schedule of Rates and Prices for items of work to be measured and paid for in various quantity bands the measurement and payment of such items for each individual Scheme shall be made using only the rate entered under the appropriate quantity band.

The quantity band used shall be that obtained by the summation of the final quantities of like work within a Scheme unless a Scheme covers more than one Site and the distance between discrete Sites within the Scheme exceeds the minimum distances between traffic management measures as detailed in Table F of Chapter 8 of the Traffic Signs Manual in which case the quantity band used shall be that obtained by the summation of the quantities of like work at each discrete Site within the Scheme.

Alternative Specified Materials, Designs and Options Within Types of Pavement 7 Where a choice of alternatives is permitted in this Contract, the item description and the rates and prices inserted shall be deemed to include any of the permitted alternative materials or designs the Operating Company may elect to use.

In all cases the rates and prices inserted in all Series of the Schedule of Rates and Prices shall be deemed to include for any adjustments of work content, rates, costs, programming, method of working and other effect occasioned by the choice of alternatives elected to be used or constructed by the Operating Company.

Privately and Publicly Owned Services or Supplies 8 The Operating Company shall allow in the rates and prices for locating, marking and taking measures for the support and full protection of pipes, cables and other apparatus.

The rates and prices shall include for obtaining the written consent and other thing required of from to or with the appropriate authority to interrupt the service or supply and for

		keeping the Scottish Ministers informed in writing of all arrangements it makes with owners of privately owned services or supplies, Statutory Undertakers and Public Authorities and other parties as appropriate.
Labours	9	<p>Labours in connection with Nominated Sub-contractors shall include but not be limited to:</p> <p>(i) in the case of Operations – for affording the use of existing working space, access, temporary roads, erected scaffolding, working shelters, staging, ladders, hoists, storage, latrines, messing, welfare and all other facilities existing on the Unit and the provision of protection, water, electricity for lighting and clearing away rubbish, debris and waste and other similar material arising from the Operations,</p> <p>(ii) in the case of goods, materials or service supplied – for taking delivery, unloading, storing, protecting and returning crates, cartons and packing materials.</p>
Location, Frequency and timescales of Schedule items	10	<p>The Operating Company shall allow in the rates and prices for carrying out the Operations at any location within or associated with the Unit, and shall also allow for the items in the Schedule of Rates and Prices being used only once, a number of times or not at all during this Contract.</p> <p>The Operating Company shall allow in the rates and prices for undertaking any Operations within the timescales prescribed in this Contract and/or any Order.</p>
Roadworks Overall Requirements	11	<p>The Operating Company shall allow in the rates and prices for complying with requirements in respect of pavement construction, horizontal alignments, surface levels and surface regularity of pavement courses, cold weather working, use of surfaces by traffic and constructional Plant and general requirements for sub-bases and road bases.</p>
Work Within and Below Non-Tidal Open Water or Tidal Water	12	<p>The Operating Company shall allow in the rates and prices for taking measures to execute all Operations above non tidal open water and above Mean High Water Springs.</p> <p>All Operations executed within and below non tidal open water or between Mean High Water Springs and Mean Low Water Springs or below Mean Low Water Springs are subject to adjustment in accordance with Series 6400.</p> <p>The datum for measurement of Operations executed within and below non tidal open water shall be stated in the Order.</p> <p>The Mean High Water Springs and Mean Low Water Springs are equivalent levels relative to Chart Datum determined by the United Kingdom Hydrographic Office.</p>

Dealing with Flow	13	The Operating Company shall allow in the rates and prices for taking measures to deal with the existing flow of water, sewage and other flowing material.
Taxes Levies Contributions Premiums Refunds or Landfill Tax	14	The Operating Company shall allow in the rates and prices for all taxes, levies, contributions, premiums, refunds or landfill tax as described in Schedule 1, the Conditions of Contract.
Site Limitations and Constraints	15	The Operating Company shall allow in the rates and prices for complying with any limitations and constraints on the use of or connected with the Unit.
Hard Material	16	<p>For the purposes of this Contract the following are designated as Hard Material in accordance with Chapter 1 of the Method of Measurement for Highway Works Definitions, paragraph 1(h):</p> <ul style="list-style-type: none">(i) material which requires the use of blasting, breakers or splitters for the removal but excluding individual masses less than 0.20 cubic metres,(ii) existing pavements, footways, paved areas (but excluding unbound materials) and foundations in masses in excess of 0.20 cubic metres.
Equivalent Products and Materials	17	<p>Where the Operating Company offers an equivalent product or material in place of the one identified or specified, which is accepted for incorporation into the Operations by the Scottish Ministers, then the rates and prices are deemed to include for all the obligations and costs associated with the incorporation of the equivalent into the Operations, including but not limited to Design, provision of data and drawings, certificates, awaiting approvals consents and other similar considerations, re-submissions and modifications and amendments to the Operations.</p> <p>Unless specifically stated to the contrary in this Contract the measurement of the Operations affected by the incorporation of the equivalent products and materials shall be based on this Contract and not on the Operations as amended and completed to incorporate the equivalent products and materials.</p>
Management of Operations	18	The Operating Company shall allow in the rates and prices for the supervision by the Operating Company of Operations.
Repair Work and Alterations	19	<p>Various elements of the Schedule of Rates and Prices identify works of repair and or alteration.</p> <p>Notwithstanding such separately identified items the Operating Company shall allow in the rates and prices for executing any of the other items in the Schedule of Rates and Prices as repairs and or alterations to existing.</p>

Time Bands and Percentage Adjustments	20	<p>The Operating Company shall allow in the rates and prices in the Schedule of Rates and Prices for executing Operations during normal working hours hereby defined as 0700 to 1900 hours Mondays to Fridays inclusive (time band reference 1), except for, 6100 to 6700 (inclusive) and 7000 which are all deemed to be undertaken at any time and shall not be subject to any time band adjustments.</p> <p>Percentage adjustments do not apply to Operations undertaken in time band reference 1.</p> <p>Operations that are executed within normal working hours but subject to working hours restrictions as referred to in Schedule 9 Part 2, Appendix 1/17 shall be deemed to be in time band reference 1 and therefore are not subject to adjustment.</p> <p>Percentage adjustments shall be made to the rates and prices in the Schedules of Rates and Prices in respect of Operations executed outwith normal working hours when the hours of working are subject to restrictions for the routes and locations referred to in Schedule 9 Part 2, Appendix 1/17.</p> <p>Notwithstanding the previous paragraph, Operations executed outwith normal working hours shall only be measured if restrictions stated in Schedule 9 Part 2, Appendix 1/17 prohibit the Operations from being carried out within normal working hours, or if the Director has given written consent that the Operations may be measured using the appropriate time band adjustments.</p> <p>For routes and locations where no working hours restrictions apply, Operations executed outwith normal working hours shall not be subject to time band adjustments unless the Director has given written consent.</p>
Other Work on the Unit, the Police and Emergency Services	21	<p>The Operating Company shall allow in the rates and prices for the presence from time to time of authorised contractors and bodies and other third parties executing work on the Unit.</p> <p>The Police and other emergency services require access through the Unit at all times and the Operating Company shall allow in the rates and prices for complying with this requirement.</p>
Traffic Safety and Traffic Management	22	<p>The Operating Company shall allow in the rates and prices for traffic safety and traffic management to undertake the Operations.</p> <p>The rates and prices shall include the Design, provision, maintenance and removal of and any costs related to traffic safety and traffic management measures referred to in Schedule 9 of this Contract and the following:</p>

- (i) phasing the Operations in a manner acceptable to the Director, the National Network Control Centre and the Police for the continuing flow of traffic including maintaining access to properties,
- (ii) complying with the requirements of the 'Traffic Signs Regulations and General Directions' and with the recommendations contained in Chapter 8 of the Traffic Signs Manual or where the circumstances of any particular case are not covered, including but not limited to any additional traffic safety and traffic management measures required by the Police, submitting proposals for dealing with such situations including but not limited to risk assessments and other similar reports information and advice to the Director,
- (iii) enhancement of the requirements of Chapter 8 of the Traffic Signs Manual as deemed necessary by the Operating Company to satisfy specific Site safety risk assessments,
- (iv) continuing traffic safety and management outside the boundaries of the Unit when associated with Operations on the Unit and including all necessary liaison with relevant authorities and other third parties,
- (v) requirements to deal with reduced Lane widths due to any reason including but not limited to convoy working,
- (vi) alterations to traffic management measures or programmes to take account of events on or outwith the Unit that prevent or constrain the use of traffic management or planned Site Operations.

Measuring, Sampling and Testing 23 The Operating Company shall allow in the rates and prices for measuring, sampling and testing as required by this contract.

Payments to Statutory Undertakers 24 The Operating Company may be required to place orders with Statutory Undertakers holders of licences issued in accordance with Section 109 of the New Roads and Street Works Act 1991 franchise holders and other similar parties for renewal, maintenance or repair of services on the Unit and the payment for such orders may well be required in advance of the work being undertaken.

An Order shall be issued on each occasion but the Operating Company shall allow in the percentage adjustment for all additional cost associated with the payments for such work and the fact that invoices for the Statutory Undertakers may not be immediately available.

Payment of Statutory Undertakers accounts is included in Series 7000.

Format of the Schedule of Rates and Prices	25	An example of the page format of the Schedule of Rates and Prices showing options for separately pricing quantity bands is in Appendix A to this Schedule.
Disposal	26	The Operating Company shall allow in the rates and prices for disposal to a licensed disposal facility which may include a licensed recycling facility.
Remove from Store	27	The Operating Company shall allow in the rates and prices for remove from store for collecting from stores on or off the Site or from where material has been set aside for re-use.
Contract Price Fluctuations	28	The Operating Company shall allow in the rates and prices for all costs in respect of contract price fluctuation that are not covered by the provisions of Schedule 1 for Contract Price Fluctuations.
Amendment to the Method of Measurement	29	<p>For the purpose of this Contract the Method of Measurement for Highway Works is amended:</p> <ul style="list-style-type: none">(i) by replacing the words "Bills of Quantities" wherever they occur with the words "Schedule of Rates and Prices",(ii) by replacing the word "Contractor" wherever it occurs with the words "Operating Company",(iii) by construing any reference to "rates", "prices", "Rates", "Prices", "rates and prices" or "Rates and Prices" to mean a reference to rates and prices contained in the Schedule of Rates and Prices,(iv) by replacing the full stop to the last item in item coverages with a semi-colon in every case where additional items have been added, and(v) in accordance with the pages immediately following.
Repairs to Category 1 Defects	30	<p>Category 1 Defects shall be classified as "of value not more than £10,000" or "of value more than £10,000". The classification shall be established in accordance with the provisions of Schedule 1 Part 3 for valuation of Orders but shall exclude:</p> <ul style="list-style-type: none">(i) the cost of maintaining temporary repairs,(ii) all traffic management required in connection with making safe and the repair of a Category 1 Defect,(iii) travel to and from the scene of the Category 1 Defect,(iv) reporting to the Director details of all Operations carried out and materials used,(v) disruption to other work as a result of attending Category 1 Defects,

(vi) attending a reported Category 1 Defect where no defect is found,

(vii) Professional Services.

If a Category 1 Defect is classified initially "of value more than £10,000" but subsequently has a final classification of "costing less than or equal to £10,000", the Operating Company shall reimburse the Director for any payment received.

Category 1 Defects which are classified as "of value more than £10,000" shall be valued in accordance with the provisions of Schedule 1 Part 3 for valuation of Orders. This valuation may include the costs of maintaining traffic management until the commencement of Site Operations for carrying out the permanent repair.

Incident Response Operations 31

Incident Response Operations for individual Incidents shall be classified as "of value not more than £10,000" or "of value more than £10,000". The classification shall be established in accordance with the provisions of Schedule 1 Part 3 for valuation of Orders and shall include:

(i) initial, secondary, and back-up Incident Response Operations,

(ii) temporary repairs and temporary safety measures to allow safety and usability to be restored,

(iii) establishment, maintenance and removal of traffic management for the duration of the Incident.

The classification shall exclude:

(i) travel to and from the scene of the Incident,

(ii) acting on Orders and/or the instructions of the Emergency Services,

(iii) reporting to the Director details of all Operations carried out and materials used,

(iv) disruption to other work as a result of attending Incidents,

(v) attending a reported Incident or Category 1 defect where no defect is found,

(vi) maintaining temporary repairs until a permanent repair is carried out,

(vii) Professional Services.

If an individual Incident is classified initially as "of value more than £10,000" but subsequently has a final classification "of value less than or equal to £10,000", the Operating Company shall reimburse the Director for any payment received.

		<p>Incidents which are classified "of value more than £10,000" shall be valued in accordance with the provisions of Schedule 1 Part 3 for valuation of Orders.</p>
Damage to Crown Property	32	<p>Damage to Crown Property will be classified as either "of value not more than £10,000" or "of value more than £10,000". The classification shall be established in accordance with the provisions of Schedule 1 Part 3 for valuation of Orders but shall exclude:</p> <ul style="list-style-type: none">(i) Police reports,(ii) establishing, maintaining and removing traffic management prior to repair Operations,(iii) Professional Services,(iv) recovery of the costs of repair of the damage to Crown Property from the third party which caused the damage. <p>If an individual incident is classified initially as "of value more than £10,000" but subsequently has a final classification "of value not more than £10,000", the Operating Company shall reimburse the Director for any payment received.</p> <p>Damage to Crown Property Incidents which are classified "of value more than £10,000" shall be valued in accordance with the provisions of Schedule 1 Part 3 for valuation of Orders. Such valuation may include any associated costs listed under (i), (ii) and (iii) of the first sub-paragraph of this paragraph.</p>
Series 6900 Fair Rates and Prices	33	<p>Series 6900 items will be used in accordance with the provisions of Schedule 1 Part 3 for valuation of Orders on the basis of fair rates and prices.</p>

In addition to the standard Series the following additional Series are included:

- 3300 Site Investigations,
- 6100 Core Operations,
- 6200 Professional Services,
- 6300 Procurement and Management of Works Contracts,
- 6400 Adjustment to Schedule of Rates and Prices,
- 6500 Time Work Schedule,
- 6600 Not used,
- 6700 Changes in Scope of Operations,
- 6800 Miscellaneous,
- 6900 Resource Prices, and
- 7000 Lump Sum Quotations.

Appendix A

Schedule of Rates and Prices

Page Format

Item No.	Description	Unit	Rate £ : p For Quantity Band	
			A 0-50	B 51+
01	Fencing Gates and Stiles			
001	Three rail (H15) fencing 1.2 metres high with timber posts	m		
002	Four rail (H3) fencing 1.4 metres high with timber posts	m		
003	Five rail (H3) fencing 1.4 metres high with timber posts	m		
004	High tensile strained wire deer fencing (H5) 1.8 metres high	m		
005	Chain link fence (H11) exceeding 1.50 metres but not exceeding 3.00 metres high on concrete or steel angle posts	m		
006	Strained wire fence (H13) not exceeding 1.50 metres high on timber posts	m		
007	Strained wire fence (H13) exceeding 1.50 metres but not exceeding 3.00 metres high on timber posts	m		
008	Timber close boarded fence (H14) not exceeding 1.50 metres high	m		
009	Planting works fence (H39 Type 1) 0.800 high	m		
010	One strand of galvanised barbed wire to permanent post and rail fencing	m		
011	One strand of galvanised plain wire to permanent post and rail fencing	m		
012	Galvanised Type 1 rabbit netting 0.800 high	m		
013	Galvanised pig netting 0.90 metres high to permanent post and rail fencing	m		
014	Galvanised sheep netting 0.90 metres high to permanent post and rail fencing	m		

Method of Measurement for Highway Works

Schedule of Pages and Relevant Publication Dates

Chapter/Series	Page Number	Publication Date	
Contents	1	November 2004	
	2	May 2005	
	3	November 2004	
	4 to 7 inclusive	May 2005	
Chapter I	1 to 3 inclusive	March 1998	
Chapter II	1	March 1998	
	2	May 2001	
Chapter III	1	March 1998	
	2	May 2001	
	3 to 12 inclusive	May 2004	
	13	November 2006	
	14 to 16 inclusive	May 2005	
Chapter IV	15 to 19 inclusive	November 2006	
	1	March 1998	
	100	1 to 2 inclusive	March 1998
		3 to 7 inclusive	May 2001
		8	November 2004
		9 to 11 inclusive	May 2001
		12	November 2004
		13 to 15 inclusive	May 2001
	200	1	May 2001
		2 to 3 inclusive	May 2004
		4	May 2001
	300	1 to 5 inclusive	May 2001
400	1 to 2 and 4 to 8 inclusive	November 2004	
	3	November 2006	

Chapter/Series	Page Number	Publication Date	
500	1 to 5 inclusive	May 2001	
	6	November 2004	
	7 to 13 inclusive	May 2001	
	14	May 2005	
	15	May 2001	
	16 to 17 inclusive	May 2005	
	18	May 2001	
	19	November 2003	
	600	1	May 2002
		2	May 2001
3		March 1998	
4 to 11 inclusive		November 2004	
12		May 2002	
13 to 14 inclusive		November 2004	
15 to 38 inclusive		May 2001	
N1 to N3 inclusive		May 2002	
700	1	May 2001	
	2	May 2002	
	3	May 2001	
	4 to 5 inclusive	May 2002	
	6	May 2001	
	7 to 9 inclusive	May 2002	
	10	May 2001	
	11	May 2002	
	12 to 13 inclusive	May 2001	
	14	May 2002	
	15 to 18 inclusive	May 2001	
	800	Not taken up	
	900	Not taken up	
	1000	Not taken up	

Chapter/Series	Page Number	Publication Date
1100	1	May 2001
	2	November 2004
	3	May 2001
	4 to 5 inclusive	May 2002
	6	May 2001
	7 to 8 inclusive	May 2005
1200	1 to 2 inclusive	May 2001
	3 to 5 inclusive	March 1998
	6 to 11 inclusive	May 2001
1300	1 to 3 inclusive	November 2003
1400	1 to 2 inclusive	May 2001
	3	May 2005
	4 to 8 inclusive	May 2001
	9	May 2005
1500	1 to 2 inclusive	May 2001
	3	May 2005
	4 to 7 inclusive	February 2003
	8 to 12 inclusive	May 2001
1600	1 to 2 inclusive	March 1998
	3 to 6 inclusive	May 2001
	7	March 1998
	8 to 19 inclusive	May 2001
1700	1	May 2004
	2	May 2001
	3	May 2004
	4 to 11 inclusive	May 2001
1800	1	March 1998
	2 to 5 inclusive	May 2001
1900	1	May 2003
2000	1	May 2002
	2 to 3 inclusive	May 2001
2100	1	March 1998
2200	Not taken up	May 2004
2300	1 to 3 inclusive	March 1998

Chapter/Series	Page Number	Publication Date
2400	1 to 3 inclusive	May 2001
	4	March 1998
2500	1 to 2 inclusive	May 2001
2600	Not taken up	
2700	1	May 2001
3000	1 to 15 inclusive	May 2001
5000	1 to 2 inclusive	May 2003

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 100: PRELIMINARIES

Temporary Accommodation

Delete paragraphs 2 to 6 inclusive.

Vehicles for the Overseeing Organisation

Delete paragraphs 7 to 10 inclusive.

Communication System for the Overseeing Organisation

Delete paragraphs 11 to 13 inclusive.

Operatives for the Overseeing Organisation

Delete paragraphs 14 to 17 inclusive.

Information Boards

Delete paragraphs 18 to 20 inclusive.

Traffic Safety and Management

Delete paragraphs 21 to 27 inclusive.

Temporary Diversion of Traffic

Delete paragraphs 28 to 33 inclusive.

Recovery Vehicles

Delete paragraph 34 to 39 inclusive and insert the following paragraph 34 to 37 inclusive:

Recovery Vehicles

Units	34	The unit of measurement shall be: (i) recovery vehicle .....day.
Measurement	35	The measurement of recovery vehicles shall be for each day or part thereof during which the recovery vehicle is provided. Recovery vehicles are deemed to be site based and not subject to a standby facility.
Itemisation	36	Separate items shall be provided for recovery vehicles in accordance with Chapter III paragraphs 3 and 4 and the following:
<hr/>		
	Group	Feature
	I	1 Each type of recovery vehicle.
<hr/>		

Recovery Vehicles 37 The items for recovery vehicles shall in accordance with the Preambles to Schedule of Rates General Directions include for:

- Item coverage
- (a) equipment including communications equipment and identification sign,
 - (b) all taxes levies licensing certification and other similar requirements for operating on the public road or highway,
 - (c) comprehensive insurance,
 - (d) replacement vehicle including equipment,
 - (e) depreciation,
 - (f) maintenance,
 - (g) fuel, oil and consumables,
 - (h) qualified operator and safety officer and provision of documents,
 - (i) completion and submission of information log sheets and record sheets,
 - (j) vehicle inspections and submission of certificates,
 - (k) dealing with shed loads, broken down, accident damaged or abandoned vehicles and removal,
 - (l) explanatory leaflets and distribution,
 - (m) liaising with Police,
 - (n) hardstandings, accommodation and servicing,
 - (o) locations and facilities for vehicle removal,
 - (p) removal of all plant, equipment, hardstandings, accommodation and locations and facilities for vehicle removal,
 - (q) vehicle inspection and report,
 - (r) lighting board,
 - (s) reinstatement.

After paragraph 55 add the following paragraphs 56 to 59 inclusive:

Mobilisation

- Units 56 The unit of measurement shall be:
- (i) provide the Quality Management System, provide resources for Integrated Roads Information System, provide Record Referencing system and storage facilities, liaise with the previous operating company and institute handover of historical records and records register, provide Customer Contact Services, provide Traffic Scotland IT and operational systems, provide Central Office and facilities, provide

subordinate Offices, Depots and facilities, provide Winter Service Plant and resources, provide Incident Response resources, provide all Plans as required in this Contract, prepare Maintenance Schedule for Management and Maintenance of Structures, provide vehicle and equipment resources for Incident Support Unit, any other Mobilisation Services.....item.

Measurement 57 The maximum payment that may be made for mobilisation prior to the Commencement of Service is £500,000 or 50% of the mobilisation total, whichever is lower.

The balance of payment for mobilisation activities executed will be made in monthly payments following the Commencement of Service Date at a rate of 25% of this balance per month.

Itemisation 58 Separate items shall be provided for mobilisation in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Mobilisation activity.

Mobilisation 59 The items for mobilisation shall in accordance with the Preambles to Schedule of Rates General Directions include for:

Item coverage (a) Everything required for mobilisation.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 200: SITE CLEARANCE

Site Clearance

Insert the following before paragraph 1:

Definitions Delete all references to "tip" and replace with "licensed facility".
"licensed facility" means a licensed disposal facility or a licensed recycling facility.

Delete paragraphs 2 to 7 inclusive and insert the following paragraphs 2 to 5 inclusive:

Units 2 The units of measurement shall be:
(i) removing undergrowth square metre,
(ii) removing hedges linear metre.

Measurement 3 The measurement of removing undergrowth shall be the area to be cleared.
The height of hedges shall be measured from ground level.

Itemisation 4 Separate items shall be provided for site clearance in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Removing undergrowth.
	2 Removing hedges not exceeding 2.5m high.
	3 Removing hedges exceeding 2.5m high.

Site Clearance 5 The items for site clearance shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

Item coverage (a) demolition, breaking up and removal,
(b) in the case of removing undergrowth, felling trees not exceeding 500mm girth and grubbing up stumps not exceeding 160mm diameter,
(c) in the case of removing hedges, removing fencing and wires, felling trees not exceeding 500mm girth and grubbing up stumps not exceeding 160mm diameter,
(d) credit value of materials,

- (e) disposal of material (as Series 600 paragraph 39),
- (f) working around services,
- (g) backfilling and compaction,
- (h) making good to severed ends of existing fences, hedges and walls,
- (i) disconnecting and sealing services,
- (j) preservation of individual or groups of trees, shrubs, hedges and other features,
- (k) reinstatement and making good,
- (l) filling post and stump holes with acceptable material from any source and compaction,
- (m) mechanical chipping of felled trees and saplings and spreading up to 25mm thick,
- (n) treatment of hazardous materials,
- (o) herbicide treatment.

Delete paragraph 8 and substitute the following:

Units

8 The units of measurement shall be:

Take up or down and set aside for re-use or remove to store or to tip off Site the following:

- (i) brickwork, blockwork and stonework cubic metre,
- (ii) paved areas and other similar hardstandings, square metre,
- (iii) kerbs, channels, edgings, combined kerbs and channels, combined drainage and kerb blocks, fencing, safety barrier, pedestrian guardrail, parapets, parapet rails, copings, string courses and other similar features linear metre,
- (iv) cable linear metre,
- (v) road lighting columns, brackets and wall mountings, traffic signs, traffic sign posts, fence posts, safety barrier posts, parapet posts, parapet infill panels, sign lighting units, sign bracket arms, gates and stiles, street furniture, reflecting road studs, communications cabinets, feeder pillars, posts, brackets, signal indicators, shelves, racking, frames, electronic units and other similar features number,
- (vi) chamber covers and frames and gully gratings and frames and other similar features number,
- (vii) quadrants number,
- (viii) individual blocks, features or stones number.

Delete paragraph 9 and substitute the following:

- Measurement 9 The measurement for take up or down and set aside for re-use or remove to store or to tip off Site brickwork, blockwork, stonework, paved areas, kerbs, channels, edgings, combined kerbs and channels, combined drainage and kerb blocks, linear drainage channel systems, fencing, safety barrier, pedestrian guardrail, parapets parapet rails and other similar features, copings, string courses and other similar features, cable, road lighting columns, brackets and wall mountings, traffic sign faces, traffic sign posts, fence posts, safety barrier posts, parapet posts, sign lighting units, sign bracket arms, gates and stiles, street furniture, reflecting road studs, communications cabinets, feeder pillars, posts, brackets, signal indicators, shelves, racking, frames, electronic units and other similar features, chamber covers and frames and gully gratings and frames and other similar features, quadrants, individual blocks, features or stones shall be the volumes, areas, lengths or numbers measured.
- Take up or down and set aside for re-use or remove to store or to tip off Site for fence posts, parapet posts and rails shall only be separately measured when they are a separate operation from the items take up or down and set aside for re-use or remove to store or to tip off Site for fences and parapets.
- The measurement of take up or down and set aside for re-use or remove to store or to tip off Site for safety barrier shall not include the posts which are separately measured.

Delete paragraph 10 and substitute the following:

- Itemisation 10 Separate items shall be provided for take up or down and set aside for re-use or remove to store or to tip off Site in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Take up or down and set aside for re-use or remove to store.
	2 Take up or down and remove to tip off Site.
II	1 Brickwork, blockwork and stonework.
	2 Paved areas and other hardstandings.
	3 Kerbs, channels, edgings, combined kerbs and channels, combined drainage and kerb blocks, fencing, safety barrier, pedestrian guardrail, parapets, parapet rails and the like.
	4 Copings, string courses and the like.

	5	Cable.
	6	Road lighting columns, brackets and wall mountings, traffic signs, traffic sign posts, fence posts, safety barrier posts, parapet posts, sign lighting units, sign bracket arms, gates and stiles, street furniture, reflecting road studs and the like.
	7	Communications cabinets, feeder pillars, posts, brackets, signal indicators and the like.
	8	Shelves, racking, frames and other similar features.
	9	Electronic units and other similar features.
	10	Chamber covers and frames and gully gratings and frames and the like.
	11	Quadrants.
	12	Individual blocks, features or stones.
III	1	Any types and sizes.
	2	Any heights or mounting height.
IV	3	Different arrangements.

In paragraph 11 delete sub-paragraph (e) and replace with the following:

(e) cleaning, stacking, palletising, protecting and labelling.

Add the following sub-paragraph to paragraph 11:

(i) retrieval of displaced materials from their position after displacement (excluding fees to Network Rail).

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 300: FENCING

Fencing, Gates and Stiles

Delete paragraph 1,2 and 3 and substitute the following:

Units	<p>1 The units of measurement shall be:</p> <p>(i) fencing, wire, wire mesh linear metre,</p> <p>(ii) gates, stiles number,</p> <p>(iii) fenced tree guards number.</p>										
Measurement	<p>2 Temporary fencing shall not be measured.</p> <p>The measurement of fencing shall be the developed length along the centre line of the fence. The measurement of height of fencing shall be that stated in this contract for the type of fence.</p> <p>The measurement of wire and wire mesh shall be separately measurable where it is required by this contract to be fixed to fencing, gates and the like, and shall be the developed length along the centre line of the fence.</p> <p>The measurement of width of gates shall be the distance between the outer edges of the stiles, the outer edges of hanging stiles in the case of double gates.</p> <p>The measurement of height of gates shall be the distance between the upper surface of the top rail and the underside of the bottom rail.</p> <p>Concrete foundation to timber posts shall only be measured for those locations stated in Appendices 1/15 or 3/1 of the Specification.</p>										
Itemisation	<p>3 Separate items shall be provided for fencing in accordance with Chapter III paragraphs 3 and 4 and the following:</p> <hr/> <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Group</th> <th style="text-align: left; border-bottom: 1px solid black;">Feature</th> </tr> </thead> <tbody> <tr> <td style="border-right: 1px solid black; padding-right: 10px;">I</td> <td style="padding-left: 10px;">1 Each type of fencing.</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;"></td> <td style="padding-left: 10px;">2 Each type of wire to fencing, gates and the like.</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;"></td> <td style="padding-left: 10px;">3 Each type of wire mesh to fencing, gates and the like.</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;"></td> <td style="padding-left: 10px;">4 Each type of gate.</td> </tr> </tbody> </table> <hr/>	Group	Feature	I	1 Each type of fencing.		2 Each type of wire to fencing, gates and the like.		3 Each type of wire mesh to fencing, gates and the like.		4 Each type of gate.
Group	Feature										
I	1 Each type of fencing.										
	2 Each type of wire to fencing, gates and the like.										
	3 Each type of wire mesh to fencing, gates and the like.										
	4 Each type of gate.										

	5	Each type of stile.
	6	Each type of fenced tree guard.
II	1	Fencing of different heights.
	2	Gates of different heights and widths.
III	1	Painted fencing, gates or stiles.

Note 1: Group II feature 1 shall only apply to Group 1 feature 1.

Note 2: Group II feature 2 shall only apply to Group 1 feature 4.

Fencing 4

Item coverage

Add the following:

- (y) removal of debris and other similar material on the line of the fencing.

After paragraph 16 add the following paragraphs 17 to 23 inclusive:

Repairs to Existing Fencing – Renew Components

Units

- 17 The units of measurement shall be:
- (a) boarding to close boarded fence square metre,
 - (b) panel to sound absorption fence square metre,
 - (c) rails, wire, chain link, wire mesh linear metre,
 - (d) posts and struts..... number.

Measurement

- 18 The measurement of renew boarding to close boarded fence or replace panel to sound absorption fence to existing fencing shall be the net area of boarding or panels replaced.
- The measurement of renew rails, wire or mesh to existing fencing shall be the net length of rails, wire or mesh replaced.
- The measurement of renew posts or struts to existing fencing shall be the number of posts or struts replaced.
- Repairs to Existing Fencing – Renew Components shall not be used for replacement of complete fence.

Itemisation

- 19 Separate items shall be provided for repairs to existing fencing in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature	
I	1	Renew boarding to close boarded fence.
	2	Renew each type of rail, wire or mesh.
	3	Renew any type of post or strut.
II	1	Different types of post or strut.

		III	1	Different types of wire or mesh.
			2	Different types of rail.
		IV	1	Not exceeding 1.50 metres long.
			2	Exceeding 1.5 but not exceeding 3 metres long.
		Note 1: Group II shall only apply to Group I feature 3.		
		Note 2: Group III shall only apply to Group I feature 2.		
		Note 3: Group IV shall only apply to Group I feature 3.		
Renew Rails, Wire and Wire Mesh	20	The items for renew rails, wire and wire mesh shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:		
Item coverage		(a)	removal of existing fence rails, wire and wire mesh,	
		(b)	disposal of material (as Series 600 paragraph 39),	
		(c)	removal of old fixings,	
		(d)	dismantling and re-erection of existing fence to facilitate removal of components,	
		(e)	fittings and fixings,	
		(f)	trimming ground on line of fencing,	
		(g)	protective system (as Series 1900 paragraph 4),	
		(h)	preservation of timber.	
Renew Posts and Struts	21	The items for renew posts and struts shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:		
Item coverage		(a)	removal of existing posts, struts and pales,	
		(b)	removal of old fixings,	
		(c)	dismantling and re-erection of existing fence to facilitate renewal of components,	
		(d)	excavation of acceptable material (as Series 600 paragraphs 17 and 18),	
		(e)	excavation of unacceptable material (as Series 600 paragraphs 19),	
		(f)	breaking up foundations,	
		(g)	disposal of material (as Series 600 paragraph 39),	
		(h)	backfilling and compaction,	
		(i)	fittings and fixings,	
		(j)	protective system (as Series 1900 paragraph 4),	
		(k)	preservation of timber,	

		(l) epoxy resin compound and mastic filler to posts fixed in sockets,
		(m) concrete foundations to posts and struts.
Renew Boarding to Close Boarded Fence and Panel to Sound Absorption Fence	23	The items for renew boarding to close boarded fence and panel to sound absorption fence shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) fencing (as this Series paragraph 4),
		(b) removing existing boarding and infills,
		(c) disposal of material (as Series 600 paragraph 39),
		(d) dismantling and re-erection of existing fence to facilitate renewal of items,
		(e) fittings and fixings.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 400: ROAD RESTRAINT SYSTEMS (VEHICLE AND PEDESTRIAN)

Safety Barriers and Transitions

Itemisation 4 In paragraph 4 delete Group V.
Delete Group III and replace with the following:

Group	Feature
III	1 Each Working Width Class or range of Working Width classes.

Item coverage 5 In paragraph 5 delete (a) (f) and (h) and replace with the following:

(a) design, fabrication, installation, construction and testing,
(f) amendments to the Unit,

Terminals

Itemisation 8 In paragraph 8 delete Groups I to IV and replace with the following Groups I to III:

Group	Feature
I	1 Terminal.
II	1 Each performance class.
III	1 Designed to be impacted on one side only. 2 Designed to be impacted on both sides.

After paragraph 9 insert the following paragraphs 9A to 9D inclusive:

Reconstruction of Concrete Ramps at Terminal Section

Units 9A The units of measurement shall be:

(i) reconstruction of concrete ramps at terminal sections..... number.

Measurement 9B The measurement of reconstruction of concrete ramps at terminal sections shall be the complete installation.

Itemisation	9C	Separate items shall be provided for the reconstruction of concrete ramps in accordance with Chapter III paragraphs 3 and 4 and the following:
	Group	Feature
	I	1 Reconstruction of concrete ramps at terminal sections.

Reconstruction of Concrete Ramps at Terminal Section

	9D	The items for reconstruction of concrete ramps at terminal sections shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage	(a)	break out existing concrete ramp and disposal of material,
	(b)	cut off and drill out, grout in place new reinforcing rods,
	(c)	design,
	(d)	provision of design calculations and details to the Overseeing Organisation for acceptance,
	(e)	reports, certificates,
	(f)	provision of data and drawings,
	(g)	re-submissions and modifications,
	(h)	amendments to the works,
	(i)	obtaining approvals,
	(j)	everything necessary for the design, fabrication, installation and testing of the works.

Connections to Existing Systems

Itemisation	12	In paragraph 12 delete Groups III and IV.
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Vehicle Parapets

		In paragraph 18 add the following:
Units	18	(ii) infill panel.....square metre.
		After paragraph 19 insert the following paragraph 19A:
Measurement	19A	Where infill is required to vehicle parapets it shall be separately measured.
		The measurement of infill shall be the developed length along the centre line of the infill multiplied by the height of the infill.

Itemisation 20 In paragraph 20 delete Groups III, V and VI and add the following:

Group	Feature	
I	2	Infill panel to vehicle parapet.
III	1	Each Working Width Class or range of Working Width Class.
V	1	Class of infill panel.
VI	1	Type of infill panel.

Note 1: Group II, III and IV features shall only be applied to Group I feature 1 vehicle parapet.

Note 2: Group V and VI features shall only be applied to Group I feature 2 infill panel to vehicle parapet.

Pedestrian Parapets and Pedestrian Guardrails

Units 23 In paragraph 23 add the following:

(ii) infill panel.....square metre.

After paragraph 24 insert the following paragraph 24A:

Measurement 24A Where infill is required to pedestrian parapets it shall be separately measured.

The measurement of infill shall be the developed length along the centre line of the infill multiplied by the height of the infill.

Itemisation 25 In paragraph 25 delete Groups IV, V and VI and add the following:

Group	Feature	
I	3	Infill panel to pedestrian parapet.
IV	1	Class of infill panel.
V	1	Type of infill panel.

Delete Notes 1 and 2 and replace with the following:

Note 1: Group II and III features shall only apply to Group I features 1 and 2.

Note 2: Group IV and V features shall only be applied to Group I feature 3.

Delete heading after paragraph 30 and substitute the following:

Remove from Store and Re-erect Safety Barriers, Vehicle Parapets, Pedestrian Parapets, Pedestrian Guardrails and Pedestrian Handrail

Units

31 In paragraph 31 add the following:

The units of measurement shall be:

- (iv) infill panels.....square metres,
- (v) additional concrete in foundations to re-erected posts.....cubic metres.

After paragraph 35 add the following paragraph 35A to 35C:

Measurement

35A Where infill is required to vehicle parapets it shall be a separately measured item.

The measurement of remove from store or from where previously set aside and re-erect infill panels shall be the area of the infill panel.

35B The measurement of re-erected vehicle parapets parapet rails and pedestrian parapets, pedestrian guardrails and pedestrian handrails shall be the developed length along the centreline of the units between the end of each type of unit at a connection to a safety barrier a different type of parapet, guardrail or handrail or within a connection piece assembly.

35C The measurement of additional concrete in foundations to re-erected posts is the volume of concrete required by the design less the volume contained in concrete foundations and socketed foundations measured under paragraph 36 Group I feature 22.

Delete paragraph 36 and substitute the following:

Itemisation

36 Separate items shall be provided for remove from store or from where previously set aside and re-erect safety barrier in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature	
I	1	Single-sided safety beam.
	2	Double-sided safety beam.
	3	Driven post.
	4	Long driven post
	5	Post for setting in concrete or socket
	6	Surface mounted post
	7	Mounting bracket.

8	Single sided terminal section.
9	Double sided terminal section.
10	Full height anchorage.
11	Expansion joint anchorage.
12	Connection to bridge parapet.
13	Tension assembly.
14	Adjuster assembly.
15	Vehicle parapet.
16	Vehicle parapet rail.
17	Vehicle parapet post.
18	Pedestrian parapet.
19	Pedestrian guardrail.
20	Pedestrian handrail.
21	Parapet infill panel.
22	Concrete foundation and socketed concrete foundation volume 0.25m ³ to re-erected post.
23	Additional concrete in foundations to re-erected posts.

After paragraph 40 add the following paragraph 40A:

Remove from Store and Re-erect Vehicle Parapets, Pedestrian Parapets, Pedestrian Guardrails and Pedestrian Handrail

40A The items for remove from store and re-erect vehicle parapets, parapet rails and infill panels, pedestrian parapets, pedestrian guardrails and pedestrian handrails shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

Item coverage

- (a) loading, transporting from store or from where previously set aside, unloading and positioning for re-erection,
- (b) replacing items damaged during the foregoing operations,
- (c) modification and new materials,
- (d) making good to protective system.

**Concrete
Foundation and
Socketed Concrete
Foundation Volume
0.25m³ to Re-
erected Post**

Delete the marginal heading to paragraph 41 and substitute the following:

After paragraph 41 add the following paragraphs 41A to 41O:

**Additional Concrete
in Foundations to
Re-erected Posts**

41A The items for additional concrete in foundations to re-erected posts shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

Item coverage

- (a) excavation in any material (as Series 600 paragraphs 17, 18, 19 and 23),
- (b) disposal of material (as Series 600 paragraph 39),
- (c) concrete (as Series 1700 paragraphs 5 and 10),
- (d) formwork (as Series 1700 paragraph 15),
- (e) reinforcement (as Series 1700 paragraph 26),
- (f) granular fill and compaction,
- (g) plastic sheeting.

Remove from Store and Re-erect Wire Rope Safety Fence

Units

41B The units of measurement shall be:

- (i) remove from store and re-erect wire rope..... linear metre,
- (ii) remove from store and re-erect posts, intermediate anchorages and end anchorages number,
- (iii) concrete foundation and socketed foundations to re-erected posts number,
- (iv) additional concrete in foundations to re-erected posts.....cubic metres.

Measurement

41C The measurement of remove from store and re-erect wire rope shall be the developed length measured once along the centre line of the fence on plan from midway between the anchor blocks at one end to midway between the anchor blocks at the other end.

	41D	The measurement of remove from store and re-erect intermediate anchorages and end anchorages shall be the complete installation. Concrete foundations and socketed foundations to re-erected posts, between those points defined in paragraph 41C shall only be measured for those locations stated in this Contract.																	
	41E	The measurement of additional concrete in foundations to re-erected posts is the volume of concrete required by the design less the volume contained in concrete foundations and socketed foundations measured under paragraph 41F Group I feature 6.																	
Itemisation	41F	Separate items shall be provided for remove from store or from where previously set aside and re-erect wire rope safety fences in accordance with Chapter III paragraphs 3 and 4 and the following:																	
		<table border="1"> <thead> <tr> <th>Group</th> <th>Feature</th> </tr> </thead> <tbody> <tr> <td rowspan="7">I</td> <td>1</td> <td>Standard length component rope,</td> </tr> <tr> <td>2</td> <td>Non-standard length component rope,</td> </tr> <tr> <td>3</td> <td>Post,</td> </tr> <tr> <td>4</td> <td>Intermediate anchorage,</td> </tr> <tr> <td>5</td> <td>End anchorage,</td> </tr> <tr> <td>6</td> <td>Concrete foundation and Socketed concrete foundation volume 0.25m³ to re-erected post,</td> </tr> <tr> <td>7</td> <td>Additional concrete in foundations to re-erected posts.</td> </tr> </tbody> </table>	Group	Feature	I	1	Standard length component rope,	2	Non-standard length component rope,	3	Post,	4	Intermediate anchorage,	5	End anchorage,	6	Concrete foundation and Socketed concrete foundation volume 0.25m ³ to re-erected post,	7	Additional concrete in foundations to re-erected posts.
Group	Feature																		
I	1	Standard length component rope,																	
	2	Non-standard length component rope,																	
	3	Post,																	
	4	Intermediate anchorage,																	
	5	End anchorage,																	
	6	Concrete foundation and Socketed concrete foundation volume 0.25m ³ to re-erected post,																	
	7	Additional concrete in foundations to re-erected posts.																	
Remove from Store and Re-erect Wire Rope	41G	The items for remove from store wire rope shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:																	
Item Coverage		<ul style="list-style-type: none"> (a) loading, transporting from store, unloading and positioning for re-erection, (b) replacing items damaged during the foregoing operations, (c) modification and new materials, (d) adjustments and tensioning, (e) threading ropes into and around posts. 																	
Remove from Store and Re-erect Posts.	41H	The items for remove from store and re-erect posts shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:																	
Item Coverage		<ul style="list-style-type: none"> (a) loading, transporting from store, unloading and positioning for re-erection, 																	

		(b) replacing items damaged during the foregoing operations,
		(c) modification and new materials,
		(d) making good to protective system,
		(e) fabrication (as Series 1800 paragraph 6),
		(f) protective system (as Series 1900 paragraph 4),
		(g) driving in any material,
		(h) fixing to structures including attachment systems,
		(i) post caps, excluders, hooks and fittings,
		(j) drilling or foaming holes and pockets and casting in bolts, base plates and anchorage assemblies,
		(k) bedding,
		(l) filling,
		(m) making good protective system,
		(n) facilities for proof loading.
Remove from Store and Re-erect Intermediate Anchorages and End Anchorages	41J	The items for remove from store and re-erect intermediate anchorages and end anchorages shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item Coverage		(a) loading, transporting from store, unloading and positioning fro re-erection,
		(b) replacing items damages during the foregoing operations,
		(c) modification and new materials,
		(d) making good to protective system,
		(e) fixing to anchor block including attachment system.
Concrete Foundations and Socketed Foundations to Re-erected Posts for Wire Rope Safety Fence	41K	The items for concrete foundations and socketed concrete foundations to re-erected posts for Wire Rope Safety Fence shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) Concrete Foundations and Socketed Foundations to Re-erected Posts (as this Series paragraph 41).

Additional Concrete in Foundations to Re-erected Posts for Wire Rope Safety Fence 41L The items for additional concrete in foundations to re-erected posts for Wire Rope Safety Fence shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

Item coverage (a) additional concrete in foundations to re-erected posts (as this Series paragraph 41A).

Renew Wire Rope Safety Fence Components

Units 41M The units of measurement shall be:
(i) renew component rope..... metre,
(ii) renew check rope, caps, base cover number.

Itemisation Separate items shall be provided for renew wire rope safety fence components in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Renew different types of components.

Renew Standard Length Component Rope and Check Rope 41N The items for renew wire rope shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

Item coverage (a) fabrication (as Series 1800 paragraph 6),
(b) protective system (as Series 1900 paragraph 4),
(c) rigging screws, threaded terminals, attachments, fittings and fixings,
(d) adjustments and tensioning,
(e) threading ropes into and around posts,
(f) take up or down existing wire rope and remove to tip off site (as Series 200 paragraph 11).

Renew Posts, Post Caps and Base Covers 41O The items for renew posts, post caps and base covers shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

Item coverage (a) fabrication (as Series 1800 paragraph 6),
(b) protective system (as Series 1900 paragraph 4),
(c) driving in any material,
(d) post caps excluders, hooks and fittings,
(e) drilling or forming holes and pockets and casting in bolts, base plates, sockets and anchorage assemblies,
(f) bedding,

- (g) filling,
- (h) take up or down existing post including concrete surround and remove to Tip off Site (as Series 200 paragraph 11).

After paragraph 47 add the following paragraphs 48 to 61 inclusive:

Damage to Crown Property: Repairs to Safety Barriers, Vehicle Parapets, Pedestrian Parapets and Pedestrian Guardrails

Definition	48	Repairs to safety barriers, vehicle parapets, pedestrian parapets and pedestrian guardrails shall be the complete replacement of the whole of the damaged apparatus and shall include posts and rails.
Units	49	The units of measurement shall be: <ul style="list-style-type: none">(i) invoiced costs of new components sum,(ii) percentage to be added to invoiced costs percentage.
Measurement	50	Measurement will be in accordance with the provisions of Schedule 4 Part 4 'Damage to Crown Property'.
	51	The measurement of repairs to safety barriers, vehicle parapets, pedestrian parapets and pedestrian guardrails shall be as follows: <ul style="list-style-type: none">(i) Take up or down and remove to tip of Site (measured in Series 200 Site Clearance) for any components that cannot be re-used.(ii) Take up or down and set aside or remove to store (measured in Series 200 Site Clearance) for any components that can be re-used.(iii) Remove from store and re-erect (measured as this Series paragraphs 31 to 40) for any components that can be reused.(iv) Remove from store and re-erect (measured as this Series paragraphs 31 to 41L) for any components that are available in store.(v) Invoiced costs of any new components.

The measurement of invoiced costs of new components shall be the value of invoices received excluding VAT, after any discounts given except in respect of any discount for prompt payment not exceeding 2.5% which may be retained by the Operating Company.

Itemisation 52 Separate items shall be provided for invoiced costs of new components in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Invoiced costs of new components.
	2 Percentage adjustment to invoiced costs.

Percentage Adjustment to Invoiced Costs of New Components. 53 The percentage adjustment to invoiced costs new components shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

Item Coverage (a) all costs in connection with the procurement of new components.

Painting of Safety Barriers, Pedestrian Guardrail and Handrail

Units 54 The unit of measurement shall be:
(i) painting of Safety Barriers, Pedestrian Guardrail and Handrail linear metre.

Measurement 55 The measurement of painting of Safety Barriers, Pedestrian Guardrail and Handrail shall be the developed length along the centreline of the units.
Painting of Safety Barriers, Pedestrian Guardrail and Handrail shall only be measured when painting in excess of the protective system is required.

Itemisation 56 Separate items shall be provided for Painting of Safety Barriers, Pedestrian Guardrail and Handrail Units in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Painting of safety barrier.
	2 Painting of pedestrian guardrail.
	3 Painting of pedestrian handrail.

Painting of Safety Barriers, Pedestrian Guardrail and Handrail Units 57 The items for painting of Safety Barriers, Pedestrian Guardrail and Handrail shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

Item coverage (a) protection of steelwork against corrosion (as Series 1900 paragraph 4),
(b) painting of all components.

Temporary Safety Barriers

Units 58 The units of measurement shall be:
(i) temporary safety barrier metre.

Measurement	59	<p>The measurement of temporary safety barrier shall be the developed length along the centreline of the temporary safety barrier including terminal sections.</p> <p>Temporary safety barrier shall only be measured where the temporary safety barrier is acting as a permanent parapet. All other temporary safety barrier shall not be measured.</p>								
Itemisation	60	<p>Separate items shall be provided for temporary safety barriers in accordance with Chapter III paragraphs 3 and 4 and the following:</p> <table border="1"> <thead> <tr> <th>Group</th> <th>Feature</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>1 Temporary Safety Barrier.</td> </tr> <tr> <td>II</td> <td>1 Each containment performance class.</td> </tr> <tr> <td>III</td> <td>1 Each Working Width Class or range of Working With Classes.</td> </tr> </tbody> </table>	Group	Feature	I	1 Temporary Safety Barrier.	II	1 Each containment performance class.	III	1 Each Working Width Class or range of Working With Classes.
Group	Feature									
I	1 Temporary Safety Barrier.									
II	1 Each containment performance class.									
III	1 Each Working Width Class or range of Working With Classes.									
Temporary Safety Barriers	61	<p>The items for temporary safety barriers shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:</p>								
Item coverage		<ul style="list-style-type: none"> (a) safety barriers and transitions (as this series paragraph 5), (b) terminals (as this series paragraph 9), (c) dismantling, loading, transporting removal and unloading, (d) maintenance, which includes for all time-related costs associated with keeping the temporary safety barrier in both condition and position. 								

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 500: DRAINAGE AND SERVICE DUCTS

Drains and Service Ducts (Excluding Filter Drains, Narrow Filter Drains and Fin Drains)

- Units 9 Add the following sub paragraphs:
- (ii) Extra over drain for concrete bed and surround (bed Type Z)metre.
- (iii) Extra over drain in trench for backfilling with concretecubic metre.

Itemisation 15 In paragraph 15 delete group VI, add the following:

Group	Feature
I	3 Extra over drain for concrete bed and surround (bed Type Z).
	4 Extra over drain or service duct for backfilling with concrete to underside of pavement.

Insert "1" after "Note".

Add the following:

Note 2: Itemisation for drains includes compliance with any Groups, materials and bed types for the stated depths, excluding bed type Z which will be measured as extra over.

Note 3: Groups II, IV and V shall not apply to Group I features 3 and 4.

Filter Drains

In paragraph 17 add the following:

- Units 17 (v) renew geotextile membrane to replaced filter material..... square metre.

Measurement 20 In paragraph 20 delete the last paragraph and add the following:

The measurement of excavate and replace filter material shall include contiguous filter material between the filter drain and the adjacent carriageway, hardshoulder and hardstrip.

The measurement of excavate and replace filter material excluding contiguous filter material shall be the product of the lengths, widths and depths ordered with no deduction for pipes, ducts or chambers. Lengths and widths for filter drains shall be taken as the lengths and widths at the level of the

drain invert or, in the case that partial excavation is ordered, at the depth to which excavation is ordered."

The widths of excavate and replace contiguous filter material shall be between the side of the contiguous filter material next to the filter drain which shall be taken as the vertical extension of the side at the level of the drain invert or, in the case of partial excavation, at the depth to which excavation is ordered and the adjacent carriageway, hardshoulder and hardstrip. The depth of the contiguous filter material next to the filter drain shall be taken above capping or where no capping is provided above subgrade level. Where the filter material is covered with red chippings the top surface of the excavate and replace filter material shall be the underside of the red chippings.

Itemisation 21 In paragraph 21 add the following Feature 6 to Group I and delete group V.

Group	Feature
I	1 Renew geotextile membrane to replaced filter material.

Delete paragraph 24 and replace with the following:

Excavate and Replace Filter Material 24 The items for excavate and replace filter material shall in accordance with the Preambles to Bill of Quantities General Directions include for:

- Item coverage
- (a) filter drains (as this Series paragraph 22), excluding geotextile membrane,
 - (b) cleaning and replacing excavated filter material,
 - (c) new and recycled filter material.

After paragraph 24 add the following paragraph 24A:

Renew Geotextile Membrane to Replaced Filter Material 24A The items for renew geotextile membrane to replaced filter material shall in accordance with the Preambles to Bill of Quantities General Directions include for:

- Item coverage
- (a) regulating and preparing surfaces,
 - (b) laps,
 - (c) measures to protect material,
 - (d) cutting, jointing, and fixing.

Renewal, Raising or Lowering of Covers and Gratings on Existing Chambers and Gullies

Itemisation 63 In paragraph 63 delete group I to VI and add the following:

Group	Feature
I	1 Renewal.
	2 Raising or lowering the level.
II	1 Area exceeding 0.30 square metres.
	2 Area exceeding 0.30 but not exceeding 0.60 square metres.
	3 Area exceeding 0.30 but not exceeding 0.60 square metres.
III	1 Not exceeding 150 mm.
	2 Exceeding 150 mm but not exceeding 300 mm and so on in steps of 150 mm.

In paragraph 64 add the following:

Item coverage (u) paving material infilling to covers.

After paragraph 64 add the following paragraphs 64A to 64D inclusive:

Renewal of Rodding Eyes

Units 64A The unit of measurement shall be:

(i) renewal of rodding eyes number.

Measurement 64B The measurement shall be of the complete installation to be renewed.

The depths of rodding eyes shall be the distance measured vertically between the top surface of the cover and the invert of the drain or, in the case of double rodding eyes, of the lower drain.

Itemisation 64C Separate items shall be provided for rodding eyes in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Renewal of rodding eyes to different pipe sizes.
	1 Depth to invert not exceeding 1 metre.
	2 Depths to invert exceeding 1 metre but not exceeding 2 metres, and so on in steps of 1 metre.
	1 Access from one end only.
	2 Access from both ends.

Renewal of Rodding Eyes

64D The items for renewal of rodding eyes shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

Item coverage

- (a) excavation (as Series 600 paragraphs 17, 18, 19 and 23),
- (b) cutting, laying, jointing and bedding pipes and fittings,
- (c) connecting drain pipe,
- (d) formwork (as Series 17 paragraph 15),
- (e) in-situ concrete (as Series 17 paragraphs 5 and 10),
- (f) brickwork (as Series 2400 paragraph 4),
- (g) covers, frames and bedding, and cover keys,
- (h) backfilling with acceptable material from any source and compaction,
- (i) disposal of material (as Series 600 paragraph 39).

After paragraph 80 add the following paragraphs 80A to 80D inclusive:

Protection of Existing Sewer, Drain or Service Duct

Units

80A The unit of measurement shall be:

- (i) protection of existing sewer, drain or service duct linear metre.

Measurement

80B The measurement of protection shall be the individual lengths of sewer, drain or service duct to be protected.

Itemisation

80C Separate items shall be provided for protection of existing sewer, drain or service duct in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Different widths.
II	1 Different types of protection.

Protection of Existing Sewer, Drain or Service Duct

80D The items for protection of existing sewer, drain or service duct shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- (a) concrete (as Series 1700 paragraphs 5 and 10),
- (b) formwork (as Series 1700 paragraph 15),
- (c) reinforcement (as Series 1700 paragraph 26),
- (f) bedding and compaction,
- (g) fabric reinforcement.

After paragraph 84 add the following paragraphs 85 to 94 inclusive:

Drain Surveys

Units	85	The unit of measurement shall be: (i) drain survey kilometre.															
Measurement	86	The measurement of drain survey shall be the length of carriageway.															
Itemisation	87	Separate items shall be provided for drain surveys in accordance with Chapter III paragraphs 3 and 4 and the following:															
<table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 10%;">Group</th> <th style="text-align: left; width: 10%;">Feature</th> <th></th> </tr> </thead> <tbody> <tr> <td style="border-top: 1px solid black;">I</td> <td style="border-top: 1px solid black;">1</td> <td style="border-top: 1px solid black;">Drain survey.</td> </tr> <tr> <td style="border-top: 1px solid black;">II</td> <td style="border-top: 1px solid black;">1</td> <td style="border-top: 1px solid black;">Type 1.</td> </tr> <tr> <td></td> <td style="border-top: 1px solid black;">2</td> <td style="border-top: 1px solid black;">Type 2.</td> </tr> <tr> <td></td> <td style="border-top: 1px solid black;">3</td> <td style="border-top: 1px solid black;">Type 3.</td> </tr> </tbody> </table>			Group	Feature		I	1	Drain survey.	II	1	Type 1.		2	Type 2.		3	Type 3.
Group	Feature																
I	1	Drain survey.															
II	1	Type 1.															
	2	Type 2.															
	3	Type 3.															
Drain Survey Type 1	88	The items for drain survey Type 1 shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:															
Item coverage		(a) carrying out desk study using available data, (b) locating chambers, pump chambers, balancing ponds, penstocks, flap valves, headwalls, outfalls, and the like, (c) recording, (d) reporting.															
Drain Survey Type 2	89	The items for drain survey Type 2 shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:															
Item coverage		(a) locating chambers, pump chambers, balancing ponds, penstocks, flap valves, headwalls, outfalls, and the like, (b) removing, and reinstalling covers and gratings, (c) measuring pipe sizes, (d) measuring depth to invert from surface, (e) recording, (f) reporting.															

Drain Survey Type 3 90 The items for drain survey Type 3 shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- Item coverage
- (a) locating chambers, pump chambers, balancing ponds, penstocks, flap valves, headwalls, outfalls, and the like,
 - (b) removing and reinstalling covers and gratings,
 - (c) measuring pipe sizes,
 - (d) measuring invert level of pipes,
 - (e) condition survey,
 - (f) recording,
 - (g) reporting.

Closed Circuit Television Drain Surveys

Units 91 The units of measurement shall be:

- (i) setting up closed circuit television equipment for drain survey number,
- (ii) closed circuit television drain survey..... linear metre.

Measurement 92 The measurement of setting up closed circuit television equipment for drain survey shall be the number of chambers at which the equipment is set up.

Any additional setting up of equipment for drain survey to suit the Operating Company's method of working shall not be measured.

The measurement of drain survey by closed circuit television camera shall be the length measured along the centre lines of the pipes between any of the following:

- (a) the external faces of chambers, gullies or headwalls,
- (b) the intersection of the centre lines at pipe junctions,
- (c) the position of any known terminations.

Itemisation 93 Separate items shall be provided for closed circuit television surveys in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Setting up closed circuit television equipment for drain survey.
	2 Closed circuit television drain survey.
II	1 Not exceeding 450mm diameter.
	2 Exceeding 450mm diameter but not exceeding 900mm diameter.

Note: Group II shall only apply to Group I feature 2.

**Closed Circuit
Television Drain
Surveys**

94

The items for closed circuit television drain surveys shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

Item coverage

- (a) locating chambers, pump chambers, balancing ponds, penstocks, flap valves, headwalls, outfalls, and the like,
- (b) removing and reinstalling covers and gratings,
- (c) moving and setting up closed circuit television camera equipment,
- (d) inserting equipment into drains,
- (e) water supply,
- (f) recording,
- (g) identification of locations recorded,
- (h) picture quality tests and linear measurement checks,
- (i) reporting.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 600: EARTHWORKS

Excavation

Itemisation 16 In paragraph 16 replace Groups and Features with the following:

Group	Features
I	1 Excavation.
II	1 Acceptable material Class 5A.
	2 Acceptable material excluding Class 5A.
	3 Unacceptable material Class U1A or U1B.
	4 Unacceptable material Class U2.
III	1 In existing culverts.
	2 In ditches or watercourses.
	3 In all other locations.

Delete Note 2.

In paragraph 18 add the following:

Item coverage 18 (w) completion of formation and sub-formation

In paragraph 22 replace Group II with the following:

Group	Features
II	1 In ditches or watercourses.
	2 In all other locations.

Excavation in Hard Material

In paragraph 23 add the following:

Item coverage 23 (f) completion of formation and sub-formation

Deposition of Fill

Itemisation 32 In paragraph 32 replace Group III with the following:

Group	Features
III	1 To any Location.

Disposal of Material

Itemisation 38 In paragraph 38 replace Group II with the following:

Group	Features
II	1 Acceptable material Class 5A.

		2	Acceptable material excluding Class 5A.
		3	Unacceptable material Class U1A or U1B.
		4	Unacceptable material Class U2.
Imported Fill			
Itemisation	44	In paragraph 44 replace Groups and Features with the following:	
		Group	Feature
		I	1 Imported acceptable material.
			2 Imported topsoil Class 5B.
		II	1 Any location.
Compaction of Fill			
Itemisation	51	In paragraph 51 replace Group III with the following:	
		Group	Feature
		III	1 Any location.
Soft Spots and Other Voids			
Itemisation	63	In paragraph 63 replace Group II with the following:	
		Group	Feature
		II	1 Any location.
Topsoiling and Storage of Topsoil			
Itemisation	79	In paragraph 79 delete Group II and Note.	
Completion of Formation and Sub-formation			
	84 & 85	Delete paragraphs 84 and 85	
Lining of Watercourses			
Itemisation	88	In paragraph 88 replace Group II as follows:	
		Group	Feature
		II	1 To inverts or side slopes.
Trial Pits			
Itemisation	168	In paragraph 168 replace Group II with the following:	
		Group	Feature
		II	1 0 metres to 0.5 metres in depth.
			2 0 metres to 1.5 metres in depth, and so on in steps of 1.0 metre.

Breaking Up and Perforation of Redundant Pavements

Itemisation 172 In paragraph 172 replace Groups and features with the following:

Group	Feature
I	1 Breaking up redundant pavements, paved areas or slabs.
	2 Perforation of redundant pavements, paved areas or slabs.
II	1 Depth not exceeding 150mm.
	2 Depth exceeding 150mm but not exceeding 300mm.

After paragraph 177 add the following paragraphs 178 to 181 inclusive.

Siding out of Carriageways, Footways and Paved Areas

Units 178 The units of measurement shall be:

- (i) siding out of carriageways, footways and paved areas linear metre.

Measurement 179 The measurement of siding out of carriageways, footways and paved areas shall be the length along the cut edge.

No deduction shall be made for gaps within the length of 2 metres or less.

Itemisation 180 Separate items shall be provided for siding out of carriageways, footways and paved areas in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Siding out of carriageways.
	2 Siding out of footways and paved areas.
II	1 Not exceeding 250 mm wide.
	2 Exceeding 250 mm.

**Siding out of
Carriageways
Footways
and Paved
Areas**

181

The items for siding out of carriageways, footways and paved areas shall in accordance with the Preamble to Schedule of Rates and Prices General Directions include for:

Item coverage

- (a) programming the work in advance of any other operation at the site,
- (b) breaking up and removal of hardened dirt areas,
- (c) prevention of damage to existing carriageways, footways and paved areas,
- (d) disposal of material by spreading and levelling on verge or disposal of material (as Series 600 paragraph 39),
- (e) trimming of edges to a neat line,
- (f) leaving carriageway, footway and verge clear of debris.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 700: PAVEMENTS

Sub-base

In paragraph 4 delete Group II.

Pavement

In paragraph 7 delete the first sub-paragraph and substitute the following:

- 7 The measurement of base, lower base, upper base, binder course, surface course concrete slab, adjustment for each 5mm variation above or below the stated thickness, adjustment for alternative PSV and adjustment for alternative AAV on Surface Course shall be calculated using the width of the top surface of the course or slab.

After the last sub-paragraph of paragraph 7, insert the following sub-paragraphs:

When base course is 150mm or less total thickness it shall be measured as a single layer of base course 100mm thick with +/- adjustments for each 5mm thickness increment where applicable.

When base course is greater than 150mm but not exceeding 250mm total thickness it shall be measured as two layers of base course with +/- adjustments for each 5mm thickness increment where applicable.

When base course is greater than 250mm but not exceeding 350mm total thickness it shall be measured as three layers of base course with +/- adjustments for each 5mm thickness increment where applicable.

When binder course is 90mm or less total thickness it shall be measured as a single layer of binder course 60mm thick with +/- adjustments for each 5mm thickness increment where applicable.

When binder course is greater than 90mm but not exceeding 150mm total thickness it shall be measured as two layers of binder course with +/- adjustments for each 5mm thickness increment where applicable.

In paragraph 8:

Add to Group II the following features:

Group	Feature	
II	7	Adjustment for each 5mm variation above or below the stated thickness.
	8	Adjustment for alternative PSV on Surface Course.
	9	Adjustment for alternative AAV on Surface Course.

Delete Groups VI and VII and replace with the following:

Group	Feature	
VI	1	Each Type to which the adjustment applies.
VII	1	Each thickness to which the adjustment applies.
VIII	1	Each alternative PSV.
IX	1	Each alternative AAV.

Note 1: Groups III, IV and V shall only apply to Group II features 1 to 6.

Note 2: Group VI shall only apply to Group II feature 7, 8 and 9.

Note 3: Group VII shall only apply to Group II feature 7.

Note 4: Group VIII shall only apply to Group II features 8.

Note 5: Group IX shall only apply to Group II features 9.

**Base, Lower Base,
Upper Base, Binder
Course, Surface
Course and
Concrete Slab**

- Item coverage 9 Delete (aa) and replace with the following:
- (aa) slurry sealing, surface dressing, bituminous spray, resin based treatment and tack coat.
- Add the following after (ee):
- (ff) removing loose material and water,
 - (gg) forming joints and sealing.

		Add the following after paragraph 9:									
Adjustment for each 5mm variation above or below the stated thickness, Adjustment for alternative PSV on Surface Course and Adjustment for alternative AAV on Surface Course	9A	The items for the adjustment for each 5mm variation above or below the stated thickness and alternative PSV on Surface Course and alternative AAV on Surface Course shall in accordance with the Preambles to Bill of Quantities General Directions include for:									
Item coverage	(a)	Base, Lower Base, Upper Base, Binder Course, Surface Course and Concrete Slab (as this Series paragraph 9).									
Surface Treatment	19	Add the following:									
Item coverage	(f)	different colours.									
		After paragraph 19 insert the following paragraphs 19A to 19D inclusive :									
		Removal of High Friction Surfacing									
Units	19A	(i) The unit of measurement shall be: removal of high friction surfacing square metre.									
Measurement	19B	The removal of high friction surfacing shall only be measured when:									
	(i)	Existing high friction surfacing is required to be removed, and									
	(ii)	Removal does not form part of any other measurable operation including milling.									
Itemisation	19C	Separate items shall be provided for removal of high friction surfacing in accordance with Chapter III paragraphs 3 and 4 and the following:									
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Group</th> <th style="width: 10%;">Feature</th> <th style="width: 70%;"></th> </tr> </thead> <tbody> <tr> <td>I</td> <td>1</td> <td>Removal of high friction surfacing.</td> </tr> <tr> <td>II</td> <td>1</td> <td>Any type.</td> </tr> </tbody> </table>	Group	Feature		I	1	Removal of high friction surfacing.	II	1	Any type.
Group	Feature										
I	1	Removal of high friction surfacing.									
II	1	Any type.									
Removal of High Friction Surfacing											
Item coverage	19D	The items for the removal of high friction surfacing shall in accordance with the Preambles to Bill of Quantities General Directions include for:									
	(a)	disposal of material (as Series 600 paragraph 39),									
	(b)	reinstatement,									

- (c) preparing surfaces to receive new high friction surfacing.

Tack Coat

Delete paragraph 22 and substitute the following:

- 22 Tack coat shall not be separately measured.

Reinstatement of Paved Areas

Itemisation

- 35 In paragraph 35 delete Group II and replace with the following:

Group	Feature
II	1 In carriageway, hardshoulder, emergency crossing, hardstrip, lay-by or bus bay,
	2 In footway or paved area.
III	1 Not exceeding 150mm total thickness,
	2 Over 150mm but not exceeding 300mm total thickness and so on in stages of 150mm.

Reinstatement of Paved Area

- 36 In paragraph 36 add the following:

Item coverage

- (m) excavation (as Series 600 paragraph 17, 18, 19 and 23),
(n) disposal of material (as Series 600, paragraph 39).

Itemisation

- 42 In paragraph 42 delete Groups III and IV.

Repairs and Patching to Carriageways

Delete paragraphs 77 to 81 and replace with the following paragraphs 77 to 87 inclusive:

Measurement

- 77 Measurement of:
(i) Permanent repairs to Category 1 defects exceeding £10,000, and
(ii) Patching to carriageways,
shall be in accordance with Series 600 and this Series paragraphs 1 to 28 inclusive.

Pavement Reinforcement

Units

- 79 The units of measurement shall be:
(i) pavement reinforcement..... square metre.

Measurement

- 80 The measurement of pavement reinforcement shall be the area of the reinforcement.
81 No deductions shall be made for openings of 1 square metre or less.

Itemisation 82 Separate items shall be provided for pavement reinforcement in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Pavement reinforcement.

Pavement Reinforcement 83 The items for pavement reinforcement shall in accordance with Preambles to Schedule of Rates and Prices General Directions include for:

- (a) cleaning, trimming, regulating and preparing surfaces,
- (b) laps,
- (c) measures to protect material,
- (d) cutting, jointing, sealing and fixing,
- (e) securing material in place,
- (f) tensioning of reinforcement,
- (g) tack coat (as this Series paragraph 24).

Grip Testing

Units 84 The units of measurement shall be:
(i) grip testing..... km.

Measurement 85 Each carriageway lane tested shall be separately measured. The measurement shall be computed net to the nearest whole number.

Itemisation 86 Separate items shall be provided for grip testing in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Grip testing.

Grip Testing 87 The items for grip testing shall in accordance with Preambles to Schedule of Rates and Prices General Directions include for:

- Item Coverage
- (a) calibration checks,
 - (b) pre-survey,
 - (c) testing each section twice where required,
 - (d) multiple and repeat testing,
 - (e) recording of GPS data,
 - (f) reporting.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 1100: KERBS, FOOTWAYS AND PAVED AREAS

Kerbs, Channels, Edgings, Combined Kerbs and Channels, Combined Drainage and Kerb Blocks, and Linear Drainage Channel Systems

- Itemisation 3 In paragraph 3 delete Group III.
- Delete paragraphs 13 to 22 and insert the following paragraphs 13 to 18 inclusive:
- Units 13 (i) Bituminous material, in-situ concrete paving, precast concrete paving and lean mix square metre.
- (ii) Sub-base cubic metre.
- Measurement 14 The measurement of footways and paved areas shall be the area of the top surface of the layer.
- 15 No deduction shall be made for openings of 1 square metre or less.
- Itemisation 17 Separate items shall be provided for footways and paved areas in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Footways and paved areas.
II	1 Bituminous material layer.
	2 In-situ concrete layer.
	3 Precast concrete layer.
	4 Lean mix concrete layer.
	5 Subbase layer.
III	1 Different materials.
IV	1 Different thicknesses.
Note: Group IV feature shall not apply to Group II feature 5.	

**Footways and
Paved Areas**

Item coverage

18 The items for footways and paved areas shall in accordance with the Preambles to Bill of Quantities General Directions include for:

- (a) edge support,
- (b) concrete (as Series 1700 paragraphs 5 and 10),
- (c) formwork (as Series 1700 paragraph 15),
- (d) void formers (as Series 1700 paragraph 16),
- (e) working round obstructions,
- (f) reinforcement (as Series 1700 paragraph 26),
- (g) joint filler and sealant (as Series 2300 paragraphs 9 and 10),
- (h) mortar and sand beds,
- (i) surface finishes,
- (j) trial mixes,
- (k) regulating, laying to levels and falls,
- (l) bedding, laying course, jointing and pointing,
- (m) straight, circular and radial cutting and fitting,
- (n) rough and fair cutting and fitting,
- (o) not used,
- (p) not used,
- (q) compacting,
- (r) membrane,
- (s) topsoiling (as Series 600 paragraph 80),
- (t) grass seeding (as Series 3000 paragraph 9).

18A The item coverage of items for sub-base shall include for compliance with Series 700 paragraph 5.

18B The item coverage of items for bituminous layers shall include for compliance with Series 700 paragraph 9.

Delete paragraphs 23 to 29 inclusive and substitute the following paragraphs 23 to 29 inclusive:

**Remove from Store or from where previously Set Aside and Relay
Paving Flags and Blocks**

Units

23 The unit of measurement shall be:

- (i) remove from store and relay paving flags and blocks
..... square metre.

Measurement 24 The measurement of remove from store and relay paving flags and blocks shall be the area of the top surface of the work.
No deduction shall be made for openings of 1 square metre or less.

25 Separate items shall be provided for remove from store and relay paving flags and blocks in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Remove from store or where previously set aside and relay paving in footways and paved areas.
II	1 Different materials.

Remove from Store and Relay Paving Flags and Blocks

The items for remove from store and relay paving flags and blocks shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

Item coverage 26 (a) loading, transporting from store or from where previously set aside, unloading and positioning for relaying,
(b) replacing items damaged during the foregoing operations,
(c) modification and new materials,
(d) footways and paved areas (as this Series paragraph 18).

Steps

Units 27 The unit of measurement shall be:
(i) flight of steps..... linear metre.

Measurement 28 The measurement steps shall be the complete flight including landings and shall be measured along the slope length of the steps and the plan length of all integral landings.

Itemisation 29 Separate items shall be provided for steps in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Steps.
II	1 Different widths.

After paragraph 3e add the following paragraphs 34 to 40 inclusive:

Cold Milling (Planing)

34 The units, measurement, itemisation and item coverage for cold milling (planing) shall be as Series 700 paragraphs 25 to 28 inclusive.

Reinstatement of Paved Areas

35 The units, measurement, itemisation and item coverage for reinstatement of paved areas shall be as Series 700 paragraphs 33 to 36 inclusive.

Patching of Footways and Paved Areas

Definition 36 Patching covers the replacement of surfacing materials in any number of individual areas of not exceeding 5 square metres.

Units 37 The unit of measurement shall be:
patching, square metre.

Measurement 38 The measurement of patching shall be the area of the top surface of the patch.

Where several patches are in a single Scheme the measurement shall be the summated area of all the patches in that Scheme.

Itemisation 39 Separate items shall be provided for patching in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Patching in existing footway or paved area.
II	1 Surface course.
	2 Binder course.
III	1 Different thicknesses.

**Patching of
Footways and
Paved Areas**

Item coverage

- 40 The items for patching of footways and paved areas shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
- (a) excavation (as Series 600 paragraphs 17, 18, 19 and 23),
 - (b) breaking out each course of existing pavement to defined depths and lines, stepped back between successive courses,
 - (c) milling (as this Series paragraph 35),
 - (d) disposal of material (as Series 600 paragraph 39),
 - (e) trimming and protecting vertical edges,
 - (f) making good up to adjacent courses, cleaning and painting with bitumen,
 - (g) regulating,
 - (h) temporary and permanent reinstatement (as Series paragraph 36),
 - (i) tack coat (as Series 700 paragraph 24),
 - (j) all of the above if the patching fails within 12 months.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 1200: TRAFFIC SIGNS AND ROAD MARKINGS

Delete heading "Traffic Signs" and replace with:

Traffic Signs Faces

Delete paragraph 1 to 5 and replace with the following paragraphs 1 to 5P inclusive:

Units	1	The unit of measurement shall be: (i) traffic sign faces.....square metre.																											
Measurement	2	The measurement of traffic sign faces shall be the surface area of the sign.																											
Itemisation	3	Separate items shall be provided for traffic signs faces in accordance with Chapter III paragraphs 3 and 4 and the following:																											
		<table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 10%;">Group</th> <th style="text-align: left; width: 10%;">Feature</th> <th></th> </tr> </thead> <tbody> <tr> <td style="border-top: 1px solid black;">I</td> <td style="border-top: 1px solid black;">1</td> <td style="border-top: 1px solid black;">Permanent traffic sign faces.</td> </tr> <tr> <td style="border-bottom: 1px solid black;">II</td> <td style="border-bottom: 1px solid black;">1</td> <td style="border-bottom: 1px solid black;">Class RA2 retroreflective.</td> </tr> <tr> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;">2</td> <td style="border-bottom: 1px solid black;">Microprismatic Grade retroreflective.</td> </tr> <tr> <td style="border-bottom: 1px solid black;">III</td> <td style="border-bottom: 1px solid black;">1</td> <td style="border-bottom: 1px solid black;">Sign face not exceeding 0.50 square metres in area.</td> </tr> <tr> <td></td> <td>2</td> <td>Sign face exceeding 0.5 but not exceeding 1.0 square metres in area.</td> </tr> <tr> <td></td> <td>3</td> <td>Sign face exceeding 1.0 but not exceeding 2.0 square metres in area.</td> </tr> <tr> <td></td> <td>4</td> <td>Sign face exceeding 2.0 but not exceeding 5.0 square metres in area.</td> </tr> <tr> <td></td> <td>5</td> <td>Sign face exceeding 5.0 square metres in area.</td> </tr> </tbody> </table>	Group	Feature		I	1	Permanent traffic sign faces.	II	1	Class RA2 retroreflective.		2	Microprismatic Grade retroreflective.	III	1	Sign face not exceeding 0.50 square metres in area.		2	Sign face exceeding 0.5 but not exceeding 1.0 square metres in area.		3	Sign face exceeding 1.0 but not exceeding 2.0 square metres in area.		4	Sign face exceeding 2.0 but not exceeding 5.0 square metres in area.		5	Sign face exceeding 5.0 square metres in area.
Group	Feature																												
I	1	Permanent traffic sign faces.																											
II	1	Class RA2 retroreflective.																											
	2	Microprismatic Grade retroreflective.																											
III	1	Sign face not exceeding 0.50 square metres in area.																											
	2	Sign face exceeding 0.5 but not exceeding 1.0 square metres in area.																											
	3	Sign face exceeding 1.0 but not exceeding 2.0 square metres in area.																											
	4	Sign face exceeding 2.0 but not exceeding 5.0 square metres in area.																											
	5	Sign face exceeding 5.0 square metres in area.																											
Traffic Sign Faces	4	The items for traffic sign faces shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:																											
Item coverage		(a) covering and removal of coverings of signs, (b) location lettering and marking, (c) drilling or forming holes and pockets in Structures or lighting columns and casting in bolts, sockets and anchorage assemblies,																											

- (d) sign plates,
- (e) rivets, bolts nuts and other fastenings,
- (f) purlins and fixings,
- (g) protective treatment,
- (h) notices and recording,
- (i) preparation and supply of record drawings,
- (j) fixing to Structures including attachment systems and additional materials for hinges.

Traffic Sign Posts and Passively Safe Traffic Sign Posts

Definitions 'Passively safe traffic sign posts' refers to posts compliant with BS EN 12767.

- Units 5 The unit of measurement shall be:
- (i) traffic sign posts linear metre,
 - (ii) passively safe traffic sign posts.....linear metre,
 - (iii) extra over for electrical housing.....number.

Measurement 5A The measurement of traffic sign posts and Passively Safe Traffic Sign Posts shall be the complete installation.

- 'Cross-sectional area' shall be measured as:
- 1 For triangular and quadrilateral profiles the cross-sectional area shall be the external area of the triangle or quadrilateral.
 - 2 For all other profiles the cross-sectional area will be the minimum area of a quadrilateral that the profile may be contained within.

Itemisation 5B Separate items shall be provided for traffic sign posts and Passively Safe Traffic Sign Posts in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Steel traffic sign posts.
	2 Passively safe traffic sign posts.
	3 Extra over steel traffic sign posts for electrical housing.
	4 Extra over passively safe traffic sign posts for electrical housing.
II	1 Circular.
	2 Other profile.
III	1 Planted.
	2 Flanged base.

IV	1	Diameter.
V	1	Cross-sectional area not exceeding 0.05 square metres.
	2	Cross-sectional area exceeding 0.05 but not exceeding 0.10 square metres.
	3	Cross-sectional area exceeding 0.10 square metres.
VI	1	Post length not exceeding 4 metres.
	2	Post length exceeding four metres.

Note 1: Group IV shall only apply to Group II feature 1.

Note 2: Group V shall only apply to Group II features 2.

Note 3: Group III to V shall not apply to Group II features 3 and 4.

**Traffic Sign Posts
and Passively Safe
Traffic Sign Posts**

Item coverage

- 5C The items for traffic sign posts shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
- (a) location lettering and marking,
 - (b) electrical equipment, wiring, and connections, excluding supply and control cable,
 - (c) conduit including screwed and threaded connections, bends, tees and other similar features draw wires,
 - (d) backboard, fixing, protective caps, sealing, grommets, spacers, mounting plates and strips,
 - (e) doors, locks and keys,
 - (f) drilling or forming holes and pockets in Structures or foundations,
 - (g) base plates, bolts, sockets and anchorage assemblies,
 - (h) top plates and caps,
 - (i) aligning, fixing and casting into foundations,
 - (j) cutting post to length,
 - (k) bedding and grouting,
 - (l) protective system (as Series 1900 paragraph 4),
 - (m) identification numbers,
 - (n) threading cable through ducts sleeves and conduits,
 - (o) complying with wiring regulations, earthing (other than earth electrodes),
 - (p) protective treatment,

- (q) notices and recording,
- (r) preparation and supply of record drawings.

Traffic Sign Bases

Units 5D The unit of measurement shall be:

- (i) small traffic sign basesnumber,
- (ii) large traffic sign bases.....cubic metres,
- (iii) Electrical access chamber in traffic sign bases
 number.

Measurement 5E The measurement of traffic sign bases shall be the complete installation. Small concrete traffic sign bases shall be those not exceeding 1.2 cubic metres. Large concrete traffic sign bases shall be those exceeding 1.2 cubic metres.

Itemisation 5F Separate items shall be provided for traffic sign bases in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature	
I	1	Small concrete traffic sign bases.
	2	Large concrete traffic sign bases.
	3	Electrical access chamber in traffic sign bases.
II	1	Not exceeding 0.3 cubic metres.
	2	Exceeding 0.3 cubic metres but not exceeding 0.6 cubic metres.
	3	Exceeding 0.6 cubic metres but not exceeding 1.2 cubic metres.

Note: Group II shall only apply to Group I feature 1.

Small and Large Traffic Sign Bases 5G The items for small and large traffic sign bases shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- Item coverage
- (a) excavation of any material (as Series 600 paragraphs 17, 18, 19 and 23),
 - (b) disposal of material (as Series 600 paragraph 39),
 - (c) backfilling and compaction,
 - (d) in situ concrete (as Series 1700 paragraph 5),
 - (e) formwork (as Series 1700 paragraph 15),

		(f) reinforcement (as Series 1700 paragraph 26),
		(g) ducts, sleeves, sockets and anchorages in bases,
		(h) reinstatement of surfaces,
		(i) preparation and supply of record drawings.
Electrical access chamber in traffic sign bases	5H	The items for Electrical access chamber in traffic sign bases shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) excavation of any material (as Series 600 paragraphs 17, 18, 19 and 23),
		(b) disposal of material (as Series 600 paragraph 39),
		(c) backfilling and compaction,
		(d) in situ concrete (as Series 1700 paragraph 5),
		(e) formwork (as Series 1700 paragraph 15),
		(f) reinforcement (as Series 1700 paragraph 26),
		(g) ducts, sleeves, sockets and anchorages in bases, electrical equipment, wiring, and connections, excluding supply and control cable,
		(h) conduit including screwed and threaded connections, bends, tees and other similar features draw wires,
		(i) backboard, fixing, protective caps, sealing, grommets, spacers, mounting plates and strips,
		(j) doors, locks and keys,
		(k) reinstatement of surfaces,
		(l) preparation and supply of record drawings.

Sign Lighting Units

Units	5I	The unit of measurement shall be:
		(i) sign lighting units..... number.
Measurement	5J	The measurement for sign lighting units shall be of the complete installation.
		The measurement of traffic sign lighting units shall be the complete installation except for earth electrodes which shall be measured separately under Series 1400 (paragraphs 24 to 27).
Itemisation	5K	Separate items shall be provided for sign lighting units in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Sign lighting units.

		III	1	Mounting height not exceeding 2 metres.
			2	Mounting height exceeding 2 metres.
Sign Lighting Units	5L	The items for sign lighting units shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:		
Item coverage		(a)	electrical equipment, wiring, and connections, excluding supply and control cable,	
		(b)	conduit including screwed and threaded connections, bends, tees and other similar features draw wires,	
		(c)	threading cable through ducts, sleeves and conduits,	
		(d)	complying with wiring regulations, earthing (other than earth electrodes), and inspection,	
		(e)	earth block and earthing of sign post and equipment,	
		(f)	light spill screens.	
Sign Bracket Arms				
Units	5M	The unit of measurement shall be:		
		(i)	sign bracket arms number.	
Measurement	5N	The measurement for sign bracket arms shall be of the complete installation.		
Itemisation	5O	Separate items shall be provided for sign bracket arms in accordance with Chapter III paragraphs 3 and 4 and the following:		
		Group	Feature	
		I	1	Sign bracket arms.
		II	2	Different types.
		III	1	Mounting height not exceeding 2 metres.
			2	Mounting height exceeding 2 metres.
Sign Bracket Arms	5P	The items for sign bracket arms shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:		
Item coverage		(a)	earthing of sign post and equipment,	
		(b)	fixtures and fittings,	
		(c)	protective system (as Series 1900 paragraph 4),	
		(d)	threading cable through ducts sleeves, conduit and the like.	

Delete paragraphs 6 to 9 inclusive and replace with the following paragraphs 6 to 9 inclusive:

Remove from Store and Re-erect Traffic Sign Faces, Traffic Sign Posts, Sign Lighting Units, Sign Bracket Arms

- Units 6 The unit of measurement shall be:
- (i) remove from store and re erect traffic sign faces number,
 - (ii) remove from store and re-erect traffic sign posts number,
 - (iii) remove from store and re-erect sign lighting units number,
 - (iv) remove from store and re-erect bracket arms number.

Measurement 6A The measurement of mounting height shall be to the lowest point of the sign face.

Itemisation 7 Separate items shall be provided for remove from store and re-erect traffic sign faces, traffic sign posts, sign lighting units, sign bracket arms in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Remove from store and re-erect.
II	1 Traffic sign face.
	2 Traffic sign post.
	3 Sign lighting unit.
	4 Bracket arm.
III	1 Different types.
IV	1 Sign face not exceeding 0.50 square metres in area.
	2 Sign face exceeding 0.5 but not exceeding 1.0 square metres in area.
	3 Sign face exceeding 1.0 but not exceeding 2.0 square metres in area.
	4 Sign face exceeding 2.0 but not exceeding 5.0 square metres in area.
	5 Sign face exceeding 5.0 but not exceeding 10.0 square metres in area.
	6 Sign face exceeding 10.0 but not exceeding 20.0 square metres in area.
	7 Sign face exceeding 20.0 square metres in area.

V	1	Different diameters.
	2	Different cross-sectional areas.
VI	1	Mounting height not exceeding 2 metres.
	2	Mounting height exceeding 2 metres.
VII	1	Post length not exceeding 4 metres.
	2	Post length exceeding 4 metres.
VIII	1	Cross-sectional area not exceeding 0.05 square metres.
	2	Cross-sectional area exceeding 0.05 but not exceeding 0.10 square metres.
	3	Cross-sectional area exceeding 0.10 square metres.

Note 1: Group III shall only apply to Group II features 2, 3 and 4.

Note 2: Group IV shall only apply to Group II feature 1.

Note 3: Group V shall only apply to Group II feature 2.

Note 4: Group VI shall only apply to Group II feature 1.

Note 5: Group VII shall only apply to Group II feature 2.

Note 6: Group VIII shall only apply to Group V feature 2.

Remove from Store and Re-erect Traffic Sign Faces, Traffic Sign Posts, Sign Lighting Units, Sign Bracket Arms

8 The items for remove from store and re-erect traffic sign faces, traffic sign posts, sign lighting units,, sign bracket arms shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

Item coverage

- (a) loading, transporting, unloading and positioning for re-erection,
- (b) replacing items damaged during the foregoing operations,
- (c) modification and new materials,
- (d) painting existing painted items,
- (e) traffic signs faces (as this Series paragraph 4),
- (f) traffic signs posts (as this Series paragraph 5G),
- (g) sign lighting units (as this Series paragraph 5O),
- (h) sign bracket arms (as this Series paragraph 5S).

IV	1	Different widths of lines.
	2	Different sizes of circles with and without enclosing arrows.
	3	Different lengths of arrows.
	4	Different lengths of kerb markings.
	5	Different heights of letters and numerals.
	6	Different sizes of symbols.
V	1	Different diagram numbers for arrows, kerb markings and symbols.
VI	1	Different types.
VII	1	Different colours.
VIII	1	Reflectorised.
IX	1	Any line, solid area symbol or letter excluding raised rib lines.
	2	Raised rib lines.

Note 1: Group III to V, VII and VIII shall only apply to Group I feature 2.

Note 2: Group IX shall only apply to Group I feature 1.

Road Studs

In paragraph 19 add the following:

- | | | |
|-------|----|---------------------------------------|
| Units | 19 | (ii) road stud cylinders.....number, |
| | | (iii) replace rubber pads.....number. |

In paragraph 21 add the following Group I features and delete Group IV:

Itemisation	21	Group	Features
		I	2 Road Stud cylinders.
			3 Replace rubber pads.

Road Studs

In paragraph 22 add the following:

- | | |
|---------------|------------------------------------|
| Item coverage | (f) surface preparation, |
| | (g) cleaning out existing sockets. |

Marker Posts

- | | | |
|---------------------|----|--|
| Marker Posts | 39 | In paragraph 39 delete sub paragraph (c) and substitute the following: |
|---------------------|----|--|

- | | |
|---------------|--|
| Item coverage | (c) driving or excavating in acceptable material and driving or excavating in any material (as Series 600 paragraphs 17, 18, 19 and 23). |
|---------------|--|

Permanent Bollards

Units 40 In paragraph 40 add the following:
(i) Renew permanent bollard shell number,
(ii) Re-fix existing permanent bollard shell number.

Itemisation 41 In paragraph 41 delete Group I and substitute the following:

Group	Feature
I	1 Permanent bollard.
	2 Renew permanent bollard shell.
	3 Refix existing permanent bollard shell.

Permanent Bollards 42 In paragraph 42 delete paragraph (a) and (b) and replace with the following:

Item coverage (a) traffic signs faces (as this Series, paragraph 4),
(b) traffic signs posts (as this Series, paragraph 5G),
(c) traffic signs bases (as this Series, paragraph 5K),
(d) preservation treatment of timber.

After paragraph 42 add the following paragraphs 42A to 42C inclusive:

Remove from Store and Re-erect Bollards

Units 42A The unit of measurement shall be:
(i) remove from store and re-erect bollards number.

Itemisation 42B Separate items shall be provided for remove from store and re-erect bollards in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Remove from store and re-erect.
II	1 Bollards.
III	1 Non-illuminated.
	2 Internally illuminated.

Remove from Store and Re-erect Bollards 42C The items for remove from store and re-erect bollards shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

Item coverage (a) loading, transporting from store, unloading and positioning for re-erection,
(b) replacing items damaged during the foregoing operations,
(c) modification and new materials,
(d) painting existing painted items,

- (e) traffic signs faces (as this Series paragraph 4),
- (f) traffic signs posts (as this Series paragraph 5G),
- (g) traffic signs bases (as this Series paragraph 5K).

After paragraph 45 add the following paragraphs 46 to 57 inclusive:

Passively Safe Flexible Chevrons

Units	46	The unit of measurement shall be: Flexible chevrons linear metre.									
Measurement	47	Measurement shall be the horizontal length of the complete chevron installation.									
Itemisation	48	Separate items shall be provided for flexible chevrons in accordance with Chapter III paragraphs 3 and 4 and the following:									
		<table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 10%;">Group</th> <th style="text-align: left; width: 10%;">Feature</th> <th></th> </tr> </thead> <tbody> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">I</td> <td style="border-right: 1px solid black; padding-right: 5px;">1</td> <td>Passively safe RA2 retroreflective rebound chevrons to BS EN 12767.</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">II</td> <td style="border-right: 1px solid black; padding-right: 5px;">1</td> <td>Different heights of chevron symbol:</td> </tr> </tbody> </table>	Group	Feature		I	1	Passively safe RA2 retroreflective rebound chevrons to BS EN 12767.	II	1	Different heights of chevron symbol:
Group	Feature										
I	1	Passively safe RA2 retroreflective rebound chevrons to BS EN 12767.									
II	1	Different heights of chevron symbol:									
Item coverage	49	(a) traffic signs faces (as this Series paragraph 4), (b) traffic signs posts (as this Series paragraph 5G), (c) traffic signs bases (as this Series paragraph 5K).									

Location Lettering and Marking of Existing Traffic Signs

Units	50	The units of measurement shall be: (i) location lettering and marking of existing traffic signsnumber.									
Measurement	51	The measurement of location lettering and marking of existing traffic signs shall be for the complete installation. The location lettering and marking of traffic signs shall not be separately measured for Sign Faces measured in accordance with this Series, paragraphs 1 to 4.									
Itemisation	52	Separate items shall be provided for location lettering and marking of existing traffic signs in accordance with Chapter III paragraphs 3 and 4 and the following:									
		<table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 10%;">Group</th> <th style="text-align: left; width: 10%;">Feature</th> <th></th> </tr> </thead> <tbody> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">I</td> <td style="border-right: 1px solid black; padding-right: 5px;">1</td> <td>Location lettering and marking.</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">II</td> <td style="border-right: 1px solid black; padding-right: 5px;">1</td> <td>Existing traffic signs.</td> </tr> </tbody> </table>	Group	Feature		I	1	Location lettering and marking.	II	1	Existing traffic signs.
Group	Feature										
I	1	Location lettering and marking.									
II	1	Existing traffic signs.									

Location lettering and marking of Existing Traffic Signs 53 The item for location lettering and marking of existing traffic signs shall in accordance with the Preamble to Schedule of Rates and Prices General Directions include for:

- Item Coverage
- (a) preparing surface,
 - (b) removing old number,
 - (c) marking and lettering,
 - (d) recording,
 - (e) reporting.

Snow Poles

Units 54 The unit of measurement shall be:
(i) Snow polesnumber.

Measurement 55 The measurement of snow poles shall be for the complete installation.

Itemisation 56 Separate items shall be provided for snow poles in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Snow poles.
II	1 External diameter.
III	1 Length.

Snow Poles 57 The items for snow poles shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- Item Coverage
- (a) excavation of acceptable material (as Series 600 paragraphs 17 and 18),
 - (b) excavation of unacceptable material (as Series 600 paragraph 19),
 - (c) backfilling and compaction,
 - (d) disposal of material (as Series 600 paragraph 39),
 - (e) in situ concrete (as Series 1700 paragraph 5),
 - (f) formwork (as Series 1700 paragraph 15),
 - (g) reinforcement (as Series 1700 paragraph 26),
 - (h) reinstatement of surfaces,
 - (i) protective system (as Series 1900 paragraph 4),
 - (j) numerals, symbols and reflectorised strips or discs including adhesive.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 1300: ROAD LIGHTING COLUMNS AND BRACKETS, CCTV MASTS AND CANTILEVER MASTS

Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts

Definitions 'Passively Safe Lighting Columns' refers to columns compliant with BS EN 12767.

Delete paragraphs 2 and 3, and substitute the following paragraphs 2 and 3:

Measurement 2 The measurement of road lighting columns and brackets, wall mountings, CCTV masts and cantilever masts shall be the complete installation except for:

- (i) earth electrodes which shall be measured separately (under Series 1400 paragraphs 24 to 27),
- (ii) earth equipotential bonding which shall be measured separately (under Series 1400 paragraphs 37 to 40),
- (iii) luminaires which shall be measured separately (under this Series paragraphs 9 to 12).

Itemisation 3 Separate items shall be provided for road lighting columns and brackets, wall mountings CCTV masts and cantilever masts in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Road lighting columns.
	2 Wall mountings.
	3 CCTV masts.
	4 Cantilever masts
II	1 Steel.
	2 Passively safe.
III	1 Not exceeding 10 metres nominal height.
	2 Exceeding 10 metres nominal height.
IV	1 Types of base.
V	1 Single bracket.
	2 Double bracket.

Remove from Store and Re-Erect Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts 8 The items for remove from store and re-erect road lighting columns, brackets and wall mountings, CCTV masts and cantilever masts shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- Item coverage
- (a) loading, transporting from store, unloading and positioning for re-erection,
 - (b) replacing items damaged during the foregoing operation,
 - (c) modification and new materials,
 - (d) painting existing painted items,
 - (e) road lighting columns and brackets, wall mountings, CCTV masts and cantilever masts (as this Series paragraphs 4.

Luminaires

Units 9 The units of measurement shall be:

- (i) luminaires, number,
- (ii) photo-electric control unit number.

Measurement 10 The measurement of luminaires shall be the complete installation.

Itemisation 11 Separate items shall be provided for luminaires, in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Luminaires.
	2 Photo-electric control unit.
II	2 Different types.

Note: Group II shall only apply to Group I feature 1.

Luminaires 12 The items for luminaires, shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- Item coverage
- (a) electrical equipment, wiring and making connections, excluding network cabling,
 - (b) remote or integral control gear,
 - (c) wiring from lighting unit to cut-out,
 - (d) conduit including draw wires, screwed and threaded connections, bends, tees, and other similar features,

Itemisation 15 Separate items shall be provided for replace lamps, in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Replace high-intensity discharge lamp within 30mph zone.

Replace Lamps 16 The items for replace lamps, shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- Item coverage (a) removal of existing lamp,
(b) disposal of material.

Marking and lettering of Existing Road Lighting Columns

Units 17 The units of measurement shall be:
Marking and lettering of existing road lighting columnsnumber.

Measurement 18 The measurement of marking and lettering of existing road lighting columns shall be for the complete installation.
Marking and lettering of lighting columns shall not be separately measured for road lighting columns measured in accordance with this Series, paragraphs 1 to 4.

Itemisation 19 Separate items shall be provided for marking and lettering of existing road lighting columns in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Marking and lettering existing road lighting columns.

Marking and lettering of Existing Road Lighting Columns 20 The item for numbering of existing road lighting columns shall in accordance with the Preamble to Schedule of Rates and Prices General Directions include for:

- Item Coverage (a) preparing surface (as Series 5000 paragraph 5),
(b) removing old number,
(c) making good protective system (as Series 5000 paragraph 6),
(d) marking and lettering,
(e) recording,
(f) reporting,
(g) conspicuity banding.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 1400: ELECTRICAL WORK FOR ROAD LIGHTING AND TRAFFIC SIGNS

Locating Buried Road Lighting and Traffic Signs Cable

Delete paragraphs 1 to 4 inclusive.

Trench for Cable or Duct

Itemisation 7 In paragraph 7 delete Groups I, II, III and IV and replace with the following:

Group	Feature
I	1 Trench for cable or duct.
II	1 Not exceeding 500mm wide.
	2 Exceeding 500mm but not exceeding 1000mm wide.
III	1 Trench depth not exceeding 600mm.
	2 Trench depth exceeding 600mm but not exceeding 900mm and so on in steps of 300mm.

Cable and Duct

Cable and Duct 9 In paragraph 9 delete sub paragraph (g) and substitute the following:

Item coverage (g) scheduled and unscheduled joints.

Cable Joints and Terminations

After paragraph 19 add the following heading and paragraphs 19A to 19D inclusive:

Renew Terminations

Units 19A The unit of measurement shall be:
(i) renew terminations number.

Measurement 19B The measurement for renew terminations shall be for the complete operation.

Itemisation	19C	Separate items shall be provided for renew terminations in accordance with Chapter III paragraphs 3 and 4 and the following:								
<table border="1"> <thead> <tr> <th data-bbox="616 286 703 322">Group</th> <th data-bbox="783 286 890 322">Feature</th> </tr> </thead> <tbody> <tr> <td data-bbox="616 338 632 374">I</td> <td data-bbox="783 338 1155 374">1 Renew terminations.</td> </tr> <tr> <td data-bbox="616 389 632 425">II</td> <td data-bbox="783 389 1082 425">1 Different types.</td> </tr> <tr> <td data-bbox="616 441 632 477">III</td> <td data-bbox="783 441 1082 477">1 Different sizes.</td> </tr> </tbody> </table>			Group	Feature	I	1 Renew terminations.	II	1 Different types.	III	1 Different sizes.
Group	Feature									
I	1 Renew terminations.									
II	1 Different types.									
III	1 Different sizes.									
Renew Terminations	19D	The items for renew terminations shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:								
Item coverage		<ul style="list-style-type: none"> (a) preparing, stripping and cleaning ends, (b) connectors, glands, clamps, sleeves, cleats, tags and terminal blocks, (c) connecting conductors to terminals, (d) removing "knock outs" and drilling backboard, (e) insulating ends of unused conductors, (f) bonding, (g) jointing kits, (h) numbering and lettering, (i) complying with wiring regulations and earthing (other than earth electrodes), (j) protection, curing and support of cable joints and keeping the cable joint free of moisture, (k) markers, (l) additional excavation of acceptable material (as Series 600 paragraphs 17 and 18), (m) additional excavation of unacceptable material (as Series 600 paragraph 19), (n) excavation in Hard Material (as Series 600 paragraph 23), (o) disposal of material (as Series 600 paragraph 39), (p) links and jumper leads, (q) building out, (r) site records, (s) phase labelling, (t) temporary sealing of cable ends, (u) isolation, 								

- (v) disconnection of cables (as this Series paragraph 36),
- (w) cable joints and termination (as this Series paragraph 19).

Chambers

Itemisation	31	In paragraph 31 delete Group II and substitute the following:	
		Group	Feature
		II	1 Not exceeding 0.30 square metres internal area.
			2 Exceeding 0.30 square metres internal area.

Remove from Store and Re-erect Feeder Pillars

Itemisation	34	In paragraph 34 delete Group II Feature 1.
		After paragraph 35 add the following paragraphs 36 to 47 inclusive.

Disconnection of Cables

Units	36	The unit of measurement shall be:
		(i) disconnection of cables number.

Measurement	37	The measurement for disconnection of cables from equipment shall be for the complete operation.
		Disconnection of cables shall not be separately measured where removal of equipment taken up or down and set aside for re-use or remove to store or tip off Site measured in accordance with Series 200.

Itemisation	38	Separate items shall be provided for disconnection of cables in accordance with Chapter III paragraphs 3 and 4 and the following:
-------------	----	---

Group	Feature	Feature
I	1	Disconnection of cables.
II	1	Permanent.
	2	Temporary.
III	1	Different sizes.
IV	1	Different types.

Disconnection of Cables	39	The items for disconnection of cables shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
--------------------------------	----	--

Item coverage	(a)	excavation of acceptable material (as Series 600 paragraphs 17 and 18),
	(b)	excavation of unacceptable material (as Series 600 paragraph 19),

- (c) excavation in Hard Material (as Series 600 paragraph 23),
- (d) backfilling, compaction and making good of the surface,
- (e) disposal of materials (as Series 600 paragraph 39),
- (f) locating, working around and supporting pipes, cables, services, apparatus and other similar features,
- (g) isolating cables at feeder pillar,
- (h) disconnecting cables from termination unit and withdrawing of cable from equipment,
- (i) temporary sealing of cable ends,
- (j) permanent sealing of cable ends,
- (k) cleaning trimming, taping, sealing and capping including clamps,
- (l) complying with wiring regulations,
- (m) reconnect at feeder pillar,
- (n) loading, transporting from store unloading and positioning of materials for erection,
- (o) replacing items damaged during operations in (l) above,
- (p) take up or down termination unit and remove to tip off Unit (as Series 200 paragraph 11),
- (q) providing new site records and updating existing site records,
- (r) reports,
- (s) reinstatement of surfaces.

Equipotential Bonding

- | | | |
|-------------|----|--|
| Units | 40 | The units of measurement shall be: <ul style="list-style-type: none">(i) earth pits and rods number,(ii) additional earth rods number,(iii) additional earth conductors linear metre. |
| Measurement | 41 | The measurement of earth conductors shall be the summation of the distance along the centre line of the route between the earth pit and the column earth block.

The measurement of earth conductors shall include the terminations to the earth rods and column earth blocks. |

Itemisation 42 Separate items shall be provided for equipotential bonding in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Equipotential bonding.
II	1 Earth pits and rods.
	2 Additional earth conductors.
	3 Additional earth rods.

Equipotential Bonding 43 The items for equipotential bonding shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- Item coverage
- (a) trench for cable or duct (as this Series, paragraph 8),
 - (b) intermediate supports and fixing devices where cables leave trench and prior to entry into equipment,
 - (c) twisting and snaking,
 - (d) preparing, stripping and cleaning ends,
 - (e) glands and clamps,
 - (f) driving,
 - (g) clamps, cables and making connections,
 - (h) covers frames seating and bedding,
 - (i) earth rods including pressure plates, glands and clamps,
 - (j) conduit including draw wires, all purpose made screwed and threaded connections, bends, tees and other similar features,
 - (k) threading cable through ducts, sleeves, conduit and the like,
 - (l) conductor cable including preparing, stripping and cleaning ends and connections,
 - (m) markers, notices, recording and reports,
 - (n) preparation and supply of record drawings.

Temporary Overhead Feed to Road Lighting Units

Units 44 The unit of measurement shall be:

- (i) temporary overhead feed to road lighting units linear metre.

Measurement 45 The measurement of temporary overhead feed to road lighting units shall be the distance between supports.

Itemisation	46	Separate items shall be provided for temporary overhead feed to road lighting units in accordance with Chapter III paragraphs 3 and 4 and the following:														
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Group</th> <th style="text-align: left;">Feature</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;">I</td> <td style="vertical-align: top;">1</td> <td>Temporary overhead feed to road lighting units.</td> </tr> <tr> <td style="vertical-align: top;">II</td> <td style="vertical-align: top;">1</td> <td>Not exceeding 10 metres nominal height.</td> </tr> <tr> <td></td> <td style="vertical-align: top;">2</td> <td>10 metres to 15 metres nominal height.</td> </tr> <tr> <td></td> <td style="vertical-align: top;">3</td> <td>Exceeding 15 metres nominal height.</td> </tr> </tbody> </table>	Group	Feature	I	1	Temporary overhead feed to road lighting units.	II	1	Not exceeding 10 metres nominal height.		2	10 metres to 15 metres nominal height.		3	Exceeding 15 metres nominal height.
Group	Feature															
I	1	Temporary overhead feed to road lighting units.														
II	1	Not exceeding 10 metres nominal height.														
	2	10 metres to 15 metres nominal height.														
	3	Exceeding 15 metres nominal height.														
Temporary Overhead Feed to Road Lighting Units	47	The items for temporary overhead feed to road lighting units shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:														
Item coverage		<ul style="list-style-type: none"> (a) fixing brackets and supports, (b) catenary wire, (c) replacement of faulty fuses, (d) fit wiring, (e) connectors, glands, clamps, sleeves, cleats, tags, terminal blocks, (f) connecting conductors to terminals, removing knock-outs and drilling backboard, insulating ends of unused conductors, bonding, numbering and lettering, removal of temporary supply, (g) markers, (h) complying with wiring regulations, earthing (other than earth electrodes), (i) site records and reports, (j) disconnection of cables (as this Series paragraph 39). 														

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 1500: MOTORWAY COMMUNICATIONS

Locating Buried Communications Cable

Delete paragraphs 1 to 4 inclusive.

Loop Detector Installations

Delete paragraph 29 and replace with the following:

Measurement

29

The measurement of loop detector installations shall be the complete installation from the joint with the feeder cable in the communications cabinet, chamber, box or pit within which the loop installation or feeder cable is terminated.

In paragraph 31 add the following:

Loop Detector Installations

31

Item coverage

(r) joints or terminations to feeder cable within communications cabinet, chamber, box or pit.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 1700: STRUCTURAL CONCRETE

Precast Concrete

Itemisation 9 In paragraph 9 add the following Group V:

Group	Feature
V	1 Cross sectional area not exceeding 0.025m ² .
	2 Cross sectional area exceeding 0.025m ² but not exceeding 0.05m ² .
	3 Cross sectional area exceeding 0.05m ² but not exceeding 0.10m ² .

Note 1: Group III shall only apply to Group I features 1 and 3.

Note 2: Group V shall only apply to Group I feature 2.

After paragraph 39 add the following new paragraphs 40 to 49 inclusive:

Structural Concrete Repairs

Units 40 The units of measurement shall be:

- (i) structural concrete repairs using normal flow concrete and high flow repair concrete, structural concrete repairs using proprietary sprayed concrete cubic metre,
- (ii) structural concrete repairs using proprietary repair mortars litre,
- (iii) crack injection using proprietary resinslitre.

Measurement 41 Measurement of structural concrete repairs shall be the volume of the void to be filled with repair mortar resin or concrete.

Itemisation 42 Separate items shall be provided for structural concrete repairs in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Structural concrete repairs.
	2 Crack injection.

	II	1	Using proprietary repair mortars.
		2	Using normal flow concrete.
		3	Using high flow repair concrete.
		4	Using proprietary sprayed concrete.
		5	Using proprietary resins.
Structural Concrete Repairs	43		The items for structural concrete repairs shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a)	saw cutting,
		(b)	removal of defective concrete,
		(c)	disposal of material (as Series 600 paragraph 39),
		(d)	protective sheeting or shielding against debris and or spray and its removal,
		(e)	blast cleaning reinforcement,
		(f)	preparation of concrete surfaces to receive concrete repair materials,
		(g)	concrete repair materials (as Series 1700 paragraph 5),
		(h)	finishing,
		(i)	curing and protection of concrete repair materials,
		(j)	procedure trials,
		(k)	sample panels,
		(l)	masking adjacent areas,
		(m)	removal of rust and chloride deposits from reinforcement,
		(n)	production tests,
		(o)	water supply.

Formwork for Concrete Repairs

44 The units, measurement, itemisation and item coverage for formwork for concrete repairs shall be as this Series paragraphs 11-21 inclusive.

Steel Reinforcement for Concrete Repairs

45 The units, measurement, itemisation and item coverage for steel reinforcement for concrete repairs shall be as this Series, paragraphs 22 to 27 inclusive.

Backfilling to Structures with Foamed Concrete

The units of measurement shall be:

Units	46	(i)	Backfilling to Structures with foamed concrete cubic metre.
Measurement	47		The Measurement of backfilling to Structures with foamed concrete will be the volume of the void to be filled.
Itemisation	48		Separate items shall be provided for backfilling to Structures with foamed concrete in accordance with Chapter III paragraphs 3 and 4 and the following:
		<hr/>	
		Group	Feature
		<hr/>	
		I	1 Backfilling to Structures with foamed concrete.
		<hr/>	
Backfilling to Structures with Foamed Concrete	49		The items for the backfilling to Structures with foamed concrete shall in accordance with the Preambles to Schedule of Rates and Prices General Direction include for:
Item Coverage		(a)	in situ concrete (as this Series paragraph 5),
		(b)	formwork (as this Series paragraph 15).

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 2000: WATERPROOFING FOR STRUCTURES

		Waterproofing				
Itemisation	3	In paragraph 3 delete Group III.				
		Removal of Existing Waterproofing				
		Add the following to paragraph 10:				
Measurement	10	Structural repairs required to the existing deck shall be measured in accordance with series 1700 (Structural Concrete).				
Itemisation	11	In paragraph 11 delete Group II and substitute the following:				
		<hr/> <table><thead><tr><th>Group</th><th>Feature</th></tr></thead><tbody><tr><td>II</td><td>1 Different types.</td></tr></tbody></table> <hr/>	Group	Feature	II	1 Different types.
Group	Feature					
II	1 Different types.					
		Removal of Existing Waterproofing				
		In paragraph 12, delete (d) and substitute the following:				
Item coverage	12	(d) additional preparation of bridge decks to receive new waterproofing.				

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 2300: BRIDGE EXPANSION JOINTS AND SEALING OF GAPS

Bridge Deck Expansion Joints

Definition

- 1 Add the following to paragraph 1:
Types of replacement bridge expansion joints and abbreviations used in the descriptions in the Schedule of Rates and Prices are as follows:

Type	Abbreviation	Description
1	BJUCS	Buried joint under continuous surfacing.
2	APJ	Asphaltic plug joint.
3	NJWPS	Nosing joint with poured sealant.
4	NWPCS	Nosing with preformed compression seal.
5	RE	Reinforced Elastomeric.
6	EIMR	Elastomeric in metal runners.

In paragraph 2 add the following:

Units

- 2 (ii) Replacement bridge deck expansion joints linear metre.

In paragraph 3 add the following:

Measurement

- 3 The measurement of replacement bridge deck expansion joints shall be the complete installation measured along the centre line of the joint.

Alterations and or repairs to the Structure excluding any damage caused by the removal of the existing bridge expansion joint, shall be measured under Series 1700 concrete repairs.

Delete paragraph 4 and substitute the following:

Itemisation

- 4 Separate items shall be provided for replacement of bridge expansion joints in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Bridge deck expansion joints.
	2 Replacement bridge expansion joints.
II	1 Different types or materials.

III	1	Different lengths.
IV	1	Different gap widths.
V	1	Movement range not exceeding 30mm.
	2	Movement range exceeding 30mm but not exceeding 100mm.
	3	Movement range exceeding 100mm but not exceeding 200mm.
VI	1	Cross sectional area not exceeding 0.05 square metres.
	2	Cross sectional area exceeding 0.05 square metres but not exceeding 0.10 square metres.
	3	Cross sectional area exceeding 0.10 square metres but not exceeding 0.15 square metres.
	4	Cross sectional area exceeding 0.15 square metres but not exceeding 0.20 square metres.

Note 1: Group III feature 1 and Group IV feature 1 shall only apply to Group 1 feature 1.

Note 2: Groups V and VI shall only apply to Group 1 feature 2.

Note 3: Groups V shall not apply to asphalt plug joints (APJ).

Note 4: Groups VI shall only apply to asphalt plug joints (APJ).

**Bridge
Expansion
Joints**

5 In paragraph 5 add the following:

Item coverage

- (q) removing existing bridge expansion joints including sealants, metalwork and joint filler, sub-surface drainage, below joint drainage and in situ nosings,
- (r) cutting out and making good existing pavements, footways, kerbs, structures and the like,
- (s) making good any damage caused by the foregoing operations,
- (t) disposal of material (as Series 600 paragraph 39),
- (u) removal and renewal of broken studs,
- (v) additional bedding and nosing material.

After paragraph 5 add the following paragraph 5A:

**Replacement
Bridge Deck
Expansion
Joints**

5A

Item coverage

- (a) As this Series paragraph 5.

Note 2: Group IV shall only apply to Group I features 1 and 4.

Note 3: Group V shall only apply to Group I feature 5.

Note 4: Group VI shall only apply to Group I features 4.

**Joint Filler and
Renew Joint
Filler**

Item coverage

9 The items for joint filler and renew joint filler shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- (a) cutting and shaping,
- (b) preparing, cleaning and priming surfaces,
- (c) adhesives and the like,
- (d) applying, inserting and casting in,
- (e) compressible strip,
- (f) masking and protection,
- (g) complying with temperature constraints,
- (h) removal of existing sealants, metalwork, and backing strips,
- (i) making good any damage caused by the foregoing operations,
- (j) disposal of material (as Series 600 paragraph 39).

**Joint Sealant
and Renew
Joint Sealants**

Item coverage

10 The items for joint sealant and renew joint sealants shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- (a) preparing and cleaning surfaces,
- (b) priming the surface of the joint,
- (c) compressible strip,
- (d) masking and protection,
- (e) complying with temperature constraints,
- (f) removal of existing sealants, metalwork, and backing strips,
- (g) making good any damage caused by the foregoing operations,
- (h) disposal of material (as Series 600 paragraph 39).

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 2400: BRICKWORK, BLOCKWORK AND STONEMWORK

Brickwork

Itemisation 3 In paragraph 3 delete Features 1 to 4 from Group IX and replace with Features 1 and 2 as follows:

Group	Feature	
IX	1	In walls and in facework to concrete.
	2	In arches.

Remove from Store and Relay Brickwork, Blockwork or Stonework

Itemisation 11 In paragraph 11 delete Features 1 to 4 from Group IX and replace with Features 1 to 2 as follows:

Group	Feature	
IX	1	In walls or in facework to concrete.
	2	In arches.

Remove from Store and Relay Brickwork, Blockwork or Stonework 12 In paragraph 12 add the following:

Item coverage (f) retrieval of displaced materials from their position after displacement (excluding fees to Network Rail).

After paragraph 12 add the following paragraphs 13 to 20 inclusive:

Rebedding of Precast Concrete Copings

Units 13 The unit of measurement shall be:
(i) rebedding of precast concrete coping linear metre.

Measurement 14 The measurement of rebedding of precast concrete copings shall be the length of the work required.

Itemisation 15 Separate items shall be provided for rebedding of precast concrete copings in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature	
I	1	Rebedding precast concrete coping.

	II	1	Cross sectional area not exceeding 0.025m ² .
		2	Cross sectional area exceeding 0.025m ² but not exceeding 0.05m ² .
		3	Cross sectional area exceeding 0.05m ² but not exceeding 0.10m ² .
		4	Cross sectional area exceeding 0.1m ² but not exceeding 0.15m ² .
Rebedding Precast Concrete Coping	16		The items for rebedding precast concrete copings shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a)	take up or down and set aside for re-use or remove to store or tip off Site (as Series 200 paragraph 11),
		(b)	loading, transporting from store unloading and positioning for rebedding,
		(c)	removal of old mortar,
		(d)	bedding in any mortar.
			Repointing
Units	17		The units of measurement shall be:
		(i)	repointing in walls and in facework to concrete and arches square metre,
		(ii)	repointing in string courses and copings linear metre.
Measurement	18		The measurement of repointing in walls and in facework to concrete and in arches shall be the superficial area of brickwork, blockwork and stonework required by this Contract. No deductions shall be made for openings of 0.10 square metres or less.
			The measurement of repointing in string courses and copings shall be the length of the joints in the brickwork, blockwork and stonework required by this Contract.
			All items in this series shall be deemed to cover alteration and repair works as well as new works.
Itemisation	19		Separate items shall be provided for repointing in accordance with Chapter III paragraphs 3 and 4 and the following:
		Group	Feature
		I	1 Brickwork or blockwork.
			2 Stonework.
		II	1 Different types of mortar.

III	1	In walls, in facework to concrete and in arches.
	2	In string courses and in copings.
IV	1	Not exceeding 300mm girth.
	2	Exceeding 300mm girth.

Note: Group IV shall only apply to Group III feature 2.

Repointing	20	The items for and repointing shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		<ul style="list-style-type: none">(a) sample panels,(b) grinding out or raking out joints,(c) removing loose material and washing clean,(d) curing and protection,(e) admixtures and additives,(f) disposal of material (as Series 600 paragraph 39),(g) multiple operations for deep cavities,(h) replacing items damaged during the foregoing operations.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 3000: LANDSCAPE AND ECOLOGY

Ground Preparation and Cultivation

Definitions

Delete paragraph 1 and replace with the following:

- 1 Landscape and ecology works in this Series shall comprise new works and maintenance of existing areas that are outwith the items in Series 6100 and 6800.

Itemisation

In paragraph 4 delete Group II and substitute the following:

Group	Feature
II	1 Different percentages of cover.

Planting

Itemisation

In paragraph 12 delete Groups IV and Group V and replace with the following:

Group	Feature
IV	1 Transplanted.

Mulching

Itemisation

In paragraph 15 delete Group VI.

Weed Control

Units

In paragraph 17 delete (i) and (ii) and replace with the following:

- (i) weed control square metre.

Measurement

Delete paragraph 18 and substitute the following:

- 18 The measurement of weed control shall be the plan area.

Itemisation

In paragraph 19 delete Groups II, III, IV and V and replace with the following:

Group	Feature
II	1 Different types of herbicide.

Maintenance of Established Trees and Shrubs

In paragraph 21 add new paragraph (iv):

- (iv) removal of branches.....number.

Measurement Add to paragraph 22 the following:

The girth of trees for felling shall be measured at a height of 1 metre above ground level.

The girth of branches to be removed shall be measured at the severance point.

Itemisation In paragraph 23 Group I add the following:

Group	Feature
I	9 Removal of branches.

In paragraph 23 delete Group II, III, IV, V, VI and VII and replace with the following:

Group	Feature
II	1 Different size categories.
III	1 Not exceeding 300mm girth.
	2 Exceeding 300mm not exceeding 900mm girth.
	3 Exceeding 900mm girth.
IV	1 Different density of cover.
V	1 Type of felling.
VI	1 Arisings spread on site.
	2 Arisings removed from site.

Note 1: Group II and V shall only apply to Group I feature 8.

Note 2: Group III shall only apply to Group I feature 9.

Note 3: Group IV shall only apply to Group I feature 3.

Item coverage In paragraph 25 add the following:

(h) spreading of arisings on site.

Item coverage In paragraph 26 add the following:

(g) spreading of arisings on site,
(h) grubbing out or treating stumps.

Item coverage In paragraph 27 add the following:

(i) spreading of arisings on site.

Item coverage In paragraph 28 add the following:

(h) spreading of arisings on site.

Item coverage In paragraph 29 add the following:

(m) spreading of arisings on site.

Item coverage In paragraph 30 add the following:

(l) spreading of arisings on site.

After paragraph 30 add the following new paragraph 30A:

Removal of Branches

30A The items for removal of branches shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

Item coverage

(a) as paragraph 29 items (a) to (m).

Maintenance of Established Wildflower Areas, Areas of Nature Conservation Value and Ornamental Planting Areas

Itemisation

In paragraph 37 delete Group III.

After paragraph 52 add the following paragraphs 53 to 56 inclusive:

Tubes, Guards and Ties and Removal of Tubes, Guards and Ties

Units

53 The units of measurement shall be:

(i) tree tubes, guards and ties and removal of tree tubes, guards and ties number.

Measurement

54 The measurement shall be the number of individual tubes, guards and ties provided or removed.

Itemisation

55 Separate items shall be provided for replacement and removal of tree tubes, guards and ties in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Tree tube.
	2 Tree guard.
	3 Tree tie.
	4 Remove tree tube.
	5 Remove tree guard.
	6 Remove tree tie.

Tree Tubes, Guards and Ties and Removal of Tubes Guards and Ties

56 The items for tree tubes, guards and ties and removal of tubes, guards and ties shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

Item coverage

(a) removal of existing tree tubes, guards and ties,
(b) take up or down and set aside for re-use or remove to store or tip off Site (as Series 200 paragraph 11).

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 3300: SITE INVESTIGATION

Rotary Coring of Existing Pavement

Units	1	The unit of measurement shall be: (i) rotary coring of existing pavement and extra over for each increase in depth number.												
Measurement	2	The measurement of rotary coring of existing pavement and extra over for each increase in depth shall be for the complete operation and the depth of core shall be taken as the overall length of the extracted core.												
Itemisation	3	Separate items shall be provided for rotary coring of existing pavement in accordance with Chapter III paragraphs 3 and 4 and the following:												
		<table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 10%;">Group</th> <th style="text-align: left; width: 10%;">Feature</th> <th></th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;">I</td> <td style="vertical-align: top;">1</td> <td>Rotary coring of existing pavement depth of core not exceeding 150mm.</td> </tr> <tr> <td></td> <td style="vertical-align: top;">2</td> <td>Extra over for each increase in depth of core of 150mm or part thereof.</td> </tr> <tr> <td style="vertical-align: top;">II</td> <td style="vertical-align: top;">1</td> <td>Not exceeding 150mm diameter.</td> </tr> </tbody> </table>	Group	Feature		I	1	Rotary coring of existing pavement depth of core not exceeding 150mm.		2	Extra over for each increase in depth of core of 150mm or part thereof.	II	1	Not exceeding 150mm diameter.
Group	Feature													
I	1	Rotary coring of existing pavement depth of core not exceeding 150mm.												
	2	Extra over for each increase in depth of core of 150mm or part thereof.												
II	1	Not exceeding 150mm diameter.												
Rotary Coring of Existing Pavement	4	The items for rotary coring of existing pavement and extra over for each increase in depth shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:												
Item coverage		<ul style="list-style-type: none"> (a) cutting and extracting sample, (b) labelling, packaging and delivery to the Operating Company's store, (c) recording data analysing interpreting and reporting, (d) supplying the Overseeing Organisation with copies of the data and reports, (e) protecting and storing samples, (f) removing all loose or superfluous material, (g) disposal of material (as Series 600 paragraph 39), (h) reinstatement of paved area (as Series 700 paragraph 36). 												

Rotary Coring of Existing Structures

- Units 5 The unit of measurement shall be:
- (i) rotary coring of existing Structures and extra over for each increase in depth number.
- Measurement 6 The measurement of rotary coring of existing Structures and extra over for each increase in depth shall be the complete operation and the depth of core shall be taken as the overall length of the extracted core.
- Itemisation 7 Separate items shall be provided for rotary coring of existing Structures in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Rotary coring of existing Structures depth of core not exceeding 150mm.
	2 Extra over for each increase in depth of core of 150mm or part thereof.
II	1 Not exceeding 150mm diameter.

- Rotary Coring of Existing Structures** 8 The items for rotary coring of existing Structures and extra over for each increase in depth shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- Item coverage
- (a) locating reinforcement,
- (b) cutting and extracting sample,
- (c) labelling, packaging and delivery to the Operating Company's store,
- (d) recording data analysing interpreting and reporting,
- (e) supplying the Overseeing Organisation with copies of the data and reports,
- (f) protecting and storing samples,
- (g) removing all loose or superfluous material,
- (h) disposal of material (as Series 600 paragraph 39),
- (i) reinstatement.

Inspection Patches on Bridge Structures

- Units 9 The unit of measurement shall be:
- (i) excavate inspection patches, reinstate inspection patches number.
- Measurement 10 The measurement of excavate and reinstate inspection patches shall be for the complete operation.

Itemisation 11 Separate items shall be provided for excavate and reinstate inspection patches on bridge Structures in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Excavate inspection patches on bridge Structures.
	2 Reinstatement inspection patches on bridge Structures.
II	1 Not exceeding 0.25 square metres in area.
	2 Over 0.25 square metres but not exceeding 0.50 square metres in area, and so on in steps of 0.50 square metres.
III	1 Not exceeding 150mm deep.
	2 Over 150mm but not exceeding 300mm deep.

Excavate and Reinstatement Inspection Patches on Bridge Structure 12 The items for excavate and reinstatement inspection patches on bridge Structure shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- Item coverage
- (i) in the case of excavate:
 - (a) excavation (as Series 600 paragraphs 17,18 19 and 23),
 - (b) removal of waterproofing system (as Series 2000 paragraph 12),
 - (c) disposal of material (as Series 600 paragraph 39).
 - (ii) in the case of reinstatement:
 - (a) reinstatement of paved area (as Series 700 paragraph 36),
 - (b) waterproofing (as Series 2000 paragraph 4).

Structural Investigations

Units 13 The unit of measurement shall be:

- (i) half cell potential survey, cover survey, delamination/soundness survey, exposing reinforcement square metre,
- (ii) other surveys, tests and examinations number.

Measurement 14 The measurement of half cell potential surveys, cover surveys, delamination/soundness surveys and exposing reinforcement shall be the area surveyed or exposed.

The measurement of other surveys tests and examinations shall be the number of surveys tests and examinations performed.

Itemisation 15 Separate items shall be provided for structural investigations in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Surveys. 2 Tests.
II	Different types.

Structural Investigations 16 The items for structural investigations shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- Item coverage
- (a) obtaining samples,
 - (b) protecting and storing samples,
 - (c) labelling, packaging and delivery of samples to the laboratory,
 - (d) testing at an accredited laboratory,
 - (e) recording data analysing interpreting and reporting,
 - (f) supplying the Overseeing Organisation with advance copies of the results,
 - (g) supplying the Overseeing Organisation with copies of the data and reports,
 - (h) disposal of material (as Series 600 paragraph 39),
 - (i) reinstatement.

Falling Weight Deflectometer Tests

Units 17 The unit of measurement shall be:

(i) falling weight deflectometer test number.

Measurement 18 The measurement of falling weight deflectometer tests shall be for the complete operation.

Itemisation 19 Separate items shall be provided for falling weight deflectometer in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Falling weight deflectometer tests.

		II	1	Location.
Falling Weight Deflectometer Tests	20	The items for falling weight deflectometer tests shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:		
Item coverage		(a)	temperature measurements including repairs to pavement,	
		(b)	recording required data analysing interpretation and supplying the Overseeing Organisation with a copy of the data and reports.	
Dynamic Cone Penetrometer Tests				
Units	21	The unit of measurement shall be:		
		(a)	dynamic cone penetrometer testing of unbound carriageway subbase, capping layer, subgrade and verges number.	
Measurement	22	The measurement of dynamic cone penetrometer tests of unbound carriageway subbase, capping layer, subgrade and verges shall be for the complete operation.		
Itemisation	23	Separate items shall be provided for dynamic cone penetrometer tests of unbound carriageway subbase, capping layer, subgrade and verges in accordance with Chapter III paragraphs 3 and 4 and the following:		
		Group	Feature	
		I	1	Dynamic cone penetrometer testing of unbound carriageway subbase, capping layer, subgrade and verges.
Dynamic Cone Penetrometer Tests of Unbound Carriageway Subbase/Capping Layer/Subgrade and Verges	24	The items for dynamic cone penetrometer tests of unbound carriageway subbase, capping layer, subgrade and verges shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:		
Item coverage		(a)	drilling or coring,	
		(b)	repeating failed tests,	
		(c)	recording data, analysing, interpreting and reporting,	
		(d)	supplying the Overseeing Organisation with copies of the data and reports,	
		(e)	disposal of material (as Series 600 paragraph 39),	
		(f)	reinstatement.	

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 5000: MAINTENANCE PAINTING OF STEELWORK

Surface Preparation and Protective System

Itemisation

In paragraph 4 delete Groups III, IV, and VI, and the Note at the bottom of the paragraph 'Group VI shall be applied only to Group II Feature 1'.

Re-number Group V as Group III.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 6100: CORE OPERATIONS

Management, Inspection and Maintenance Core Operations

Definitions	1	The Core Operations to be provided under this Contract shall be measured in accordance with this Series.
	2	Operations which are additional to Core Operations are subject to Orders and shall be measured in the appropriate Series in this Schedule of Rates and Prices.
Units	3	The units of measurement shall be: (i) management, inspection and maintenance Core Operations .....month.
Measurement	4	The measurement of: (i) inspections and safety patrols, (ii) Detailed Inspections, (iii) Repair of Category 1 Defects of value not more than £10,000, (iv) linear drainage systems, (v) gullies, catchpits, interceptors, soakaways, manholes and oil separators, (vi) drainage grips, (vii) filter material, (viii) high, medium, low and minimal frequency grass cutting, (ix) vehicle restraint systems, (x) road traffic signs, (xi) Incident Response Operations of value not more than £10,000, which have a Payment Adjustment Factor for each month, shall be 1 multiplied by the Payment Adjustment Factor (Detailed in Schedule 5 Part 6, Annex C) for that month.

Itemisation	5	Separate items shall be provided for management, inspection and maintenance operations in accordance with Chapter III paragraphs 3 and 4 and the following:						
		<table border="1"> <thead> <tr> <th>Group</th> <th>Feature</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>1 Schedule and Part number.</td> </tr> <tr> <td>II</td> <td>1 Different management, inspection and maintenance Operations.</td> </tr> </tbody> </table>	Group	Feature	I	1 Schedule and Part number.	II	1 Different management, inspection and maintenance Operations.
Group	Feature							
I	1 Schedule and Part number.							
II	1 Different management, inspection and maintenance Operations.							
Provide, Maintain and Update Register of staff and Professional Services staff	6	The item for provide, maintain and update register of staff and Professional Services staff shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:						
Item coverage		(a) compliance with Clause 4.2 of Schedule 1 Part 1.						
Overall Requirements	7	The item for overall requirements shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:						
Item coverage		(a) compliance with Schedule 3 Part 1.						
Extent of the Unit	8	The item for the extent of the Unit shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:						
Item coverage		(a) compliance with Schedule 3 Part 2.						
Reference Documents	9	The item for the reference documents shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:						
Item coverage		(a) compliance with Schedule 3 Part 3.						
Other Contracts within the Unit	10	The item for other contracts within the Unit shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:						
Item coverage		(a) compliance with Schedule 3 Part 4. Where the Director appoints the Operating Company to procure or manage a Works Contracts which the previous operating company was procuring or managing the Operating Company shall be paid separately under Series 6200.						
Communications Strategy, Correspondence Enquiries and Complaints	11	The item for communications strategy, correspondence, enquiries and complaints shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:						
Item coverage		(a) compliance with Schedule 3 Part 5.						

Customer Contact Services	12	The item for customer contact services shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 3 Part 6.
Network Operations Services	13	The item for network operations services shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 3 Part 7.
Statutory Functions	14	The item for Statutory Functions shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 3 Part 8.
Collaboration Requirements	15	The item for collaboration requirements shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 3 Part 9.
Partnering	16	The item for partnering shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 3 Part 10.
Community Benefits	17	The item for community benefits shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 3 Part 11.
Financial and Contract Management	18	The item for financial and contract management shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 4 Part 1 excluding provision of resources for Integrated Roads Information System measured as mobilisation under Series 100.
Integrated Roads Information System	19	The item for Integrated Roads Information System shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 4 Part 2 except paragraph 2.4.
Inventory Requirements	20	The item for inventory requirements shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 2.4 of Schedule 4 Part 2.

Roadside Electrical Apparatus, and Power Supplies	21	The item for roadside electrical apparatus and power supplies shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 4 Part 3.
Damage To Crown Property and Third Party Claims	22	The item for damage to Crown Property and third party claims shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 4 Part 4 excluding paragraph 3.2.
Damage to Crown Property of Value not more than £10,000	23	The item for damage to Crown Property of value not more than £10,000 shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 3.2 of Schedule 4 Part 4, excluding removal of graffiti. (b) Police reports, (c) establishing, maintaining and removing traffic management while the Design and Operations are completed to allow the repair to be executed, (d) recovery of the costs of repair of the damage to Crown Property from the third party which caused the damage, (e) betterment, (f) Professional Services, (g) non-recovery of any costs of repair from any third party including the Motor Insurance Bureau.
Management System	24	The item for management system shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 5 Part 1 and paragraph 1.10 of Schedule 7 Part 1.
Records, Information and communication Technology	25	The item for records, information and communication technology shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
		(a) compliance with Schedule 5 Part 2.

Reporting and Submission Requirements and Progress Meetings	26	The item for reporting and submission requirements and progress meetings shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 5 Part 3.
Operating Company's Representative, Core Management Team and Key Staff	27	The item for Operating Company's representative, core management team and key staff shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 5 Part 4.
Audits by the Performance Audit Group	28	The item for audits by the performance audit group shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 5 Part 5.
Performance Measurement	29	The item for performance measurement shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 5 Part 6.
Operating Company's Offices and Depots	30	The item for Operating Company's offices and depots shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 5 Part 7.
Environmental Sustainability and Waste	31	The item for environmental sustainability and waste shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 5 Part 8.
Procurement and Management of Schemes	32	The item for procurement and management of schemes shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 6 Part 1 excluding procurement and management of Works Contracts measured under Series 6300.
Construction (Design and Management) Regulations 2007	33	The item for Construction (Design and Management) Regulations 2007 shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 6 Part 2.

Road Safety Audits	34	The item for road safety audits shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 6 Part 3.
Design and Certification of Operations and works	35	The item for design and certification of operations and works shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 6 Part 4 excluding design costs measured under Series 6200.
Routine Maintenance Management Function	36	The item for Routine Maintenance Management Function shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 1.2 of Schedule 7 Part 1.
Defect Categories and Response Times	37	The item for defect categories and response times shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 2 of Schedule 7 Part 1, excluding permanent repair Operations.
Hazard Notices and Observations Identified by Performance Audit Group	38	The item for hazard notices and observations identified by performance audit group shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 3 of Schedule 7 Part 1.
Inspections and Safety Patrols	39	The item for inspections and safety patrols shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with all Safety Inspections, Safety Patrols, ad-hoc inspections requirements of Schedule 7 Part 1.
Repair of Category 1 Defects Costing Less Than or Equal to £10,000	40	The item for Repair of Category 1 Defects of value not more than £10,000 shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 2, Schedule 7 Part 1, in respect of permanent repair Operations of value not more than £10,000, (b) the cost of maintaining temporary repairs,

		(c)	all traffic management required in connection with making safe and the repair of a Category 1 Defect,
		(d)	travel to and from the scene of the Category 1 Defect,
		(e)	reporting to the Director details of all Operations carried out and materials used,
		(f)	disruption to other work as a result of attending Category 1 Defects,
		(g)	attending a reported Category 1 Defect where no defect is found,
		(h)	Professional Services.
Detailed Inspections	41		The item for Detailed Inspections shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a)	compliance with all Detailed Inspection requirements of Schedule 7 Part 1, excluding paragraph 1.8.14 in respect of inventory validation,
		(b)	reports and recording of results and data in Routine Maintenance and Management System.
Carriageway	42		The item for carriageway shall in accordance with the Preambles to Schedule of Rates General Directions include for:
Item coverage		(a)	compliance with paragraph 4.1 of Schedule 7 Part 1 excluding Detailed Inspections.
Pedestrian and Cycle Facilities	43		The item for pedestrian and cycle facilities shall in accordance with the Preambles to Schedule of Rates General Directions include for:
Item coverage		(a)	compliance with paragraph 4.2 of Schedule 7 Part 1 excluding Detailed Inspections.
Covers, Gratings and Frames	44		The item for covers, gratings and frame shall in accordance with the Preambles to Schedule of Rates General Directions include for:
Item coverage		(a)	compliance with paragraph 4.3 of Schedule 7 Part 1 excluding Detailed Inspections.
Kerbs, Channels Edgings and Quadrants	45		The item for kerbs, channels, edgings and quadrants shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a)	compliance with paragraph 4.4 of Schedule 7 Part 1 excluding Detailed Inspections.

Linear Drainage Systems	46	The item for linear drainage systems shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.5 of Schedule 7 Part 1 excluding Detailed Inspections.
Gullies, Catchpits, Interceptors, Soakaways, Manholes and Oil Separators	47	The item for gullies, catchpits, interceptors, soakaways, manholes and oil separators shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.6 of Schedule 7 Part 1 excluding Detailed Inspections.
Drainage Grips	48	The item for drainage grips shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.7 of Schedule 7 Part 1 excluding Detailed Inspections.
Ditches	49	The item for ditches shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.8 of Schedule 7 Part 1 excluding Detailed Inspections.
Filter Material	50	The item for filter material shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.9 of Schedule 7 Part 1 excluding Detailed Inspections.
Drainage Structures	51	The item for drainage Structures shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.10 of Schedule 7 Part 1 excluding Detailed Inspections.
Balancing Ponds	52	The item for balancing ponds shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.11 of Schedule 7 Part 1 excluding Detailed Inspections.
Ancillary Drainage Items	53	The item for ancillary drainage items shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.12 of Schedule 7 Part 1 excluding Detailed Inspections.

Communications and Miscellaneous Equipment	54	The item for communications and miscellaneous equipment shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.13 of Schedule 7 Part 1.
Geotechnical Assets	55	The item for geotechnical assets shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.14 of Schedule 7 Part 1 excluding Detailed Inspections.
Grassed Areas	56	The items for grassed areas shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.15 of Schedule 7 Part 1 excluding Detailed Inspections.
Bulb and Wildflower Areas	57	The item for bulb and wildflower areas shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.16 of Schedule 7 Part 1 excluding Detailed Inspections.
Woodland Areas and Trees	58	The item for woodland areas and trees shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.17 of Schedule 7 Part 1 excluding Detailed Inspections.
Scrub Areas, Shrub Areas and Hedges	59	The item for scrub areas shrub areas and hedges shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.18 of Schedule 7 Part 1 excluding Detailed Inspections.
Wetland Areas	60	The item for wetland areas shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.19 of Schedule 7 Part 1 excluding Detailed Inspections.
Special Ecological Measures	61	The item for special ecological measures shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.20 of Schedule 7 Part 1 excluding Detailed Inspections.

Invasive Species	62	The item for special invasive species shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.21 of Schedule 7 Part 1 excluding Detailed Inspections.
Vehicle Restraint Systems	63	The item for vehicle restraint systems shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.22 of Schedule 7 Part 1 excluding Detailed Inspections.
Road Traffic Signs	64	The item for road traffic signs shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.27 of Schedule 7 Part 1 excluding Detailed Inspections.
Traffic Signals	65	The item for traffic signals shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.28 of Schedule 7 Part 1 excluding Detailed Inspections.
Roadside Electrical Apparatus, Road Lighting and Power Supplies	66	The item for roadside electrical apparatus, road lighting and power supplies shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.29 of Schedule 7 Part 1 excluding Detailed Inspections.
Weather Stations	67	The item for weather stations shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.30 of Schedule 7 Part 1 excluding Detailed Inspections.
Arrester Beds	68	The item for arrester beds shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item Coverage		(a) compliance with paragraph 4.31 of Schedule 7 Part 1 excluding Detailed Inspections.
Traffic Control Barriers	69	The item for traffic control barriers shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.33 of Schedule 7 Part 1 excluding Detailed Inspections.

Litter and Refuse	70	The item for litter and refuse shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.34 of Schedule 7 Part 1 excluding Detailed Inspections.
Dead Animals	71	The item for dead animals shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.35 of Schedule 7 Part 1.
Removal of Graffiti	72	The item for removal of graffiti shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.36 of Schedule 7 Part 1 excluding Detailed Inspections.
Node Markers	73	The item for node markers shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.37 of Schedule 7 Part 1 excluding Detailed Inspections.
Network Referencing	74	The item for network referencing shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.38 of Schedule 7 Part 1 excluding Detailed Inspections.
Flooding	75	The item for flooding shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4.39 of Schedule 7 Part 1 excluding Detailed Inspections.
Winter Service	76	The item for Winter Service shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 7 Part 2.

Incident Response excluding Incident Response Operations for Incidents of Value not more than £10,000	77	The item for Incident Response shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 7 Part 3, excluding Incident Response Operations
Incident Response Operations for Incidents of Value not more than £10,000	78	The item for Incident Response Operations for Incidents of value not more than £10,000 shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 7 Part 3 Incident Response Operations, (b) travel to and from the scene of the Incident, (c) acting on Orders and/or the instructions of the Emergency Services, (d) Reporting to the Overseeing Organisation details of all Operations carried out and materials used, (e) Disruption to other work as a result of attending Incidents, (f) Attending a reported Incident or Category 1 defect where no defect is found, (g) maintaining temporary repairs until a permanent repair is carried out, (h) Professional Services.
Landscape Development Process and Deliverables	79	The item for landscape development process and deliverables shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 7 Part 4.
New Roads and Street Works Act 1991	80	The item for New Roads and Street Works Act 1991 shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 7 Part 5.

Management and Maintenance of Structures excluding Requirements for Maintenance of Structures	81	The item for management and maintenance of structures shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 7 Part 6 excluding paragraph 4 and excluding the cost of Possessions.
Management and Maintenance of Structures: Requirements for Maintenance of Structures	82	The item for management and maintenance of Structures: requirements for maintenance of structures shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with paragraph 4 of Schedule 7 Part 6 excluding the cost of Possessions.
Structures with Particular Requirements	83	The item for structures with particular requirements shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 7 Part 7.
Severe Weather Services	84	The item for severe weather services shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 7 Part 8.
Abnormal Indivisible Load Routeing	85	The item for abnormal indivisible load routeing shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 8 Part 1.
Development Management	86	The item for development management shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 8 Part 2.
Road Safety and Accident Investigation and Prevention	87	The item for road safety and accident investigation and prevention shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 8 Part 3 excluding Procurement and management of Works Contracts measured under Series 6300.

Signs Requiring Authorisation	88	The item for signs requiring authorisation shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Schedule 8 Part 4.
Manage and Maintain Grip Tester	89	The item for Manage and Maintain Grip Tester shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) compliance with Clauses 972AR and 973AR of Schedule 9 Part 1.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 6200: PROFESSIONAL SERVICES

Professional Services

- Definition 1 Professional Services rates shall apply for the Designs referred to in paragraph 1.1.1 of Schedule 6 Part 4 except where included within the item coverage of other Series.
- Professional Services shall only be measured for Design Operations stated as being subject to an Order.
- Units 2 The units of measurement shall be:
- (i) staff category and classification hour.
- Measurement 3 The measurement of work at professional services rates shall be based on certified timesheet records. Travel time shall be paid for travel from the Central Office or a sub office within the Unit to the location where the services are being undertaken whichever is the lesser.
- Itemisation 4 Separate items shall be provided for professional services rates in accordance with Chapter III paragraphs 3 and 4 and the following:
- | Group | Feature |
|-------|-------------------------|
| I | 1 Category of staff. |
| | 2 Staff classification. |
- Professional Services 5 The items for professional services rates shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
- Item Coverage (a) basic time and overtime worked,
 (b) non-productive overtime payments,
 (c) bonuses and incentive payments,
 (d) National Insurance,
 (e) holidays with pay,
 (f) sickness benefits,
 (g) pension and life insurance benefits,
 (h) travel and subsistence,
 (i) car and car allowance,
 (j) office accommodation, equipment and supplies,

- (k) administration (including managerial, supervisory, clerical, administrative and accountancy staff),
- (l) any tax, charge, levy impost or payment of any kind which the Operating Company shall be obliged to pay by law to make on behalf of persons employed by the Operating Company including all mobilisation and demobilisation requirements,
- (m) appropriate computers and general office applications and software,
- (n) printing, binding, photocopying and similar administrative tasks,
- (o) preparation, updating and submission to the Director of registers of staff, curricula vitae and other details,
- (p) all other costs and all charges whatsoever associated with the employment of any such professional.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 6300: PROCUREMENT AND MANAGEMENT OF WORKS CONTRACTS

Procurement and Management of Works Contracts

- Definition
- 1 Procurement and Management of Works Contracts fee percentages shall be used for the procurement and supervision of all Works Contracts.
- Works Contracts shall be classified as follows:
- (i) Roadworks – having a bridgeworks content of 10% or less of the Cost,
 - (ii) Bridgeworks – having a bridgeworks content of 11% or more of the Cost,
 - (iii) Lane rental – in combination with any of the above items (i) and (ii) under a lane rental regime.
- The percentages in this Series shall also apply to works on the Unit undertaken by others that the Scottish Ministers require the Operating Company to procure and/or Supervise.
- 2 The following definitions shall apply to this Series of this Schedule:
- (i) "Roadworks" means all works other than bridgeworks,
 - (ii) "Bridgeworks" means works on Structures,
 - (iii) "Lane rental" means a Works Contract where the requirements of a lane rental Clause for a bonus for early completion and charge for late completion are included,
 - (iv) "Cost" means the final construction cost which shall be the value of the final account for Works Contracts excluding VAT, liquidated and ascertained damages and any bonus adjustments or other charges related to lane rental Works Contracts.
- The Order of procurement and management for Works Contracts with element construction costs up to £350,000 shall be at the discretion of the Director.
- Measurement
- 3
- (i) The percentage entered against the first Cost band shall be applied to the element of Cost of a Works Contract below £250,000,
 - (ii) The percentage entered against the second Cost band shall be applied to the element of the Cost of a Works Contract between £250,000 and £750,000,

- (iii) The percentage entered against the third Cost band shall be applied to the element of the Cost of a Works Contract between £750,000 and £1,500,000,
- (iv) The percentage entered against the fourth Cost band shall be applied to the element of the Cost of a Works Contract between £1,500,000 and £3,000,000,
- (v) The percentage entered against the fifth Cost band shall be applied to the element of the Cost of a Works Contract above £3,000,000,
- (vi) The percentage entered against extra over fees for management for lane rental shall be applied to the total of management fees measured under the five cost bands above.

Units

- 4 The unit of measurement shall be:
 - (i) Fees for procurement and management of Works Contracts and extra over fees for management for lane rental..... percentage.
- 5 Separate items shall be provided for the procurement and management of Works Contracts in accordance with Chapter III paragraphs 3 and 4 and the following:

Itemisation

Group	Feature
I	1 Works Contracts.
II	1 Procurement.
	2 Management.
	3 Extra over management fees for lane rental.
III	1 Roadworks.
	2 Bridgeworks.
IV	1 Element of Cost of a Works Contract below £250,000.
	2 Element of the Cost of a Works Contract between £250,000 and £750,000.
	3 Element of the Cost of a Works Contract between £750,000 and £1,500,000.
	4 Element of the Cost of a Works Contract between £1,500,000 and £2,000,000.
	5 Element of the Cost of a Works Contract between £2,000,000 and £3,500,000.
	6 Element of the Cost of a Works Contract above £3,500,000.

Note: Group IV shall only apply to Group II feature 1 and 2.

Fees for Procurement of Works Contracts	6	The items for the Fees for Procurement of Works Contracts shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item Coverage	(a)	compliance with paragraphs 1, 3 and 4 of Schedule 6 Part 1.
Fees for Management of Works Contracts	7	The items for Fees for management of Works Contracts shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item Coverage	(a)	compliance with paragraphs 1 and 5 of Schedule 6 Part 1.
		The following items shall not be included in the percentage adjustments but shall be included in Series 100 of the Method of Measurement for Highway Works of the Works Contract where appropriate:
	(a)	temporary accommodation for the Engineer,
	(b)	vehicles for the Engineer,
	(c)	communication system for the Engineer,
	(d)	operatives for the Engineer,
	(e)	scheme information boards,
	(f)	information signs.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 6400: ADJUSTMENT TO SCHEDULE OF RATES AND PRICES

Adjustment for Time Band

- 1 The percentage adjustments apply to each of the time bands shown below, excluding time band reference 1 which is not subject to adjustment.

Time Bands		
Time Band Reference	Day of Week	Hours
1	Monday to Friday (inclusive)	0700 to 1900 inclusive
2	Monday pm to Tuesday am	1900 to 0700 inclusive
2	Tuesday pm to Wednesday am	1900 to 0700 inclusive
2	Wednesday pm to Thursday am	1900 to 0700 inclusive
2	Thursday pm to Friday am	1900 to 0700 inclusive
3	Friday pm to Monday am	1900 to 0700 inclusive
4	Public Holiday	1900* to †0700 inclusive

* previous day to Public Holiday

† following day to Public Holiday

- 2 Each time band adjustment shall comprise a single percentage adjustment to cover all Series except for Series 700 which shall be separately measured and those Series stated in the Preambles to Schedule of Rates and Prices paragraph 20 as not being subject to any time band adjustment.
 - 3 The unit of measurement shall be:
 - (i) Percentage adjustment to rates and prices for Operations percentage.
- Units
- Measurement
- 4 The percentages shall be applied where relevant to the value of the relevant Operations executed within each time band.

Itemisation 5 Separate items shall be provided for time band adjustments in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature	
I	1	Percentage adjustment to rates for Operations.
II	1	Time band reference.
III	1	Series 700.
	2	All other Series (excluding Series 700).

Time Band Adjustment to Schedule of Rates and Prices 6 The percentage adjustments inserted in the items for time band adjustment to Schedule of Rates and Prices shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

Item Coverage (a) all additional costs.

Adjustment for Works Within and Below Non-Tidal Open Water or Tidal Water

Units 7 The unit of measurement shall be:

- (i) Percentage adjustment to rates for Operations executed within and below non tidal open water percentage,
- (ii) Percentage adjustment to rates for Operations executed between mean high water springs and mean low waters springs percentage,
- (iii) Percentage adjustment to rates for Operations executed below mean low water springs percentage.

Measurement 8 The percentage adjustment shall be applied to the value of the Operations executed within and below non-tidal open water or tidal water below mean high water springs.

Itemisation 9 Separate items shall be provided for Operations within and below non-tidal open water or tidal water below mean high water springs in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature	
I	1	Percentage adjustment to rates for Operations.
II	1	Within and below non-tidal open water.
	2	Within and below tidal water.
III	1	Between mean high water springs and mean low waters springs.
	2	Below mean low water springs.

Note: Group III shall only apply to Group II feature 2.

**Adjustment for
Works Within and
Below Non-Tidal
Open Water or Tidal
Water**

Item Coverage

10 The percentage adjustments inserted in the items for adjustment for Operations within and below non-tidal open water or tidal water to Schedule of Rates and Prices shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

(a) all additional costs.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 6500: TIME WORK SCHEDULE

Time Work Schedule

Definition

- 1 The following terms and conditions shall apply to all work the subject of an Order in accordance with Schedule 1 to this Contract to be executed on a Time Work Schedule basis.

The term 'Sub-contractors' used in this Series shall include "Labour only" sub-contractors.

Sub-contractors labour plant and materials shall be included on the statements submitted by the Operating Company and shall be paid at the Rates and Prices contained herein as though they are directly employed by the Operating Company in accordance with this Series. No adjustment or allowance shall be applied in respect of labour plant and materials supplied by sub-contractors.

For the purposes of labour the Operating Company's normal working hours shall be defined as 0700 hrs to 1900 hrs Monday to Friday inclusive.

Unless otherwise ordered by the Overseeing Organisation, Series 6500 time work schedule items shall not be measured where there are appropriate items in Series 0200 to 6400 and Series 6700 to 6800 of this Schedule, or where similar items exist from which a rate can be deduced in accordance with Clause 10.1 of Schedule 1.

Labour

- 2 Trades and activities to be carried out by the labour type as detailed under this Series shall be as Table 1 below.

Table 1

Labour Type	Trades and Activities Applicable (inclusive of sub-contractors).
Ganger	Working foreman, covering all trades.
Driver/machine operator	Heavy goods vehicle driver, machine/plant operator.
Skilled operative	Surfacing operative, traffic management operative, fencing operative, footway and kerb laying operative, drainage operative, scaffolder, reinforcement bar fixer, steelwork erectors/fabricator, mechanic/fitter, welder, landscaping operative and other skilled operative.
Craftsman	Bricklayer, painter, decorator, carpenter, joiner, plumber and other skilled craftsman.
Electrician	Traffic signals, road lighting and communications engineer.
General Operative	Labourer, watchman, banksman, handyman, light duty driver and other general or unskilled operative.

Units 3 The units of measurement shall be:
(i) ganger, driver/machine operator, skilled operative, craftsman, electrical engineer, general operativehour.

Measurement 4 The measurement of ganger, driver/machine operator, skilled operative, craftsman, electrical engineer and general operative shall be the actual hours spent on work on the Site Operations when such Site Operations are subject of an Order to be carried out at Rates and Prices in this Series.

The measurement of outside the Operating Company's normal working hours shall only be applicable when the Site Operations are either so referred to an Order or required due to time work restraints to be carried outside the Operating Companies normal working hours.

Itemisation 5 Separate items shall be provided for Labour in accordance with chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1 Ganger.
	2 Driver/machine operator.
	3 Skilled operative.
	4 Craftsman.
	5 Electrician.
	6 General operative.

	II	1	During the Operating Company's normal working hours.
		2	Outside the Operating Company's normal working hours.
Labour	6		The items for Labour shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a)	basic cost of labour for workmen,
		(b)	plus rates for skill,
		(c)	all other amounts of every kind paid in accordance with the rules of the appropriate wage fixing body,
		(d)	non-productive overtime and costs associated therewith,
		(e)	all bonuses, payments and incentives in excess of the basic cost of labour,
		(f)	national Insurance and Surcharges,
		(g)	normal contract works, Third Party and Employers liability insurances,
		(h)	annual and public holidays with pay and benefit scheme,
		(i)	non-contributory sick pay scheme,
		(j)	industrial training levy,
		(k)	redundancy payments,
		(l)	the Employment Rights Act 1996,
		(m)	site supervision and staff including foremen and walking gangers,
		(n)	small tools, appliances and plant not provided for in paragraphs 7, 8 and 9 of this Series,
		(o)	protective clothing,
		(p)	transport within or related to the Unit,
		(q)	welfare facilities,
		(r)	establishment charges, overheads and profit,
		(s)	preparation, updating and submission to the Director of registers of staff, curricula vitae,
		(t)	travelling time to from within or related to the Unit.

Plant

Definitions

7 Basic cost of plant and percentage adjustment:

(i) The basic cost of plant shall be charged at the Hire Rates set down in Section 4 Plant of Schedules of Dayworks Carried Out Incidental to Contract Work published by the Civil Engineering Contractors Association current forty two days prior to the Tender submission date for this Contract.

The notices and conditions set down in Section 4 Plant of the Schedules of Dayworks Carried Out Incidental to Contract Work shall not apply.

(ii) Only the actual time plant is working or made available on site in accordance with sub paragraph (iv) of this paragraph 7 on Time Work Operations shall be chargeable.

(iii) The period stated in Section 4 Plant of the Schedules of Dayworks Carried Out Incidental to Contract Work for plant not listed shall be the minimum chargeable.

(iv) Plant the subject of an Order by the Director to be made available on site for a Time Work Operation shall be charged at two-thirds of the rate obtained in accordance with sub-paragraph (i) of this paragraph 7 for the time the plant is made available but not used, subject to a maximum of 8 hours per working day and 40 hours in a working week.

(v) Rates for mechanical and other special plant not normally classed as small tools and not included in the Schedule of Rates and Prices or Section 4 Plant of the Schedules of Dayworks Carried Out Incidental to Contract Work shall be paid for at hire rates reasonably related to those obtained in accordance with sub-paragraph (i) of this paragraph 7.

(vi) The Operating Company shall include for percentage adjustment to the basic cost of plant in Section 4 Plant of the Schedule of Dayworks Carried Out Incidental to Contract Work. The adjustment may be positive or negative.

Units

8 The units of measurement shall be:

(i) basic cost of plant sum,

(ii) percentage adjustment to the basic cost of plant percentage.

Itemisation	9	Separate items shall be provided for the basic cost of plant in accordance with chapter II paragraphs 3 and 4 and the following:						
		<table border="1"> <thead> <tr> <th>Group</th> <th>Feature</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>1 Basic cost of plant.</td> </tr> <tr> <td></td> <td>2 Percentage adjustment to the basic cost of plant.</td> </tr> </tbody> </table>	Group	Feature	I	1 Basic cost of plant.		2 Percentage adjustment to the basic cost of plant.
Group	Feature							
I	1 Basic cost of plant.							
	2 Percentage adjustment to the basic cost of plant.							
Basic Cost of Plant	10	The basic cost of plant for Time Work shall in accordance with Section 4 Plant of the Schedules of Dayworks carried out incidental to Contract Work and in accordance with the Preambles to Schedule of Rates and Prices General Directions include for include for:						
Item coverage		<ul style="list-style-type: none"> (a) all associated costs irrespective of whether plant is owned, hired or leased, (b) fuel, (c) consumable stores, (d) repairs, (e) maintenance, (f) insurance, (g) establishment charges overheads and profit, (h) be exclusive of operator, driver and attendants. 						
Percentage Adjustment to the Basic Cost of Plant	11	The percentage adjustment to the basic cost of plant shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for include for:						
Item coverage		<ul style="list-style-type: none"> (a) owned, hired or leased plant, (b) general servicing, overheads and replacements, (c) fuel distribution, (d) transporting within or related to the Unit, (e) all other charges and costs not recovered in basic cost of plant, (f) discounts. 						
Materials								
Definitions	12	Basic cost of materials and percentage adjustment:						
		<ul style="list-style-type: none"> (i) the basic cost of materials shall be charged at the net invoiced price of materials delivered to the Operating Company, 						

- (ii) the Operating Company shall include for percentage adjustment to the basic cost of materials in Section 2 Materials of the Schedule of Dayworks Carried Out Incidental to Contract Work. The adjustment may be positive or negative.
- Units 13 The units of measurement shall be:
- (i) basic cost of materials sum,
- (ii) percentage adjustment to the basic cost of materials percentage.
- Itemisation 14 Separate items shall be provided for the basic cost of materials in accordance with chapter II paragraphs 3 and 4 and the following:
- | Group | Feature |
|-------|---|
| I | 1 Basic cost of materials. |
| | 2 Percentage adjustment to the basic cost of materials. |
- Basic Cost of Material** 15 The basic cost of material for Time Work shall in accordance with Section 2 Materials of the Schedules of Dayworks carried out incidental to Contract Work and in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
- Item coverage (a) all costs of materials delivered to the Unit.
- Percentage Adjustment to the Basic Cost of Materials** 16 The percentage adjustment to the basic cost of materials shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
- Item coverage (a) ordering and taking delivery,
(b) unloading, storing and protecting,
(c) double handling,
(d) waste,
(e) discounts,
(f) establishment charges overheads and profit,
(g) delivery within or related to the Unit,
(h) all other charges and costs not recovered in basic cost of materials.

Supplementary Services

Definition 17 Services involving the payment of invoiced costs for supplementary services shall include:

- (i) procurement of supplementary services for items that are not included in the Schedule of Rates and Prices or covered by a method of payment in Clause 10.1 of Schedule 1,
- (ii) procurement of supplementary services shall not include labour plant and materials paid elsewhere in this Series 6500: Time Work Schedule,
- (iii) tipping charges. Tipping charges incurred by the Operating Company shall only be separately measured in respect of arisings resulting from work ordered to be carried out on a Time Work basis.

Units 18 The units of measurement shall be:

- (i) invoiced costs of accounts sum,
- (ii) percentage adjustment to invoiced costs percentage.

Measurement 19 The measurement of invoiced costs for payment of accounts for supplementary services shall be the value of invoices received, after any discounts given except in respect of any discount for prompt payment not exceeding 2½% which may be retained by the Operating Company.

The percentage adjustment shall be applied to the correctly submitted invoiced costs excluding VAT.

Itemisation 20 Separate items shall be provided for invoiced costs of accounts for supplementary services in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Invoiced costs of accounts.
	2 Percentage adjustment to invoiced costs.
II	1 Supplementary services.
	2 Nominated Subcontractors.
	3 Tipping charges.

**Percentage
Adjustment to
Invoiced Costs for
Supplementary
Services.**

21 The percentage adjustment to invoiced costs for supplementary services shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:

Item coverage

- (a) general management of the relevant services,
- (b) obtaining quotations and placing orders,
- (c) payment of invoices and subsequent inclusion of the relevant amounts in monthly statements including any interest costs,
- (d) any cost incurred by the Operating Company in respect of supplementary services,
- (e) procurement (as Series 6300 paragraph 5),
- (f) supervision (as Series 6300 paragraph 6),
- (g) establishment charges overheads and profit,
- (h) labours in connection with Nominated Subcontractors as detailed in the Preambles to the method of this measurement of measurement paragraph 8.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 6700: CHANGES IN SCOPE OF OPERATIONS

Changes in the Extent of the Unit Impacting on Core Operations Items in Series 6100

Definition	<p>The provisions of this Series shall not apply to Operations, activities duties and responsibilities in any other part of the Scottish Trunk Road network outside the boundary of the Unit.</p> <p>If at any time during the currency of this Contract the extent of the Unit increases or decreases, items in this Series shall be measured to cover the impact of the change on Core Operations items measured in Series 6100. Measurement of these items shall be deemed to cover the impact on all items within Series 6100.</p> <p>Cumulative spans of bridges are the summation of the individual clear span(s) that makes up the bridge.</p>
Units	<p>1 The units of measurement shall be:</p> <p>(a) addition/deduction for change in the extent of the Unit for carriageways kilometre/month,</p> <p>(b) addition/deduction for change in the extent the Unit for Structures number/month.</p>
Measurement	<p>2 The measurement of the change in the extent of Trunk Roads in the Unit shall be the length of carriageway added to or removed from the Unit.</p> <p>No deduction from the measurement of carriageway shall be made for structures.</p> <p>Roundabouts and slip roads shall be measured as single carriageway.</p> <p>For slip roads the length shall be the distance between the mid point of the nominal channel at its junctions. Roundabouts shall be measured along the centre line between the outer edges of its carriageway.</p> <p>A footbridge shall be defined as the totality of the Structure.</p> <p>Additions to the length of the road network shall be measured as a positive quantity. Deductions from the length of the road network shall be measured as a negative quantity.</p> <p>Additions to the number of Structures shall be measured as a positive quantity. Deduction from the number of Structures shall be measured as a negative quantity.</p>

Itemisation 3 Separate items shall be provided for changes in the extent of the Trunk Road Network impacting on Core Operation items in Series 6100 in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature	
I	1	Addition/deduction for change in the extent of the Unit.
II	1	Carriageway.
	2	Structure.
III	1	Bridge with cumulative clear spans not exceeding 10 metres.
	2	Bridge with cumulative clear spans exceeding 10 metres but not exceeding 50 metres.
	3	Bridge with cumulative clear spans exceeding 50 metres.
	4	Footbridge.
	5	Sign gantry/signal gantry.

Note: Group III shall only apply to Group II feature 2.

Changes in the Extent of the Unit Impacting on Core Operation Items in Series 6100

Item coverage

- 4 The items for changes in the extent of the Unit impacting on Core Operation items in Series 6100 shall in accordance with the Preambles to the Schedule of Rates and Prices General Directions include for:
- (a) all costs or savings occasioned by the change.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 6800: MISCELLANEOUS

Definitions Operations in excess of the requirements measured in accordance with Series 6100 shall be measured in accordance with this Series.

Anti-Graffiti Coatings

- Units 1 The units of measurement shall be:
 - (i) apply anti-graffiti coatings square metre.
- Measurement 2 The measurement of anti-graffiti coatings shall be the plane surface area.
- Itemisation 3 Separate items shall be provided for anti-graffiti coatings in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Anti-graffiti coatings.

Anti-Graffiti Coatings 4 The items for anti-graffiti coatings shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- Item coverage (a) preparation of surfaces,
- (b) masking and other measures to protect adjacent untreated work and the removal of masking and other measures upon completion,
- (c) preparing materials for applications,
- (d) complying with any special requirements in respect of ambient conditions including the containment of dust and debris and for intervals between successive operations and applications,
- (e) multiple coat as recommended by manufacturer,
- (f) sealer/primer as recommended by manufacturer,
- (g) preparation and supply of system and data sheets,
- (h) measures for protection.

Vehicle Restraint Systems

- Units 6 The unit of measurement shall be:
 - (i) re-tensioning safety barriersmetre.

Itemisation 7 Separate items shall be provided for re-tensioning safety barriers in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Re-tensioning.
II	1 Safety barrier.
	2 Wire rope.
III	1 Single sided.
	2 Double sided.

Re-tensioning Safety Barrier 8 The items for re-tensioning safety barrier shall in accordance with the Preambles to Bill of Quantities General Directions include for:

- Item coverage
- (a) applying a releasing agent to adjuster assembly,
 - (b) ensuring the nut is capable of travel along the whole of the threaded portion of the adjuster bolt,
 - (c) remove existing and replace beam to post screws, nut and washers,
 - (d) tighten adjuster bolt to correct torque appropriate to the ambient temperature,
 - (e) tighten lock nut to correct torque,
 - (f) tighten beam to post bolt to the correct torque,
 - (g) adjust wire rope rigging screws to achieve tension appropriate to the ambient temperature,
 - (h) additional adjuster assemblies.

Drainage

Units 9 The units of measurement shall be:

- (i) low pressure high volume jettingmetre,
- (ii) extra over any item of low pressure high volume jettingmetre.

Itemisation 10 Separate items shall be provided for low pressure high volume jetting in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Low pressure high volume jetting.
II	1 Piped drain.
	2 Combined drainage and kerb system.
	3 Linear drainage channel system.

		III	1	Different diameters.
			2	Any diameter.
			3	Any type.
		IV	1	Extra over for use of root cutter.
Low Pressure High Volume Jetting	11	The items for low pressure high volume jetting shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:		
Item coverage		(a)	cleaning existing drainage systems (as Series 500 paragraph 84).	
Extra Over any item of Jetting for use of Root Cutter	12	The items for extra over any item of jetting for use of root cutter shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:		
Item coverage		(a)	all additional costs for use of root cutter.	

Cleaning of Street Furniture

Units	13	The unit of measurement shall be:		
		(a)	Cleaning of sign faces, sign faces on gantry, marker posts hazard posts, ECP cylinders, bollard, refuge beacon.....number.	
		(b)	Painted safety fence.....linear metre.	
Itemisation	14	Separate items shall be provided for cleaning of street furniture in accordance with Chapter III paragraphs 3 and 4 and the following:		

Group	Feature	
I	1	Cleaning.
II	1	Sign face.
	2	Marker post, hazard post, ECP cyclinder, bollard or refuge beacon.
	3	Painted safety fence.
III	1	Not exceeding 5.0 square metres in area.
	2	Exceeding 5.0 square metres but not exceeding 10.0 square metres.
	3	Exceeding 10.0 square metres but not exceeding 20.0 square metres.

Note: Group III shall only apply to Group II feature 1.

- (g) removal of litter, stones and other deleterious materials,
- (h) dispersal of cuttings from non-hard areas evenly over the sward.

Hedge Trimming

Units 19 The units of measurement shall be:

- (i) trimming hedgeslinear metre.

Itemisation 20 Separate items shall be provided for hedge trimming in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Trimming hedges.
II	1 Less than 2 metres high.
	2 Over 2 metres high.
III	1 One side and top.
	2 Both sides and top.

Hedge Trimming 21 The items for hedge trimming shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- Item coverage
- (a) trimming,
 - (b) taking precautions to avoid damage,
 - (c) disposal of all hedge cuttings, litter and debris,
 - (d) where appropriate shredding and disposal on Site,
 - (e) removal of clippings lodged in top or sides of the hedge,
 - (f) removal of all litter and debris from within the Structure of the hedge.

Road Cleaning and Clearance

Units 22 The units of measurement shall be:

- (i) cleaning carriageway, hard shoulder, nearside channel, offside channel, roundabout channel, central reserve, footways/cycling facilities kilometre,
- (ii) remove dead animal carcasses, remove single objects weighing over 25kgnumber.

Itemisation 23 Separate items shall be provided for road cleaning and clearance in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Cleaning.
	2 Remove animal carcasses and single objects.

II	1	Carriageway.
	2	Hard shoulder.
	3	Nearside channel.
	4	Offside channel.
	5	Roundabout channel.
	6	Central reserves.
	7	Footways and cycleways.
III	1	Verges.
	2	Carriageway and hardshoulders.
	3	Central reserves.
	4	Other Areas.

Note 1: Group II shall only apply to Group I feature 1.

Note 2: Group II shall only apply to Group I feature 2.

Cleaning	24	The items for cleaning shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		<ul style="list-style-type: none"> (a) hand or mechanical sweeping, (b) picking up objects not exceeding 25kg from hard areas in timescales appropriate to the prevailing circumstances, (c) water supply, (d) removal of sweepings, objects not exceeding 25kg and debris, (e) disposal of material (as Series 600 paragraph 39).
Remove Animal Carcasses and Single Objects	25	The items for remove animal carcasses and single objects shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		<ul style="list-style-type: none"> (a) picking up animal carcasses and picking up single objects exceeding 25kg in timescales appropriate to the prevailing circumstances, (b) placing in sacks, (c) where an animal carcass is a domestic pet, removal of any identification tags and delivery to the Police together with a brief description of the animal, attempting to contact the owner, keeping the carcass of any domestic animal for a period of two weeks and arranging return of the carcass to the owner, (d) disposal of material (as Series 600 paragraph 39).

Litter Clearance

Units	26	The units of measurement shall be: (i) Litter clearance kilometre.
Measurement	27	Measurement shall be the linear length of associated highway irrespective of the width of clearance.
Itemisation	28	Separate items shall be provided for keeping land clear of litter and refuse in accordance with Chapter III paragraphs 3 and 4 and the following:
<hr/>		
Group Feature		
<hr/>		
I 1 Litter clearance from highway.		
<hr/>		
II 1 Grade C to B.		
2 Grade D to B.		
<hr/>		
Litter clearance	29	The items for litter clearance shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) picking up litter, (b) placing in sacks, (c) disposal of material (as Series 600 paragraph 39).

Validating Network Inventory

Units	30	The units of measurement shall be: (i) Validate network inventory.
Itemisation	31	Separate items shall be provided for validate network inventory and in accordance with Chapter III paragraphs 3 and 4 and the following:
<hr/>		
Group Feature		
<hr/>		
I 1 Validate network inventory.		
<hr/>		
Validate network inventory		The item for validate network inventory shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
Item coverage		(a) Survey complete extent of network, (b) Identify incorrect or missing inventory records or attributes, (c) Update inventory and inventory attributes in the Routine Management and Maintenance System including adding, deleting or amending records as required, (d) Reporting to the Overseeing Organisation details of all of all updates made to the network inventory.

SCHEDULE 2 PART 1

METHOD OF MEASUREMENT

SERIES 7000: LUMP SUM PRICES

Payment of Accounts

- Definition 1 Services involving the payment of accounts shall include but not be limited to the following:
- (a) payment of statutory undertakers accounts,
 - (b) payment of Network Rail possession charge accounts.
- Units 2 The units of measurement shall be:
- (i) invoiced costs of accounts sum,
 - (ii) percentage to be added to invoiced costs.
- Measurement 3 The measurement of invoiced costs for payment of accounts shall be the value of invoices received, after any discounts given except in respect of any discount for prompt payment not exceeding 2½% which may be retained by the Operating Company.
- The percentage adjustment shall be applied to the invoiced costs excluding VAT.
- Itemisation 4 Separate items shall be provided for invoiced costs of accounts in accordance with Chapter III paragraphs 3 and 4 and the following:
- | Group | Feature |
|-------|---|
| I | 1 Invoiced costs of statutory undertakers accounts. |
| | 2 Invoiced costs of Network Rail accounts. |
| | 3 Percentage to be added to invoiced costs of statutory undertakers accounts. |
| | 4 Percentage to be added to invoiced costs of Network Rail accounts. |
- Percentage to be Added to Invoiced Costs for Statutory Undertakers Accounts.** 5 The percentage to be added to invoiced costs of Statutory Undertakers accounts. shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:
- (a) payment of invoices and subsequent inclusion of the relevant amounts in monthly statements including any interest costs,
 - (b) any other costs in connection with the payment of invoices.
- Item coverage

Percentage to be Added to Invoiced Costs for Network Rail Possession Charge Accounts 6 The percentage to be added to invoiced costs of Network Rail possession charge accounts, shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- Item Coverage (a) payment of invoices and subsequent inclusion of the relevant amounts in monthly statements including any interest costs,
(b) all costs in connection with working on or in the vicinity of Network Rail land,
(c) any other costs in connection with the payment of invoices.

Lump Sum Quotations

Units 7 The units of measurement shall be:
(i) Lump Sum Quotation, Lump Sum Quotation for the construction of Schemes costing less than £350,000sum.

Itemisation 8 Separate items shall be provided for Lump Sum Quotations in accordance with Chapter III paragraphs 3 and 4 and the following:

Group	Feature
I	1 Lump Sum Quotation.
	2 Lump Sum Quotation for the Construction of Schemes costing less than £350,000.

Lump Sum Quotation 9 The item for Lump Sum Quotation shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- Item coverage (a) all costs to undertake the Operations as a Lump Sum Quotation.

Lump Sum Quotation for the construction of Schemes costing less than £250,000 10 The item for Lump Sum Quotation for the construction of Schemes costing less than £350,000 shall in accordance with the Preambles to Schedule of Rates and Prices General Directions include for:

- Item coverage (a) all costs to undertake the Operations as a Lump Sum Quotation.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 1

OVERALL REQUIREMENTS

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 1

OVERALL REQUIREMENTS

1. OVERALL REQUIREMENTS

1.1 General

- 1.1.1 In executing the requirements of this Contract, the Operating Company shall:
- (i) operate with full regard for the safety of the Operating Company's employees, road users and any other persons on the Unit or on land adjacent to the Unit,
 - (ii) minimise the risk of damage and disturbance to, and destruction of, third party property,
 - (iii) plan, manage and execute Operations to minimise delay to road users,
 - (iv) minimise the risks of any potentially adverse effects to the environment as a result of both undertaking Operations and the use of the Trunk Road,
 - (v) respond to all Incidents within the timescales stated in this Contract to minimise the adverse effects on road users, and
 - (vi) treat all members of the public and all other road users with due courtesy and consideration.

1.2 Meetings and Seminars

- 1.2.1 The Operating Company shall attend any meetings at the Director's office or at such other locations as the Director shall reasonably require.
- 1.2.2 The Director may organise seminars and working groups related to improving the methods by which Trunk Road management and maintenance activities are carried out. The Operating Company shall attend such seminars and working groups when required to do so in writing by the Director.

1.3 Disclosure

- 1.3.1 The Operating Company shall ensure that all personnel, including subcontractors, engaged, or proposed to be engaged, for the purposes of this Contract in positions directly interacting with the public are appointed only after it has completed satisfactorily a disclosure process appropriate to the position or role of the individual concerned. Disclosure checks shall be undertaken through Disclosure Scotland for all existing or potential new employees and subcontractors engaged in such positions.
- 1.3.2 The Operating Company shall carry out disclosure checks for personnel undertaking vehicle recovery work on the Trunk Road network.
- 1.3.3 All vehicle recovery personnel shall also comply with the requirements set out in the Specification.

1.4 Statutory Duties

- 1.4.1 The Operating Company shall perform, on behalf of the Scottish Ministers, the Statutory Functions stipulated in this Contract.

1.4.2 The Operating Company shall carry out the Operations in such a way that they do not impede the Scottish Ministers or others with statutory duties or statutory functions in relation to the Unit or other adjoining roads in executing those duties and functions.

1.5 Community Planning Support

1.5.1 The Scottish Ministers have resolved to support community planning in terms of the *Local Government in Scotland Act 2003*. The Operating Company shall provide such support and attend such meetings as required by the Director in this regard.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 2

EXTENT OF THE UNIT

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 2

EXTENT OF THE UNIT

1. THE UNIT

1.1 Extent

1.1.1 The extent of the Unit is:

- (i) Trunk Roads as stated in Annex 3.2/A of this Part, extending to the Trunk Road boundary, excluding items stipulated in Annex 3.2/D of this Part, and
- (ii) items outwith the Trunk Road boundary stipulated in Annex 3.2/C of this Part.

1.2 Interfaces with Adjacent Trunk Road Units

1.2.1 The interfaces at the Unit boundary with adjacent Trunk Road Units, and with some roads of other roads authorities, are as stated in Annex 3.2/B of this Part.

1.3 Interfaces with Other Roads

1.3.1 The interfaces at the Unit boundary with local authority and other roads are not always identifiable. The document *Extent of the Trunk Road Network* published by Transport Scotland, identifies protocols for determining the boundaries between the Trunk Roads in the Unit and local authority roads for the purposes of this Contract.

1.3.2 The Operating Company shall comply with these protocols to determine the extent of any of its responsibilities and those of Works Contractors for all Operations, Schemes and Works at such interfaces, if it is not stipulated elsewhere.

1.3.3 The Operating Company shall liaise with local authorities, other relevant public bodies and other organisations responsible for Trunk Roads and other roads adjoining the Unit. The Operating Company shall thereby manage any local arrangements for maintenance and any documented cross-boundary arrangements in a coordinated manner that secures the safety of road users at all times, irrespective of contractual responsibilities.

1.3.4 The Operating Company shall identify and record any instances of such arrangements not conforming to the protocols set out in *Extent of the Trunk Road Network*. The Operating Company shall inform the Director in writing within 14 days of identification of such instances.

This is Annex 3.2/A to Schedule 3 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 2

EXTENT OF THE UNIT

ANNEX 3.2/A – Trunk Roads in the Unit

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 2

EXTENT OF THE UNIT

ANNEX 3.2/A – Trunk Roads in the Unit

1. LOCATION OF UNIT

1.1 Drawing

- 1.1.1 The location of the Unit and the included Trunk Roads are shown on Drawing No S3P2 001, which is included in this Annex.

2. TRUNK ROADS

2.1 Trunk Roads in the Unit

- 2.1.1 The following Trunk Roads are in the Unit:

- (i) M9/A9 Edinburgh - Stirling - Thurso Trunk Road from its junction with the A912 at but excluding Inveralmond Roundabout Perth leading generally northwards for a distance of 357 kilometres or thereby to its junction with an unclassified road leading to Holborn Head lighthouse at Scrabster.
- (ii) A82 Dalnotter - Inverness Trunk Road from but excluding Tullichewan Roundabout Alexandria leading generally northwards for a distance of 243. kilometres (**including the Crianlarich Bypass**) or thereby to its junction with the A9 at but excluding Longman Roundabout Inverness.
- (iii) A83 Tarbet - Lochgilphead – Kennacraig - Campbeltown Trunk Road from but excluding its junction with the A82 at Tarbet leading generally south-westwards for a distance of 158 kilometres or thereby to and including its junction with New Quay Street at the Campbeltown Ferry Terminal.
- (iv) A84/A85 Stirling - Crianlarich Trunk Road from its junction with the M9 at and including the eastern most roundabout at Craigforth Stirling (M9 Junction 10) leading generally north-westwards for a distance of 70.5 kilometres or thereby to but excluding its junction with the A82 at Crianlarich.
- (v) A85 Perth - Lochearnhead Trunk Road from its junction with Newhouse Road Perth at and including Crieff Road Roundabout Perth leading generally westwards for a distance of 56 kilometres or thereby to but excluding its junction with the A84/A85 Stirling - Crianlarich Trunk Road at Lochearnhead.
- (vi) A85 Tyndrum - Oban Trunk Road from but excluding its junction with the A82 at Tyndrum leading generally westwards for a distance of 57 kilometres or thereby to its junction with the A816 at but excluding the roundabout at Argyll Square Oban.
- (vii) A86 Spean Bridge - Kingussie Trunk Road from but excluding its junction with the A82 at Spean Bridge leading generally north-eastwards for a

- distance of 65 kilometres or thereby to its junction with the A9 at but excluding the interchange at Kingussie.
- (viii) A87 Invergarry - Kyle of Lochalsh - Borve - Uig Trunk Road (1) from but excluding its junction with the A82 at Invergarry leading generally north-westwards for a distance of 160 kilometres to but excluding its junction with the pier at Uig.
 - (ix) The length of A87 Invergarry – Kyle of Lochalsh – Borve – Uig Trunk Road from its junction with Main Street, Kyle of Lochalsh to its junction with A850 Kyleakin to Broadford Road Isle of Skye shall be special road as cited in the A87 Extension (Skye Bridge Crossing) Special Road Regulations 1995.
 - (x) A99 Latheron - Wick Trunk Road from but excluding its junction with the A9 at Latheron leading generally north-eastwards for a distance of 27 kilometres or thereby to its junction with the A882 at but excluding the junction at Thurso Street/Dempster Street Wick.
 - (xi) A828 Connel - South Ballachulish Trunk Road from but excluding its junction with the A85 at Connel leading generally north-eastwards for a distance of 51 kilometres or thereby to its junction with the A82 at but excluding an unnamed roundabout at South Ballachulish.
 - (xii) A830 Fort William - Mallaig Trunk Road from but excluding its junction with the A82 at Fort William leading generally westwards for a distance of 70 kilometres or thereby to its junction with the B8008 at and including an unnamed roundabout at Station Road Mallaig.
 - (xiii) A835/A893 Tore - Ullapool Trunk Road from its junction with the A9 at but excluding the unnamed roundabout at Tore leading generally north-westwards for a distance of 80 kilometres or thereby to but excluding its junction with the ferry terminal at Ullapool.
 - (xiv) A887 Invermoriston - Moriston Bridge Trunk Road from but excluding its junction with the A82 at Invermoriston leading generally westwards for a distance of 24 kilometres or thereby to but excluding its junction with the A87 at Ben Lyon.
 - (xv) A889 Dalwhinnie - Laggan Bridge Trunk Road from but excluding its junction with the A9 at Dalwhinnie leading generally northwards for a distance of 14 kilometres or thereby to but excluding its junction with the A86 at Laggan.

Drawing No S3P2 001



This is Annex 3.2/B to Schedule 3 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 2

EXTENT OF THE UNIT

ANNEX 3.2/B – Interfaces with Adjacent Trunk Road Units

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 2

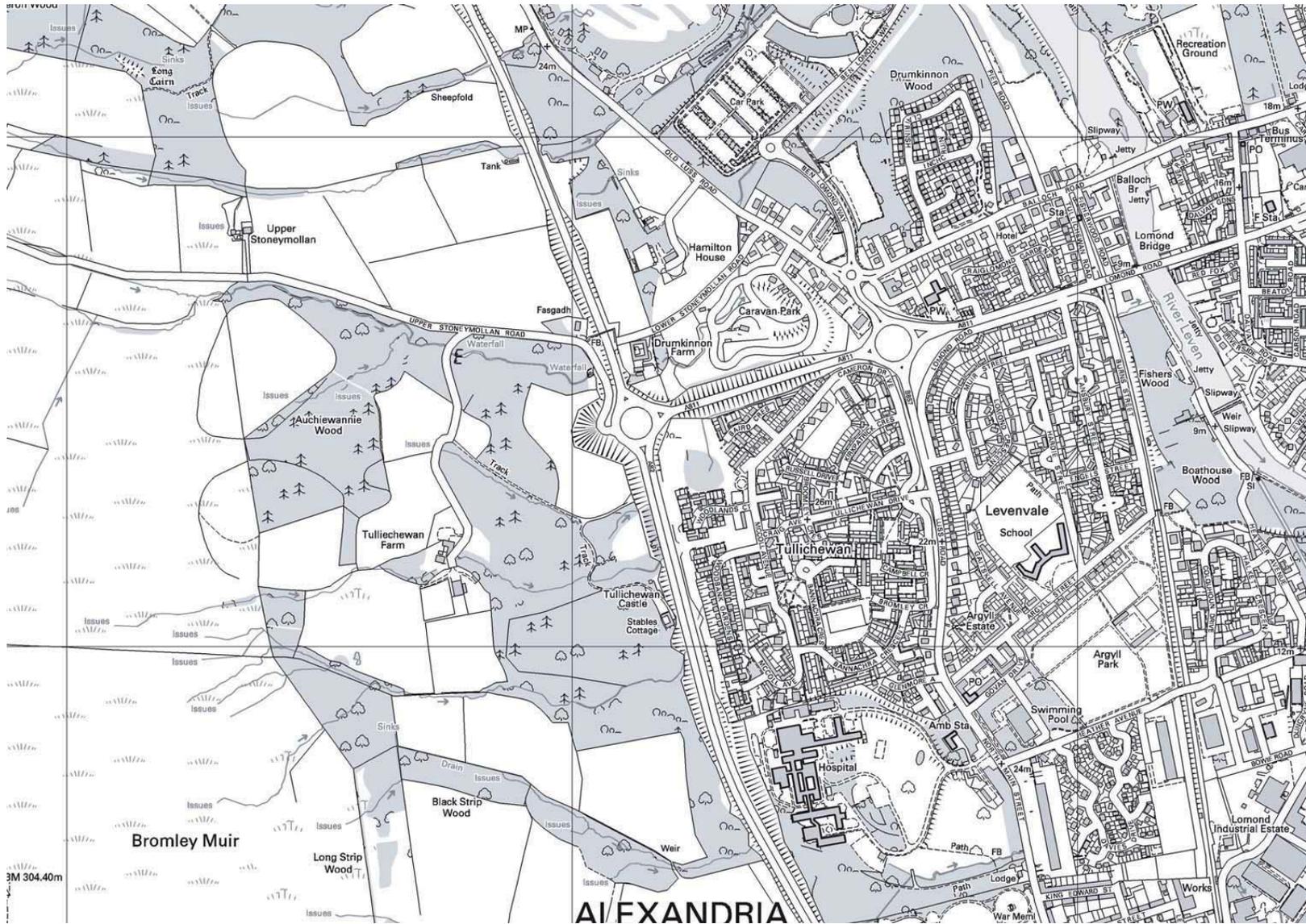
EXTENT OF THE UNIT

ANNEX 3.2/B – Interfaces with Adjacent Trunk Road Units

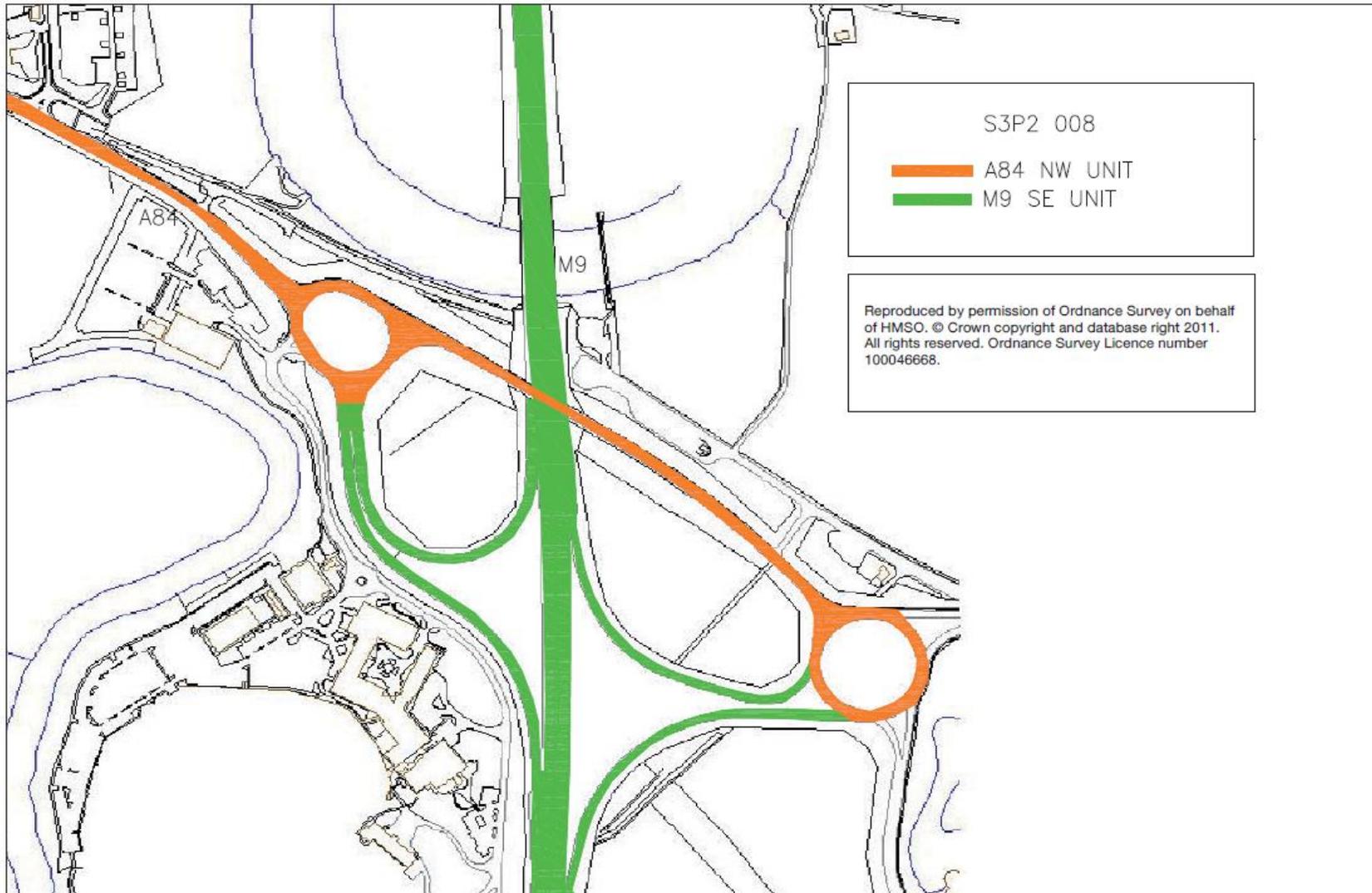
The following drawings, which are included in this Annex, show interfaces with adjacent Trunk Road units and roads that are the responsibility of other authorities:

- (i) Drawing No S3P2 007 – A82,
- (ii) Drawing No S3P2 008 – M9/A84,
- (iii) Drawing No S3P2 009 – A9/A85 and Inveralmond Roundabout,
- (iv) Drawing No S3P2 010 – A9/A96.

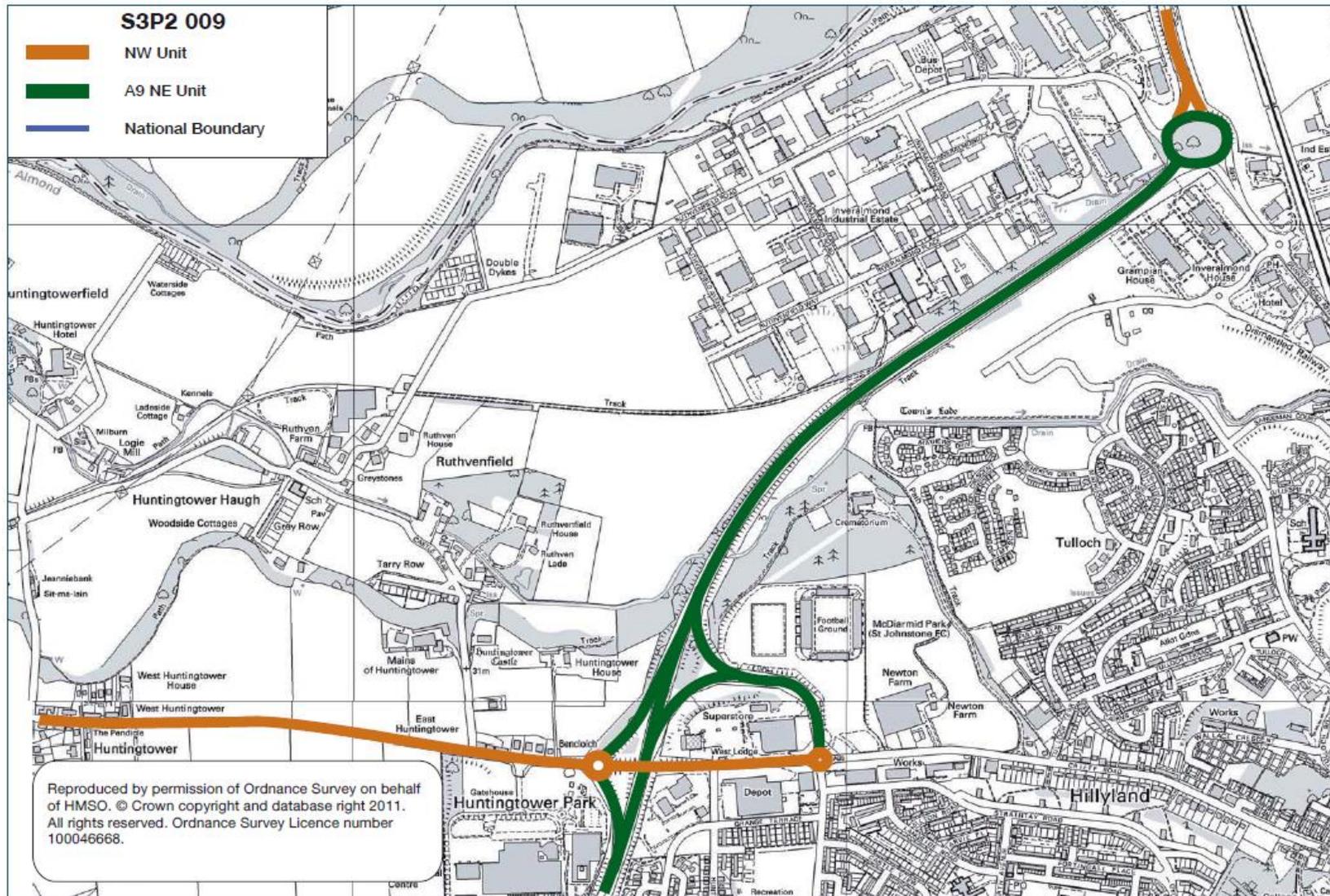
Drawing No S3P2 007 - A82



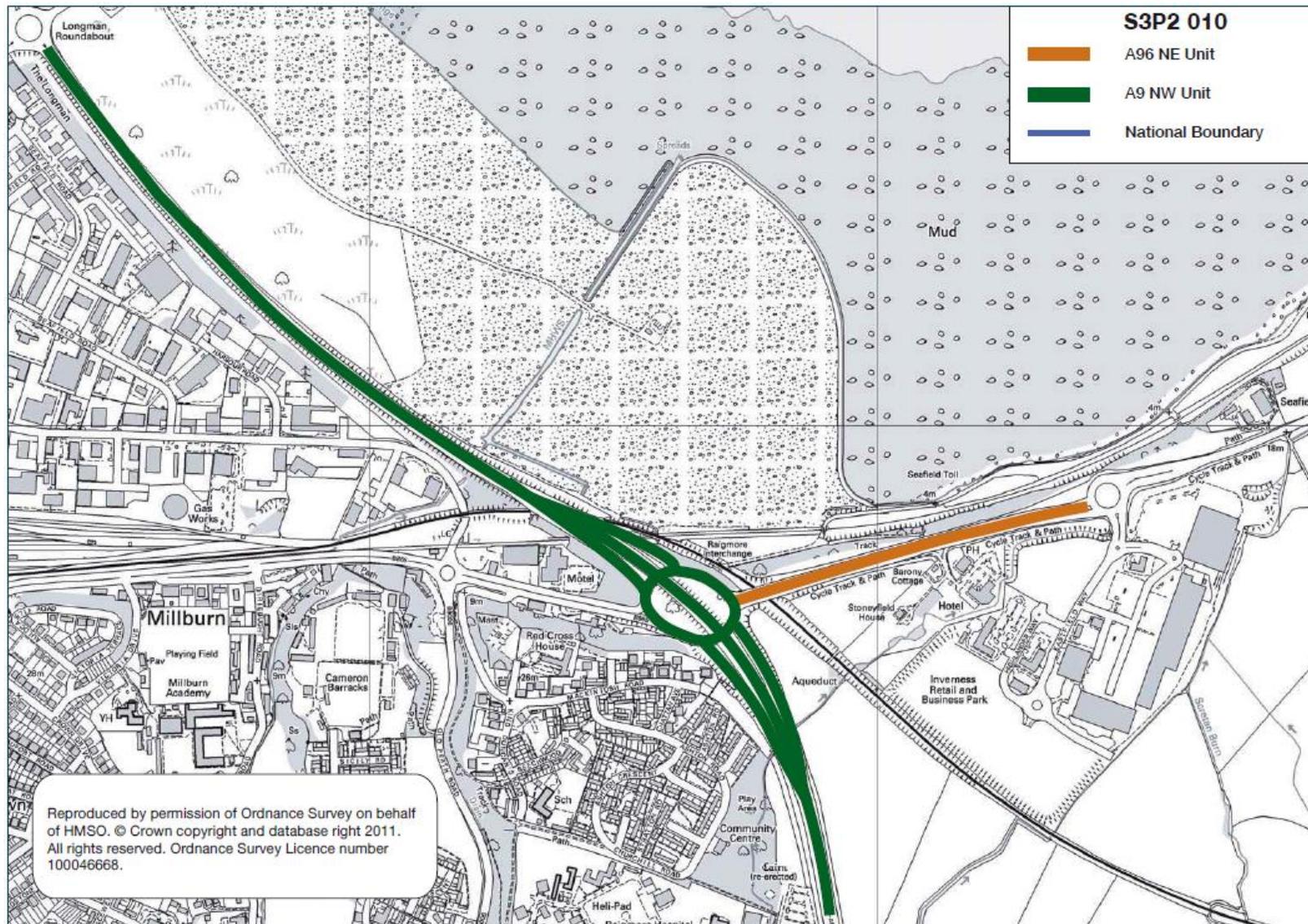
Drawing No S3P2 008 – M9/A84



Drawing No S3P2 009 – A9/A85 and Inveralmond Roundabout



Drawing No S3P2 010 – A9/A96



This is Annex 3.2/C to Schedule 3 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 2

EXTENT OF THE UNIT

ANNEX 3.2/C – Included Items outwith the Trunk Road Boundary

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 2

EXTENT OF THE UNIT

ANNEX 3.2/C – Included Items outwith the Trunk Road Boundary

The following items outwith the Trunk Road boundary are included in the Unit:

- (i) A9 cycle route (1) lying to the west of the M9/A9 Edinburgh - Stirling - Thurso Trunk Road from Ordnance Survey co-ordinates 264598,773284 leading generally north-westwards for a distance of 2.8 kilometres or thereby to Ordnance Survey co-ordinates 263216,775618, (2) lying to the west of the M9/A9 Edinburgh - Stirling - Thurso Trunk Road from Ordnance Survey co-ordinates 271423,770635 leading generally north-westwards for a distance of 1.4 kilometres or thereby to Ordnance Survey co-ordinates 270164,771186, (3) lying to the west of the M9/A9 Edinburgh - Stirling - Thurso Trunk Road from Ordnance Survey co-ordinates 268400,792670 leading generally northwards for a distance of 3.5 kilometres or thereby to Ordnance Survey co-ordinates 269420,796070, (4) lying to the west of the M9/A9 Edinburgh - Stirling - Thurso Trunk Road from Ordnance Survey co-ordinates 263075,779910 leading generally northwards for a distance of 0.9 kilometres or thereby to Ordnance Survey co-ordinates 263321,780707, (5) lying to the west of the M9/A9 Edinburgh - Stirling - Thurso Trunk Road from Ordnance Survey co-ordinates 263947,782234 leading generally northwards for a distance of 0.7 kilometres or thereby to Ordnance Survey co-ordinates 263933,782853 and (6) lying to the west of the M9/A9 Edinburgh - Stirling - Thurso Trunk Road from Ordnance Survey co-ordinates 303567,916969 leading generally north-eastwards for a distance of 1.0 kilometres or thereby to Ordnance Survey co-ordinates 304340,917136.
- (ii) A86 cycle route lying to the south of the A86 Spean Bridge - Kingussie Trunk Road from Ordnance Survey co-ordinates 272653,799674 leading generally north-eastwards for a distance of 0.4 kilometres or thereby to Ordnance Survey co-ordinates 272974,799907.
- (iii) A9 Drumochter Lodge Shelter Belts situated on the west side of the A9 Trunk Road consisting of shelter belt fencing shown on plan S3P2 201 annexed.
- (iv) Shelter Belts situated on the West side of the A9 at Ord of Caithness shown on drawing number S3P2 202 annexed.
- (v) Areas of land used for:
 - (a) landscaped areas as referred to in the routine maintenance and management function of the Integrated Roads Information System, and
 - (b) snow fences,in accordance with the provisions of this Contract.
- (vi) Variable message sign Structures that are the responsibility of the Traffic Scotland Operator, listed in Table 3.2.C.1 "Structures outwith the Trunk Road Boundary".
- (vii) Structures that are the responsibility of Transport Scotland, listed in Table 3.2.C.1 "Structures outwith the Trunk Road Boundary".

(viii) A828 cycle route (1) from Behind Campbell Hall Cottage to Northbound Layby, Ordnance Survey co-ordinates 190532,737321 to Ordnance Survey co-ordinates 190472, 737505. (2) from Letterwalton House Access to West Ferlochan Farm Approach, Ordnance Survey co-ordinates 191560, 740062 to Ordnance Survey co-ordinates 191784, 740237.

Table 3.2.C.1 – Structures outwith the Trunk Road Boundary

Structure Purpose	Type (Gantry, Cantilever, Centrally mounted)	TRBDB Reference Number	Other Reference Number	Route	Unit	Easting	Northing	Location Description
Bridge		A9 1610		A9	277550	898200	Mound Sluices underbridge at The Mound	Bridge
Bridge		A9 1630		A9	280737	899079	Culmaily Old underbridge at Culmaily	Bridge
Bridge		A9 1800		A9	303426	916941	Widow's underbridge at Navidale	Bridge
Bridge		A82 240		A82	235615	685672	Fruin underbridge at Arden	Bridge
Bridge		A82 985		A82	210900	774600	An Aird Accommodation Bridge underbridge at Fort William	Bridge
Bridge		A82 989		A82	211600	774700	Base Camp Rail Old underbridge at Fort William	Bridge
Bridge		A83 99		A83	211395	710100	Shira Old underbridge at Dubh Loch	Bridge
Bridge		A84 39		A84	270660	703029	Old Annet underbridge at Burn of Cambus	Bridge
Retaining Wall		A84 135		A84	257375	721025	Balquhiddar Street retaining wall at Kingshouse	Retaining Wall
Bridge		A835 50		A85	245400	856700	Contin Old underbridge at Contin	Bridge
Bridge		A835 70		A835	240250	863930	Silverbridge underbridge near Gorstan	Bridge
VMS			0005214A	B9152	289189	811470	B9152S 270m S of B970 Jct (N A9 Jct S Aviemore)	VMS

This is Annex 3.2/D to Schedule 3 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 2

EXTENT OF THE UNIT

ANNEX 3.2/D – Excluded Items within the Trunk Road Boundary

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 2

EXTENT OF THE UNIT

ANNEX 3.2/D – Excluded Items within the Trunk Road Boundary

The following items within the Trunk Road boundary are excluded from the Unit:

- (i) Crianlarich Viaduct overbridge at Crianlarich (Structures Management System (SMS) database reference number A88 410) at Ordnance Survey co-ordinates 238480, 725371.
- (ii) Crianlarich East overbridge at Crianlarich (SMS reference number A82 530) at Ordnance Survey co-ordinates 238430, 725330.
- (iii) Crianlarich West overbridge at Crianlarich (SMS reference number A82 540) at Ordnance Survey co-ordinates 238280, 725460.
- (iv) Achnacloch Road overbridge (SMS reference number A85 650) at Ordnance Survey co-ordinates 195265, 733390.
- (v) Glen Mama Road overbridge (SMS reference number A830 310) at Ordnance Survey co-ordinates 172900, 784100.
- (vi) Barodale Road overbridge (SMS reference number A830 340) at Ordnance Survey co-ordinates 170600, 785100.
- (vii) Craigag Road overbridge (SMS reference number A830 120) at Ordnance Survey co-ordinates 192775, 779575.
- (viii) Chapel Road Bridge (SMS reference number A830 270) at Ordnance Survey co-ordinates 175300, 782800.
- (ix) Bearsdale Road overbridge (SMS reference number A830 320) at Ordnance Survey co-ordinate 171500, 784900.
- (x) West Highland Road overbridge (SMS reference number A83 10) at Ordnance Survey co-ordinate 230788, 704280.
- (xi) The electronic components of variable message signs and cameras that are the responsibility of the Traffic Scotland Operator. (For the avoidance of doubt, variable message sign and camera Structures are the responsibility of the Operating Company.)

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 3

REFERENCE DOCUMENTS

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 3

REFERENCE DOCUMENTS

1. REFERENCE DOCUMENTS

1.1 List of Documents

1.1.1 The Operating Company shall comply with the documents identified in Annex 3.3/A of this Part.

1.2 Edition of Reference Documents

1.2.1 Notwithstanding any date stated in Annex 3.3/A of this Part, for any Ordered Operations the relevant reference documents are deemed to be the editions current on the date of the Order instructing those Operations.

1.2.2 Notwithstanding any date stated in Annex 3.3/A of this Part, for any Core Operations the relevant reference documents are deemed to be the editions current on the date 30 days prior to the date of execution of those Core Operations.

1.3 Provisions within Various Standards in the Design Manual for Roads and Bridges

1.3.1 Notwithstanding any individual provisions of the various standards within the *Design Manual for Roads and Bridges* regarding implementation and scope, the Operating Company shall comply with all standards constituting parts of the *Design Manual for Roads and Bridges* in respect of all Operations and all Schemes arising in connection with this Contract.

1.4 Transport Scotland Interim Amendments

1.4.1 Listed Transport Scotland Interim Amendments which amend certain provisions of the *Design Manual for Roads and Bridges* shall have precedence over those provisions unless otherwise Ordered by the Director.

This is Annex 3.3/A to Schedule 3 Part 3 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 3

REFERENCE DOCUMENTS

ANNEX 3.3/A – List of Documents referred to in Schedule 1 and the Scottish Ministers' Requirements

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 3

REFERENCE DOCUMENTS

ANNEX 3.3/A – List of Documents referred to in Schedule 1 and the Scottish Ministers' Requirements

Publisher	Title	Address
Scottish Government	2020 Challenge for Scotland's Biodiversity - A Strategy for the conservation and enhancement of biodiversity in Scotland +	Edinburgh: Scottish Government
Transport Scotland	Addressing Barriers to Accessibility on the Trunk Road Network: Guidance Note for Operating Companies	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	Airwave Operating Protocols and Procedures+	Glasgow: Transport Scotland, Buchanan House
Airwave Accreditation Secretariat	Airwave Service Code of Practice Implementation Brief+	Cabinet Office
ASTM International	American Society for Testing and Materials C856-04 'Standard Practice for Petrographic Examination of Hardened Concrete'	USA: 100 Barr Harbor Drive, West Conshohocken
ELEXON	Balancing and Settlement Code of Practice (BSCP) 520	4th Floor, 350 Euston Road, London NW1 3AW
BRE	Building Research Establishment Information paper IP/6/81 'Carbonation of concrete made with dense natural aggregates'	Watford: BRE, Bucknalls Lane
Scottish Executive	Choose Life – the National Strategy and Action Plan to Prevent Suicide in Scotland' December 2002 +	Edinburgh, Scottish Government
Scottish Executive	Circular 4/1998 – The Use of Conditions in Planning Permissions	Edinburgh: Scottish Government
Road Surface Treatments Association	Code of Practice for Surface Dressing (RSDA 2004)	Colchester: RSTA, Westwood Park, London Road

Highways Agency	Code of Practice Lighting and Marking for Abnormal Load Self Escorting Vehicles incorporating Operating guidance+	Birmingham :Highways Agency
Scottish Executive Environment Group	Code of Practice on Litter and Refuse	Edinburgh: Scottish Government
The Scottish Office and the County Surveyor's Society in Scotland	Code of Practice 'The Reduction of Traffic Delays at Roadwork's	Edinburgh: Scottish Government
Health and Safety Executive	Control of Lead at Work Regulations Approved Code of Practice and guidance +	Merseyside: Redgrave Court, Merton Road, Bootle
Transport Scotland	Cycling by Design 2010+	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	Departures from Standard – Advice and Procedures Guide+	Glasgow: Transport Scotland, Buchanan House
Overseeing Organisations of Scotland, Wales, England and Northern Ireland	Design Manual for Roads and Bridges	London: The Stationery Office
Transport Scotland	Development Planning and Management Transport Appraisal Guidance	Glasgow: Transport Scotland, Buchanan House
BSI	Draft for Development (DD) 232: 1996	London: 389 Chiswick High Road
Transport Scotland	Emergency Standard Diversion Routes – Development Procedures for Operating Companies+	Glasgow:Transport Scotland, Buchanan House
Energy Networks Association	Engineering Recommendation G39/1 Model Code of Practice covering Electrical Safety in the Planning, Installation, Commissioning and Maintenance of Public Lighting and Other Street Furniture	London: 52 Horseferry Road
Transport Scotland	Extent of the Trunk Road Network	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	Fitting Landscapes: Securing More Sustainable Landscapes #	Glasgow: Transport Scotland, Buchanan House

Highways Agency	Functional specification for the optical performance of discontinuous variable message signs TR25 16B*	London: The Stationery Office
Department for Work and Pensions	Get Britain Working	Department for Work and Pensions, London (see http://www.dwp.gov.uk/policy/welfare-reform/get-britain-working/)
Scottish Road Works Commissioner	Good Practice Guidance under Section 17(4) (B) of the Transport (Scotland) Act 2005 +	Edinburgh: Saughton House, Broomhouse Drive
Communications-Electronic Security Group (CEGS)	Good Practice Guide No 6 – Outsourcing and Offshoring: Managing the Security Risks	Cheltenham, Gloucestershire
Findlay Irvine Ltd	Grip Tester Automatic Watering System Operations Manual Issue 2	Penicuik, Edinburgh
Findlay Irvine Ltd	Grip Tester MK2 D-Type Maintenance Manual	Penicuik, Edinburgh
Transport Scotland	Guidance Document for Implementing a Skid Resistance Policy for Transport Scotland	Glasgow: Transport Scotland, Buchanan House
The Institution of Engineering and Technology	Guidance Note 3: Inspection & Testing (Guidance Notes for BS7671)	Stevenage: Michael Faraday House
NHS Health Scotland	Guidance on action to reduce suicides at locations of concern 2012 +	Glasgow: Meridian Court, Cadogan Street
Transport Research Laboratory	Guidance on the use in Scotland of Five Alternative De-icers to Salt Suitable for use in Lower Temperatures+	Wokingham: Crowthorne House
Energy Networks Association	Handbook for the Highway Electrical Registration Scheme	Ferring: Little Hampton Road, West Sussex
Transport Scotland	High Wind Strategy and National Wind Management Guidelines	Glasgow: Transport Scotland, Buchanan House
Highways Agency	Highways Agency Network Management Manual +	London: The Stationery Office
Communications-Electronic Security Group (CEGS)	HMG1A Standard No 1 Technical Risk Assessment	Cheltenham, Gloucestershire

Transport Scotland	Inspections Further Data Collection Requirements	Glasgow: Transport Scotland, Buchanan House
BBA/HAPAS	Interim Guideline Document for the Assessment and Certification of Thin Surfacing Systems for Highways +	Bucknalls Lane, Garston, Watford, Herts
Scottish Executive	Inventory of Wildlife Mitigation Measures on Trunk Roads and Motorways*	Edinburgh: Scottish Government
Transport Scotland	LDS8001_Roadside Electrical Apparatus and Lighting Identification System#	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	LDS8002_Roadside Electrical Apparatus and Lighting Inventory Requirements+	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	LDS8004_Roadside Electrical Apparatus and Lighting Health and Safety File Requirements#	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	LDS8005_Electrical Inspection and Testing of Lighting and Associated Electrical Apparatus & Installations with Model Forms#	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	LDS8006_Electrical Supply to Roadside Electrical Apparatus and Lighting Sites#	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	LDS8007_Roadside Electrical Apparatus and Lighting Recommended Reference Documents Listing+	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	LDS8012_ Guidance Note on Unmetered Supplies for Transport Scotland Equipment #	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	LDS8013_ Guidance on decommissioning and removal of obsolete, redundant and derelict Roadside Electrical Assets and Lighting. #	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	LDS8014_ Competency Requirements Relating to Work on Transport Scotland's Roadside Electrical Assets and Lighting #	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	LDS8016_Scottish MCHW Series 1200 1300 & 1400 and Sample Appendices+	Glasgow: Transport Scotland, Buchanan House

Transport Scotland	LDS8017_ Special Requirements for Local Authority Roadside Electrical Assets and Lighting.#	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	LDS8018_ Guidance on Sustainability in Relation to Roadside Electrical Assets and Lighting.#	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	LDS8020_ Guidance on the preparation of Statements of Intent relating to proposed works on Roadside Electrical Assets and Lighting.+	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	LDS8021_ Festive Decorations on the Scottish Trunk Road Network+	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	LDS8022_ Guidance on the Definition of Electrical Maintenance Responsibilities and Boundaries in Relation to Roadside Electrical Assets and Lighting. #	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	LDS8023_ Electrical Maintenance Guidelines for Roadside Electrical Apparatus Lighting and Power Supplies.#	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	LDS8024_ Weather Station (Road Sensor) Equipment on Scottish Trunk Roads.+	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	LDS8025_ Typical Drawings relating to Roadside Electrical Assets and Lighting.+	Glasgow: Transport Scotland, Buchanan House
The Scottish Office	Local Transport Note 1/98	Edinburgh: Scottish Government
Transport Scotland	Maintenance and Making Better Use – Value Management of the Structures Renewal Programme – Amended for Transport Scotland	Glasgow: Transport Scotland, Buchanan House
Department for Transport	Management of Highway Structures: A Code of Practice	London: The Stationery Office
Transport Scotland	Manual for the Management of the Risk of Unplanned Network Disruption	Glasgow: Transport Scotland, Buchanan House
Overseeing Organisations of Scotland, Wales, England and Northern Ireland	Manual of Contract Documents for Highway Works	London: The Stationery Office

Water Research Council	Manual of Sewer Condition Classification – 5th Edition #	Swindon: Frankland Road, Blagrove
Scottish Executive	Method of Installation of Node Markers+	Edinburgh: Scottish Government
Scottish Environmental Protection Agency	Pollution Prevention Guideline 22	Stirling: Erskine Court, Castle Business Park
Department for Transport	Prevention of Strikes on Bridges over Highways – A Protocol for Highway and Road Managers and Bridge Owners	London: The Stationery Office
RSPCA	Problems with Badgers +	West Sussex:RSPCA
Scottish Government	Refreshing the National Strategy and Action Plan to prevent Suicide in Scotland +	Edinburgh, Scottish Government
Transport Roads and Research Laboratory	Report LR 362 "Snow Fences"	London: The Stationery Office
Department for Transport	Response to a Bridge Strike over the Railway – A Protocol for Highway and Road Managers and Bridge Owners	London: The Stationery Office
Transport Scotland	Road Asset Management Plan*	Glasgow: Transport Scotland, Buchanan House
Findlay Irvine Ltd	Roadbase Grip Tester Survey Software for Roads User Manual	Penicuik, Edinburgh
Transport Scotland	Roads for All: Good Practice Guide for Roads#	Glasgow: Transport Scotland, Buchanan House
Scottish Executive	Scotland's Biodiversity: It's in Your Hands - A strategy for the conservation and enhancement of biodiversity in Scotland +	Edinburgh: Scottish Government
Scottish Government	Scotland's Road Safety Framework to 2020 +	Edinburgh: Scottish Government
Scottish Executive	Scotland's Transport Future	Edinburgh: Scottish Government
Scottish Procurement Directorate	Scottish Public Sector Procurement and Freedom of Information Guidance	Edinburgh: Scottish Government

Transport Scotland	Scottish Road Network Landslides Study Report	Glasgow: Transport Scotland, Buchanan House
Scottish Executive	SEIA 18 – Saturation Ageing Tensile Stiffness Test*	Edinburgh: Scottish Executive, Victoria Quay
Transport Scotland	Signposting of Truckstop Facilities from Motorways and Other Trunk Roads – Policy and Guidance	Glasgow: Transport Scotland, Buchanan House
Overseeing Organisations of Scotland, Wales, England and Northern Ireland	Specification for Highway Works	London: The Stationery Office
Highways Agency	Specification for Highway Works MCH1540 specification for the Installation of Detector Loops	London: The Stationery Office
Highways Agency	Specification for Traffic Signal Controller TR2500	London: The Stationery Office
Transport Scotland	Strategic Road Safety Plan 2007 +	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	Structures Management System user manual	Glasgow: Transport Scotland, Buchanan House
The Institution of Lighting Professionals	Technical Report No. 7 High Masts for Lighting and CCTV (2000 Edition)	Rugby: Regent House, Regent Place
Scottish Natural Heritage	The Code of Practice for Deer Management +	Leachkin Road, Inverness IV3 8NW
Highways Agency	The Inspection Manual for Highways Structures Volume 1	London: The Stationery Office
The Institution of Structural Engineers	The Operation and Maintenance of Bridge Access Gantries and Runways. (Second Edition 2007)	London: 11 Upper Belgrave Street
Department for Transport	TR2020C National Ice Prediction Network *	London: The Stationery Office
Highways Agency (TSS Division)	TR2502A Specification for Portable Traffic Signal Control Equipment for use at Roadworks*	London: The Stationery Office
Highways Agency	TR2504A Specification for Vehicle Detection Equipment for Vehicle Actuated Portable Traffic Signals*	London: The Stationery Office

Concrete Society	TR30 Alkali-silica reaction minimising the risk of damage to concrete (CS TR 30)*	Camberley: 4 Meadows Business Park, Blackwater
Department for Transport	Traffic Advisory Leaflet 04/11 Temporary Traffic Signs for Special Events October 2011 #	London: The Stationery Office
Department for Transport	Traffic Advisory Leaflet 1/03, Vehicle Activated Signs	London: The Stationery Office
Transport Scotland	Traffic Scotland Special Requirements*	Glasgow: Transport Scotland, Buchanan House
Department for Transport	Traffic Signs Manual	London: The Stationery Office
Department for Transport	Traffic Signs Regulations and General Directions +	London, The Stationery Office
TRL	Transport and Road Research Laboratory Overseas Road Note 8 – A Users Manual for a Program to Analyse Dynamic Cone Penetrometer Data.	Wokingham: Crowthorne House, Nine Mile Ride
Transport Scotland	Transport Scotland Identity Guidelines +	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	Transport Scotland Inspection Manual – Principal Inspections of Trunk Road Structures and Location System	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	Transport Scotland Trunk Road Condition Manual	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	Transport Scotland Trunk Road Inventory Manual	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	Transport Scotland Trunk Roads Inspection Manual	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	Transport Scotland's Annual Process for Roads Structural Maintenance	Glasgow: Transport Scotland, Buchanan House
UK Roads Board	Treatments for Extreme Cold+	www.NWSRG.org
TRL	TRL Road Note 39 (6th Edition)	Wokingham: Crowthorne House, Nine Mile Ride

Concrete Bridge Development Group	TRRL Technical report 'Guide to Testing and Monitoring the durability of Concrete Structures' (by the Concrete Bridge Development Group – 2002	Camberley: Meadows Business Park
Transport Scotland	Trunk Road and Motorway Tourist Signposting Guidance – For tourist attractions and tourist facilities March 2016 +	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	Trunk Road and Motorway Tourist Signposting Policy and Guidance	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	Trunk Road Network Management Division Node Marker Installation Guidance Positioning at Standard Locations+	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 20 Concrete Half-Joint Deck Structures+	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 21 Principal and General Inspection of Sign/Signal, and Gantries with Low Handrails or Open Mesh Flooring+	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 22 Implementation of New Reinforcement Standards*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 23 Rev3 – Implementation of BS8500 – 1:2006 Concrete – complimentary British Standard to BS EN206 – 1+	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 24 Guidance on Implementing Results of Research on Bridge Deck Waterproofing*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 25 Assessment and Upgrading of Existing Vehicle Parapets*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 26 The Anchorage of Reinforcement and Fixings in Hardened Concrete*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 27 Rev 01 Implementation of Construction (Design and Management) Regulations 2007*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 28 Rev 2 Certification of Combined Kerb and Drainage Products*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 29 Identification of Particularly at Risk Supports*	Glasgow: Transport Scotland, Buchanan House

Transport Scotland	TSIA 30 The Use of Foamed Concrete*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 32 The Deflection of Permanent Formwork*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 33 General and Principal Inspections for Trunk Road Structures*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 34 Use of HFS on Low Speed Approaches to Signalised Crossings and Junctions on Trunk Road*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 35/15 TS2010 Surface Course Specification and Guidance*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 36 Structural Safety Reporting*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 37 Design of Wide Single 2 plus 1 Roads*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 38 Temporary Barrier Decision Tool*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 39 Use of Eurocodes for the design of bridges and road related structures*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 40 Road Safety Audit Certification Compliance with EC Directive 2008 96 EC*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 42 Temporary Cover Plates Over Bridge Expansion Joints*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 43 Strategy for the Repair/Replacement of Joints*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 44 Introduction of Simplified Design Method for Crack and Seat Overlay (CSO)*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 45 Rev1 Management of Abnormal Indivisible Loads*	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 46/16 - Structures Inspector Competencies and Certification+	Glasgow: Transport Scotland, Buchanan House
Transport Scotland	TSIA 47/16 - Adoption of IAN 154/12+	Glasgow: Transport Scotland, Buchanan House

Transport Scotland	Use of Mobile Variable Message Signs on the Trunk Road Network – Guidance Note 1+	Glasgow: Transport Scotland, Buchanan House
Scottish Executive Development Department	Value for Money Manual	Edinburgh: Scottish Government

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 4

OTHER CONTRACTS WITHIN THE UNIT

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 4

OTHER CONTRACTS WITHIN THE UNIT

1. WORKS IN PROGRESS

1.1 Contracts in Progress on the Unit

1.1.1 For the purposes of this Part, "Other Contracts" means road and bridge construction and maintenance contracts outwith Operating Company arrangements and developers' schemes.

1.1.2 Road or bridge construction or maintenance contracts for which the Scottish Ministers are the employer may be in progress on the Unit at the Commencement of Service Date. They will be either:

- (i) Works Contracts where the previous operating company was acting as Engineer, or
- (ii) Other Contracts.

1.1.3 Other Contracts may commence during the term of this Contract.

1.2 Developers' Schemes

1.2.1 Improvement work in connection with development projects, led or funded by developers or others, may be in progress on the Unit at the Commencement of Service Date or may commence during the term of this Contract.

1.2.2 Subject to an Order, the Operating Company shall assist the Director with other matters relating to developers' schemes.

2. REQUIREMENTS

2.1 Engineer for Works Contracts in Progress

2.1.1 During the Mobilisation Period, the Director shall provide the Operating Company with details of all Works Contracts in progress on the Unit.

2.1.2 For Works Contracts where the previous operating company was acting as Engineer, the Director shall issue an Order requiring the Operating Company to take over the role and responsibilities of the Engineer with effect from the Commencement of Service Date. These Works Contracts shall include those where Works have been substantially completed but the defects correction or maintenance period has not expired.

2.1.3 The Director shall ensure, by arrangement with the previous operating company, that all relevant documentation related to these Works Contracts is passed to the Operating Company during the Mobilisation Period.

2.1.4 The Operating Company shall undertake all outstanding obligations of the Engineer for these continuing Works Contracts, as detailed in Schedule 6 Part 1 of this Contract.

2.1.5 For Works Contracts where the Operating Company takes over the role and responsibilities of the Engineer, the Operating Company shall also assume the roles

required by the *Construction (Design and Management) Regulations 2007* that were undertaken by the previous operating company.

2.2 Other Contracts

2.2.1 The Director shall provide the details and starting dates of Other Contracts to the Operating Company:

- (i) during the Mobilisation Period for all Other Contracts that are then in progress, and
- (ii) no later than two weeks after appointment of a contractor for all Other Contracts that commence after the Commencement of Service Date.

2.2.2 For any Other Contract, the Director may issue an Order to the Operating Company stating any requirements for transfer or suspension of specified Operating Company related responsibilities during the construction phase or the maintenance period. In particular, the Director may, unless the cause of a Defect is fair wear and tear or Incident, instruct the Operating Company to suspend the carrying out of Defects Correction Operations under Clause 5.5.1 of Schedule 1 within the length of road notified, other than making safe and executing temporary repair of Category 1 Defects, for the advised duration.

Annex 3.4/A of this Part contains local requirements in relation to transfer and suspension of Operating Company responsibilities.

2.2.3 Upon completion of the construction phase or maintenance period of an Other Contract, the Director shall issue an Order requiring the Operating Company to recommence all Operations that have may have been transferred or suspended.

2.2.4 Upon completion of the construction phase of an Other Contract, the Director will provide the Operating Company with the health and safety file for that Other Contract prior to the works becoming part of the Operating Company's obligations under this Contract.

2.2.5 Subject to an Order, the Director may require the Operating Company to assist him with other matters for Other Contracts.

This is Annex 3.4/A to Schedule 3 Part 4 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 4

OTHER CONTRACTS WITHIN THE UNIT

ANNEX 3.4/A – Local Requirements in Relation to Transfer or Suspension of Operating Company Responsibilities

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 4

OTHER CONTRACTS WITHIN THE UNIT

ANNEX 3.4/A – Local Requirements in Relation to Transfer or Suspension of Operating Company Responsibilities

None.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 5

COMMUNICATIONS STRATEGY, CORRESPONDENCE, ENQUIRIES AND COMPLAINTS

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 5

COMMUNICATIONS STRATEGY, CORRESPONDENCE, ENQUIRIES AND COMPLAINTS

1. COMMUNICATIONS STRATEGY

1.1 Introduction

1.1.1 The Operating Company shall develop a comprehensive communications strategy in the form of an annual Unit-specific communications plan for publicising and promoting to customers and stakeholders its role in delivery of services under this Contract.

1.2 Communications Planning

1.2.1 No later than 25 Working Days prior to the Commencement of Service Date, the Operating Company shall develop and submit for the Director's consent a Unit-specific communications plan for the first Annual Period. In developing the plan, the Operating Company shall identify key groups of customers and stakeholders with whom it needs to communicate such as Transport Scotland, the Traffic Scotland Operator, local, regional and national media, Operational Partners, local and community councils and Members of the Scottish Parliament. This plan shall, as a minimum, include proposals for:

- (i) proactive management of a wide range of both incoming and outgoing communications including dealing with positive and adverse publicity and disseminating information efficiently and effectively,
- (ii) managing proactive and reactive media opportunities, including those relating to sensitive issues that may attract media attention,
- (iii) meeting current standards for digital communications, including how these will be resourced to ensure they are updated on a regular, ongoing basis throughout the Contract Period,
- (iv) managing the relationship with the Director and Press Transport Scotland including:
 - (a) a process for deciding whether publicity should be handled directly by the Operating Company or through Press Transport Scotland,
 - (b) a process for keeping Press Transport Scotland informed about all relevant issues,
 - (c) a process for deciding whether to use Transport Scotland or Operating Company branding on publicity,
- (v) providing customers and stakeholders with opportunities to discuss their needs and give feedback on the Operating Company's Unit-specific communications plan,
- (vi) responding to customer and stakeholder feedback,
- (vii) publicising and promoting its annual Winter Service plan,
- (viii) developing and agreeing appropriate strategies for different levels of communication in relation to Schemes, Core Operations, Operations and

Works Contracts according to their importance, complexity and potential impact on the reliability of journey times, and

- (ix) regular monitoring and reporting to the Director on the effectiveness of the plan, including suggestions for improvements.

1.2.2 No later than 25 Working Days prior to the commencement of the second Annual Period and all subsequent Annual Periods, the Operating Company shall review its current Unit-specific communications plan and develop and submit an updated plan to the Director for his consent.

1.2.3 Press Transport Scotland will provide advice to the Operating Company regarding the text for all newsletters and other publicity materials and communications. The Operating Company shall agree the nature and extent of any external advertising with the Director.

1.2.4 The Operating Company shall produce a quarterly e-newsletter for issue to customers, community groups and relevant stakeholders. The Operating Company shall propose an initial list of recipients for this newsletter for the consent of the Director. The Operating Company shall thereafter maintain the list of recipients and keep it up to date throughout the Contract Period.

1.3 Media Relations

1.3.1 The Operating Company shall appoint suitably experienced personnel in accordance with the requirements of Schedule 5 Part 4 to deliver the Media and Communications Officer role and manage the Unit-specific communications plan.

1.3.2 The Media and Communications Officer shall ensure that Press Transport Scotland is given the opportunity to comment on proposed media statements prior to their release in accordance with the media enquiries procedure detailed in Annex 3.5/A of this Part.

1.3.3 The Media and Communications Officer shall provide Press Transport Scotland, and Operational Partners where appropriate, with sufficient information to enable advance notice to be given for all Core Operations, Operations, Schemes, Works Contracts, road closures, diversions and the like which are likely to affect the reliability of journey times. The Media and Communications Officer shall agree in advance the extent of any related publicity or advertising with Press Transport Scotland and the Director.

1.3.4 The Media and Communications Officer shall attend quarterly review meetings, on dates to be notified by the Director, with Press Transport Scotland and the Director to review the effectiveness of the Unit-specific communications plan and agree any improvements or amendments for the following quarter.

1.3.5 The Media and Communications Officer shall attend biannual meetings on dates to be notified by the Director, with all other Operating Companies' Media and Communications Officers, Press Transport Scotland and the Director to review the effectiveness of communications plans and strategies and agree any improvements, new or revised objectives for the following six months.

1.4 Website and Digital Communications

1.4.1 The Operating Company shall comply with the requirements of Schedule 3 Part 6 in relation to its Unit-specific website and the use of social networking websites.

2. CORRESPONDENCE, ENQUIRIES AND COMPLAINTS

2.1 Ministerial, Chief Executive and General Correspondence

- 2.1.1 All information referred to in this Schedule which is to be submitted to the Director shall be submitted by e-mail. All requests from the Director to the Operating Company for draft responses, briefings and other information will be sent by e-mail.
- 2.1.2 The Operating Company shall provide to the Director, on request, draft responses and briefing material to general, Transport Scotland Chief Executive and Ministerial correspondence which has been received by the Scottish Ministers or Transport Scotland, in respect of any matter requiring input relevant to the Operating Company or this Contract. This shall be in a format prescribed by the Director.
- 2.1.3 The Operating Company shall provide the draft response required in paragraph 2.1.2 of this Part to the Director within five Working Days of receipt of the request to provide such responses.
- 2.1.4 If the Operating Company anticipates that a draft response cannot be provided within five Working Days of receipt, it shall notify the Director and agree a date for the provision of the full response with the Director.
- 2.1.5 The Operating Company shall appoint a Correspondence Officer in accordance with the requirements of Schedule 5 Part 4.
- 2.1.6 The Director shall provide the Operating Company with draft standard text for use in the direct replies or in the draft responses to be provided under this Part.

2.2 Parliamentary Questions

- 2.2.1 The Operating Company shall provide to the Director, on request, a briefing note related to the topics raised in written or oral Parliamentary questions from Members of the Scottish Parliament and provide a draft reply in editable electronic form to allow the Director to develop a suitable response for the Minister to issue. For written questions, the information shall be provided to the Director within three Working Days. For oral questions, the information shall be provided to the Director within two Working Days.

2.3 The Environmental Information (Scotland) Regulations 2004 and Freedom of Information (Scotland) Act 2002 Requests

- 2.3.1 The Operating Company shall provide to the Director, on request, all information and relevant data requested in any information request received by the Director under the *Environmental Information (Scotland) Regulations 2004* or the *Freedom of Information (Scotland) Act 2002*, in order to allow the development of a response by the Director. Such information and data shall be provided to the Director within ten Working Days.
- 2.3.2 When the Operating Company receives a direct request for such information, it shall acknowledge receipt and explain to the requester that, as a private company, it is not subject to either the *Environmental Information (Scotland) Regulations 2004* or the *Freedom of Information (Scotland) Act 2002*. The Operating Company shall offer to forward the request to Transport Scotland with the requester's permission or advise the requester to contact Transport Scotland directly.

2.4 The Disability Discrimination (Scotland) Act 2005

2.4.1 When the Operating Company receives a request for a briefing note in relation to:

- (i) written or oral Parliamentary questions from Members of the Scottish Parliament, or
- (ii) direct correspondence,

which relates to barriers to accessibility as defined by the *Disability Discrimination (Scotland) Act 2005*, the Operating Company shall check whether the issue is registered in the Disability Discrimination Act database within the Integrated Roads Information System.

2.4.2 When the issue is not registered, the Operating Company shall notify the Director and the Director shall discuss and agree with the Operating Company whether it should be registered.

2.5 Direct Responses from the Operating Company

2.5.1 The Operating Company shall respond directly to correspondence, enquiries and complaints received from any source excluding those made directly to the Operating Company by Members of the Scottish Parliament, Members of the United Kingdom Parliament, Members of the European Parliament and local councillors.

2.5.2 When correspondence, enquiries and complaints are received from Members of the Scottish Parliament, Members of the United Kingdom Parliament, Members of the European Parliament and local councillors, the Operating Company shall:

- (i) respond directly by acknowledging the correspondence, enquiries and complaints within five Working Days of receipt,
- (ii) forward a copy of the correspondence, enquiries and complaints received to the Director within one Working Day of receipt, and
- (iii) provide within five Working Days of receipt, a briefing note related to the topic raised and a draft letter of reply in editable electronic form to allow the Director to develop a suitable response for the Minister to issue, in accordance with the requirements of paragraph 1.2.1 above.

2.5.3 In respect of correspondence, enquiries and complaints received directly by the Operating Company regarding matters of Transport Scotland and Scottish Government policy, Transport Scotland or Scottish Government funding or matters where there is a possibility of political sensitivity, the Operating Company shall refer the correspondence or communication to the Director within one Working Day of receipt and notify the originator accordingly.

The Director will clarify in writing whether the Operating Company or the Director shall respond to any issues referred to in the previous paragraph which are raised by the Operating Company.

2.6 Media Enquiries

2.6.1 The Operating Company shall appoint a Media and Communications Officer in accordance with the requirements of Schedule 5 Part 4.

2.6.2 All enquiries to the Operating Company from television companies, radio stations and the press shall be dealt with by the Media and Communications Officer.

- 2.6.3 The Media and Communications Officer shall operate in accordance with the media enquiries procedure stated in Annex 3.5/A of this Part.
- 2.6.4 The Operating Company shall maintain an electronic register of media enquiry forms, as provided in Annex 3.5/B of this Part, at the Central Office. The register shall be available for inspection at all times by the Director and the Performance Audit Group.
- 2.6.5 No later than 30 days prior to the Commencement of Service Date, the Operating Company shall submit its proposed arrangements for dealing with media enquiries received between 08:00 hours and 17:00 hours on each Working Day, and any received outside these hours, to the Director for written consent.

2.7 Communications Register

- 2.7.1 The Operating Company shall maintain an electronic register of all communications it receives and the replies thereto relating to the Unit or to this Contract. The information recorded in the register in respect of each communication received from the Director, or any other source, shall include:
- (i) date of receipt of the communication and whether it is verbal or written,
 - (ii) details of the communication, including whether it is related to *the Disability Discrimination (Scotland) Act 2005*,
 - (iii) whether the communication requires a response,
 - (iv) date of issue of written information to the Director with the reference number and transmittal method,
 - (v) date of issue and a copy of the Director's signed reply to the originator,
 - (vi) date of issue and a copy of any direct reply from the Operating Company to the originator,
 - (vii) any follow up actions to be taken by either the Operating Company or the Director,
 - (viii) details of any commitments made,
 - (ix) date by which a commitment is to be completed, and
 - (x) date on which a commitment was completed.

2.8 Monthly and Annual Summaries to be Maintained

- 2.8.1 The communications register shall be capable of producing summarised reports for each calendar month and for each Annual Period which shall be available for inspection by the Director and the Performance Audit Group. The communications register shall contain the following information:
- (i) number of communications received from the Director,
 - (ii) number of communications received from all other sources,
 - (iii) number of communications requiring a response,
 - (iv) number of communications responded to within and outwith the five Working Days limit referred to in paragraph 2.1.3,
 - (v) number of communications acknowledged within and outwith the five Working Days limit referred to in paragraph 2.5.2 (i),

- (vi) number of communications forwarded to the Director within and outwith the one Working Day limit referred to in paragraph 2.5.2 (ii),
 - (vii) number of briefing notes and draft letters of reply prepared for, and provided to, the Director within and outwith the five Working Day limit referred to in paragraph 2.5.2 (iii),
 - (viii) average response time in days for all communications,
 - (ix) number of commitments completed within the due date, and
 - (x) number of commitments not completed within the due date.
- 2.8.2 The Operating Company shall produce a monthly summary for the preceding month, by the fifteenth day of each month, throughout the Contract Period.
- 2.8.3 The Operating Company shall produce an annual summary by 15 April each year, covering the preceding Annual Period, throughout the Contract Period.

This is Annex 3.5/A to Schedule 3 Part 5 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 5

COMMUNICATIONS STRATEGY, CORRESPONDENCE, ENQUIRIES AND COMPLAINTS

ANNEX 3.5/A – Media Enquiries and Procedure

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 5

COMMUNICATIONS STRATEGY, CORRESPONDENCE, ENQUIRIES AND COMPLAINTS

ANNEX 3.5/A – Media Enquiries and Procedure

Procedure

1. This procedure sets out the arrangements for handling media enquiries received by the Operating Company.
2. The Media and Communications Officer shall speak for the Operating Company and shall liaise with the Transport Scotland media desk.
3. Information requested, and the Operating Company's proposed response, shall be recorded on the media enquiry form provided in Annex 3.5/B of this Part and this shall be sent immediately to the Director, the Performance Audit Group and the Transport Scotland media desk.
4. The Operating Company shall identify on the media enquiry form further actions required and the proposed response, together with the timescale proposed for undertaking the further actions.
5. The Media and Communications Officer shall telephone the Transport Scotland media desk to discuss the proposed response within one hour of the media enquiry form having been sent.
6. The Operating Company shall have discretion to give an immediate response when the media question is about factual, non-controversial matters. In these circumstances, the Transport Scotland media desk and the Director shall be notified immediately of such questions and responses using the media enquiry form. The form shall be marked 'Factual – Non Controversial Media Call' for identification purposes.
7. Any media questions on Transport Scotland and Scottish Government policy, Transport Scotland or Scottish Government funding or matters where there is a possibility of political sensitivity shall be passed to the Transport Scotland media desk for action.
8. A copy of the Transport Scotland response will be passed to the Media and Communications Officer by the Transport Scotland media desk for information.
9. The Media and Communications Officer shall maintain frequent and regular contact with the Transport Scotland media desk. The Transport Scotland media team shall be notified of all contact from television companies, radio stations and the press with the Media and Communications Officer and shall be given the opportunity to comment on all proposed media statements other than those described in paragraph 6 above.
10. All media releases from the Operating Company shall be sent to the Director, the Performance Audit Group and the Transport Scotland media desk.

This is Annex 3.5/B to Schedule 3 Part 5 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 5

COMMUNICATIONS STRATEGY, CORRESPONDENCE, ENQUIRIES AND COMPLAINTS

ANNEX 3.5/B – Media Enquiries Form

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 5

COMMUNICATIONS STRATEGY, CORRESPONDENCE, ENQUIRIES AND COMPLAINTS

ANNEX 3.5/B – Media Enquiries Form

To

From

As required in Annex 3.5/A, please find information requested by the following organisation that requires a response from the Operating Company and Transport Scotland.

Source of Enquiry

Organisation	Contact	Date and Time received	Operating Company Contact and telephone number

Details of Enquiry

Details of Proposed Response

Further Action Proposed

Deadline

This notice has been sent to

Name				Transport Scotland media officer
Name				TRBO
Name				Performance Audit Group

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 6

CUSTOMER CONTACT SERVICES

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 6

CUSTOMER CONTACT SERVICES

1. TRANSPORT SCOTLAND'S TRAFFIC CUSTOMER CARE LINE SERVICE REQUIREMENTS

1.1 General

1.1.1 To complement information provided by the Traffic Scotland Service, Transport Scotland provides its customers with timely and accurate travel information relating to Scotland's strategic Trunk Road network through the Traffic Customer Care Line, a dedicated 24 hour phone service, which is delivered currently through a call centre. Within 14 days of the Commencement of Service Date, the Director will provide details of the current Traffic Customer Care Line Operator and will notify the Operating Company of any changes as necessary thereafter. The Traffic Customer Care Line serves as a single point of contact for customers with enquiries relating to sections of the Unit maintained by the Operating Company.

The Director will notify the Operating Company in writing of any changes made to the Traffic Customer Care Line Operator role or telephone number during the Contract Period.

1.1.2 The Operating Company shall liaise regularly with the Traffic Customer Care Line Operator during the Mobilisation Period, including attending at least one meeting prior to the Commencement of Service Date. Following the Commencement of Service Date, the Operating Company shall meet the Traffic Customer Care Line Operator and the Director at least annually to provide feedback and improve the coordination arrangements between the Operating Company and the Traffic Customer Care Line Operator in delivering the service.

1.2 Traffic Customer Care Line Contact Requirements

1.2.1 The Operating Company shall provide all necessary resources including competent, trained and experienced staff on duty during both Normal Working Hours and outwith Normal Working Hours to deliver the requirements relating to the Traffic Customer Care Line service as defined within this Part.

The Operating Company shall immediately notify the Traffic Customer Care Line Operator in writing of cover arrangements during periods of staff absence due to holidays, sickness and the like.

1.2.2 The Operating Company shall provide the Traffic Customer Care Line Operator with a dedicated, 24 hours a day, telephone number and e-mail address throughout the term of the Contract for all communications including the transfer of calls received by the Traffic Customer Care Line Operator requiring a response by the Operating Company and those identified by the Traffic Customer Care Line Operator as emergency calls in accordance with paragraph 1.7.1 (ii) and Annex 3.6/A of this Part.

The Operating Company shall provide the Traffic Customer Care Line Operator with this contact information no later than 30 days prior to the Commencement of Service

Date. The Operating Company shall notify the Traffic Customer Care Line Operator immediately of any alteration to the contact information provided.

1.3 Customer Enquiries Submitted by the Traffic Customer Care Line Operator

1.3.1 The Traffic Customer Care Line service is responsible for receiving and transferring to the Operating Company, telephone calls relating to sections of the Unit maintained by the Operating Company.

The Traffic Customer Care Line Operator will notify the Operating Company of such information by submitting customer enquiries via email, common internet access or telephone calls. Annex 3.6/B of this Part details the information that is supplied within any such customer enquiry by the Traffic Customer Care Line Operator to the Operating Company.

The Operating Company shall respond in accordance with the timescales prescribed in Annex 3.6/C of this Part.

1.3.2 The Operating Company shall, as a minimum, have within its Management System and Quality Plan documented procedures for dealing with all types of customer enquiries classified and submitted by the Traffic Customer Care Line Operator. These procedures shall ensure that all customer enquiries identified as emergencies by the Traffic Customer Care Line Operator are responded to immediately.

When the Operating Company determines that other Operational Partners may be affected by Traffic Customer Care Line customer enquiries, the Operating Company shall immediately notify, liaise and coordinate its response with the appropriate Operational Partners as required.

1.4 Customer Call-backs

1.4.1 The Operating Company shall provide customers requiring call-backs with updates in accordance with the timescales detailed in Annex 3.6/C of this Part using the method of communication preferred by the customer.

1.5 Responses to Customer Enquiries

1.5.1 Where responses to customer enquiries are provided to the Traffic Customer Care Line Operator by the Operating Company, such responses shall be provided in accordance with the timescales detailed in Annex 3.6/C of this Part and contain, as a minimum, the information specified in Annex 3.6/D of this Part. Responses shall be provided via email, common internet access or telephone call as appropriate, using one of the following classifications as defined in Annex 3.6/D of this Part:

- (i) "Received", or
- (ii) "WIP (work in progress)", or
- (iii) "Closed".

The Operating Company shall also provide any additional information it deems relevant to the status of the customer enquiry.

1.6 Clarification of Customer Enquiries

1.6.1 The Operating Company shall review all customer enquiries to ensure the information provided by the Traffic Customer Care Line Operator is clear and accurate.

- 1.6.2 If the Operating Company considers the information contained within a customer enquiry is incomplete or incorrect, or it cannot identify accurately the affected sections of the Trunk Road network, it shall contact the Traffic Customer Care Line Operator via email or telephone call to request the relevant additional or corrected information and an updated customer enquiry within one hour of identifying the need for such information.

The Traffic Customer Care Line Operator will make the required additions or corrections and reissue the customer enquiry.

- 1.6.3 Where the Operating Company considers a customer enquiry to be either incomplete or incorrect, the response time requirements detailed in Annex 3.6/C of this Part shall only apply once an updated customer enquiry is received by the Operating Company.
- 1.6.4 Where customer enquiries are submitted to the incorrect Operating Company, the Operating Company shall forward these to the correct Operating Company and inform the Traffic Customer Care Line Operator of the error immediately via email.

1.7 Customer Enquiry Classifications and Call Types Used by the Traffic Customer Care Line Operator

- 1.7.1 The Traffic Customer Care Line Operator will classify each customer enquiry submitted to the Operating Company as either "complaint", "emergency", "enquiry" or "routine":

- (i) "complaint" relates to customer enquiries identifying customer dissatisfaction regarding the service provided by the Operating Company,
- (ii) "emergency" relates to customer enquiries where an immediate response by the Operating Company is required to prevent potential danger to the public or disruption to the operational effectiveness of the Trunk Road network. Details of typical Incidents that might be classified as emergencies by the Traffic Customer Care Line Operator are provided in Annex 3.6/A of this Part,
- (iii) "enquiry" relates to customer enquiries requiring the Operating Company to respond regarding aspects of the maintenance of the Trunk Road network. A request for a response to the customer will also be passed to the Operating Company, and
- (iv) "routine" relates to routine maintenance or non-emergency customer enquiries or scenarios that do not pose a danger to the public or do not have the potential to disrupt the operational effectiveness of the Trunk Road network.

- 1.7.2 All definitions in Schedule 1 Part 1 take precedence over any classification of customer enquiry or call type used by the Traffic Customer Care Line Operator. In the event of any conflict, the Operating Company shall notify the Traffic Customer Care Line Operator accordingly and confirm what action it intends to take.

- 1.7.3 The customer enquiry classification categories will be further categorised by the Traffic Customer Care Line Operator, using one or more of the following call types:

- (i) Defect report where the customers reports a Defect with any aspect of the Trunk Road network,

- (ii) third party damage where the customer reports damage to property sustained as a result of the condition of the Trunk Road network or the activities of the Operating Company. Where the customer requests a claim form, the Traffic Customer Care Line shall collect appropriate details in accordance with Annex 3.6/E of this Part and transfer such request to the Operating Company,
- (iii) roadworks enquiry where the customer enquires about any aspect of current or planned roadworks on the Trunk Road network,
- (iv) road conditions enquiry where the customer enquires about the status of road conditions on the Trunk Road network,
- (v) Severe Weather enquiries where the customer requires Severe Weather related road condition information, and
- (vi) repeat calls where the customer has previously made an enquiry. Such calls shall be passed to the Operating Company in the form of an update to the original work request.

1.8 Fault Reporting

- 1.8.1 Any system failure of the Traffic Customer Care Line which leads to customer enquiries not being sent to the Operating Company results in an automatic notification being sent to the Traffic Customer Care Line faults mailbox. The Operating Company shall be given access to this mailbox.
- 1.8.2 In the event of planned or short-term loss of the Traffic Customer Care Line system, calls will be diverted to the Operating Company's nominated contact who shall collate and transfer call details and pass them to the Traffic Customer Care Line Operator.

2. BRANDING REQUIREMENTS

2.1 General

- 2.1.1 36 signs of the type shown at Annex 3.6/F of this Part are in place at key locations within the Unit.

No later than 30 days prior to the Commencement of Service Date, the Operating Company shall submit details of the logo which it proposes to utilise on these signs to the Director for written consent. On receipt of the Director's written consent, the Operating Company shall manufacture suitable plates containing the logo. These plates shall be attached to all the signs identified in Annex 3.6/F of this Part during the first seven days of the first Annual Period.
- 2.1.2 The Operating Company shall produce an information leaflet which shall include details describing the extent of the Unit, the services provided by the Operating Company and appropriate telephone contact numbers for the Operating Company and the Traffic Customer Care Line.
- 2.1.3 The draft leaflet shall be submitted for the written consent of the Director not later than 30 days prior to the Commencement of Service Date. On receipt of the Director's written consent, and not later than the Commencement of Service date, the Operating Company shall produce and distribute one copy of the leaflet per

property to all properties having direct access on to the Trunk Roads within the Unit. The Operating Company shall also contact:

- (i) outlets within the Unit including filling stations, refreshment places and post offices, and
- (ii) Statutory Authorities' establishments including local authority offices, libraries and police stations,

to establish if they are willing to display stocks of the leaflet and how many copies of the leaflets are required.

2.1.4 The Operating Company shall provide further copies of the leaflet on request.

2.2 Unit Specific Website Requirements

2.2.1 The Operating Company shall submit their proposed Unit-specific website no later than 30 days before the Commencement of Service Date to the Director for approval.

2.2.2 Following approval the Operating Company shall create and launch a fully operational Unit-specific website no later than 30 days after the Commencement of Service Date.

2.2.3 As a minimum, the Operating Company shall utilise its Unit-specific website for the following issues, however, this is not meant to duplicate the Traffic Scotland website:

- (i) demonstrate added value to a more local audience by providing timely, accurate and reliable information on issues being faced by the Unit, to allow informed decisions to be made on travel arrangements. Such information shall include how, where and when the normal operation of the Trunk Road network has been affected and how it will impact on users,
- (ii) highlight in a transparent manner what the Operating Company is doing to proactively manage and monitor the network,
- (iii) provide greater detail on roadworks, closures, incidents and special events occurring within the Unit than the information published on the Traffic Scotland Service website. Such information shall include dates and timings of such events similar to that logged within the Automated Diary Facility.

2.2.4 The Operating Company shall manage and keep the Unit-specific website up to date on a daily basis throughout the Contract Period and shall:

- (i) supply the Director with monthly reports on usage figures on all pages contained within the Unit-specific website, and
- (ii) remove or amend content or structure if requested by the Director.

2.3 Social Networking Websites

2.3.1 The Operating Company shall use social networking websites for improved communications with customers. Proposals to use such websites shall be submitted to the Director for his written consent.

2.3.2 When the Director gives written consent to the use of social networking websites, the Operating Company shall:

- (i) ensure information provided on the websites is accurate and kept up to date at all times, and

- (ii) remove any information provided on the networking website if instructed by the Director to do so.

This is Annex 3.6/A to Schedule 3 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 6

CUSTOMER CONTACT SERVICES

ANNEX 3.6/A – Customer Enquiries Classified as Emergencies by the Traffic Customer Care Line

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 6

CUSTOMER CONTACT SERVICES

ANNEX 3.6/A – Customer Enquiries Classified as Emergencies by the Traffic Customer Care Line

The descriptions below provide an indication of call types which the Traffic Customer Care Line Operator will regard as emergencies. The Traffic Customer Care Line Operator defines an emergency as any Incident or fault that poses a danger to the public or has the potential to disrupt the operational effectiveness of the Trunk Road network. This list is not exhaustive.

Emergency	Descriptions
Crash Barrier / Fencing Damage	Damaged Crash Barrier
	Boundary fence damage
Debris / Animals	Dead animals on live lanes and hard shoulder
	Live animals on carriageway
	Debris on live lane or hard shoulder & verge if likelihood could blow back onto live lane.
	Debris on centre reservation – obstructs vision, possibly blow onto carriageway
Drains / Manhole Covers	Damaged or Missing manhole cover
	Collapsed gully
Flooding	Flooding
Landscaping / Overhanging Branches	Grass cutting / landscaping – obscures visibility splays, trees down on carriageway or footpaths, overhanging branches.
Other	Calls from emergency services requiring road closures. Road closures as a result of accidents and incidents
	Bridge Strikes, parapet strikes, high winds or other
Potholes	Damage to road pavement
Road Traffic Accident (RTA)	Report of road traffic accident
	Debris, spillage as a result of RTA
	Diversions, Traffic Management
	RTA involving electrical unit
Road Works	Cones, signs, lamps scattered
Spillage	All spillages including oil, petrol, diesel, hydraulic fluid / chemical / fish oil etc
Street Lighting	Dark sections (3 or more consecutive)
	Door off / wires exposed
	Damaged electrical road signs, lighting columns
	Hanging lanterns, hanging bowls
	Exposed wiring on electrical installation
Subsidence	Road subsidence
Traffic Related Signs	Damaged, facing in wrong direction, hanging from mounting

Emergency	Descriptions
Traffic Signal	All dark, stuck on RED – emergency at specified locations
	Pedestrian crossing all dark
	Two or more red lamps dark in same direction
	In-operative push button
	2 or more reports of signal stuck on red. Outwith office hours, monitor for any other calls before calling emergency

This is Annex 3.6/B to Schedule 3 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 6

CUSTOMER CONTACT SERVICES

ANNEX 3.6/B – Customer Enquiry Information Supplied by the Traffic Customer Care Line

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 6

CUSTOMER CONTACT SERVICES

ANNEX 3.6/B – Customer Enquiry Information Supplied by the Traffic Customer Care Line

In accordance with paragraph 1.3.1 of this Part, the following tables show typical information which will be supplied by the Traffic Customer Care Line Operator to the Operating Company within submitted customer enquiries:

Data Field	Description
Service request ID	Unique Request ID of the call
Route	Route on which incident is located
X-coordinate	X-Coordinate of incident location
Y-coordinate	Y-Coordinate of incident location
Caller first name	First name of the caller
Caller last name	Surname of the caller
Caller add name num	Caller's property number
Caller add 1	First line of caller's address
Caller add 2	Second line of caller's address
Caller add town	Caller's town
Caller add county	Caller's county
Post code	Caller's Postcode
Caller phone	Caller's Phone number
Date time requested	Time the call came in
Category 1 (as defined below)	First category of the call
Category 2 (as defined below)	Second category of the call
Category 3 (as defined below)	Third category of the call
Summary	Summary of the call
Details	More details about the call

Remedy category requirements used by the Traffic Customer Care Line Operator. This list is indicative only and not exhaustive.

Category 1 - Operating Company responsible for Unit where incident has occurred	Category 2 - Type of incident (Applicable to all Category 1 options except 'Local Authority')	Category 3 - Call type
	Type of Incident	Complaint
	Abandoned/Broken Down Vehicle	Emergency
	Crash Barrier / Fencing Damage	Enquiry
	Debris / Animals	Routine
	Drains / Manhole Covers	
	Flooding	
	Grass Cutting (Winter Months - Winter Related)	
	Landscaping / Overhanging Branches	
	Litter	
	Local Authority Emergency	
	Other	
	Pothole	
	Road Conditions	
	Road Markings	
	Road Traffic Accident	
	Road Works	
	Spillage	
	Street Lighting	
	Subsidence	
	Traffic Related Signs	
	Traffic Signal	
	Third Party Damage	Claim Form
Other	Local Authority	Non-Emergency
	Other Operating Companies	Non-Emergency
	Bridges	Non-Emergency

This is Annex 3.6/C to Schedule 3 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 6

CUSTOMER CONTACT SERVICES

ANNEX 3.6/C – Timescales for Responses to the Traffic Customer Care Line Operator and for Customer Call-backs

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 6

CUSTOMER CONTACT SERVICES

ANNEX 3.6/C – Timescales for Responses to the Traffic Customer Care Line Operator and for Customer Call-backs

Responses to the Traffic Customer Care Line Operator

Work Request Type	Response Time to Customer Enquiries received after 06:00 Monday up to 19:00 Friday		Response Time to Customer Enquiries received after 19:00 Friday up to 06:00 Monday	
	Maximum response time		Maximum Response time	
	After 06:00 up to 19:00	After 19:00 up to 06:00		
Emergency	1 hour	2 hours	Emergency	2 hours
Enquiry	24 hours	24 hours	Enquiry	No later than 07:00 the following Tuesday
Complaint	24 hours	24 hours	Complaint	No later than 07:00 the following Tuesday
Routine	48 hours	48 hours	Routine	No later than 07:00 the following Wednesday

Responses to Customers Requiring Call-backs

Customer Enquiry Type	Frequency of call-back
Emergency	Within an hour of first notification and then hourly until the emergency is resolved.
Enquiry	(i) within 24 hours of first notification to acknowledge the enquiry, (ii) to confirm the required information has been found and (iii) notification of formal response.
Complaint	(i) within 24 hours of first notification to acknowledge the complaint, (ii) to confirm resolution of complaint and (iii) notification of formal response.
Routine	(i) within 48 hours of first notification to acknowledge the enquiry, (ii) to confirm the required information has been found and (iii) notification of formal response.

This is Annex 3.6/D to Schedule 3 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 6

CUSTOMER CONTACT SERVICES

ANNEX 3.6/D – Updates on the Status of Customer Enquiries

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 6

CUSTOMER CONTACT SERVICES

ANNEX 3.6/D – Updates on the Status of Customer Enquiries

Information to be supplied by the Operating Company to the Traffic Customer Care Line Operator when providing updates on the status of customer enquiries shall, as a minimum, include:

Data Field	Description
Service Request ID	Traffic Customer Care Line Operator call reference.
Customer Enquiry Status	<p>Containing:</p> <p>'Received'</p> <p>The Traffic Customer Care Line Operator shall be updated via email, data file transfer or telephone call by the Operating Company with a 'received' classification when the customer enquiry has been acknowledged by the Operating Company but no remedy has been undertaken.</p> <p>or</p> <p>'WIP (work in progress)'</p> <p>The Traffic Customer Care Line Operator shall be updated via email, data file transfer or telephone call by the Operating Company with a 'WIP' classification when the customer enquiry has been acknowledged by the Operating Company and a remedy has been undertaken but not completed.</p> <p>or</p> <p>'Closed'</p> <p>The Traffic Customer Care Line Operator shall be updated via email, data file transfer or telephone call by the Operating Company with a 'closed' classification when the customer enquiry has been acknowledged by the Operating Company and a remedy has been completed and no further work is required to be undertaken.</p>
Comments	
Issued date and time	
Actual completion Date and Time	
Deleted Date and Time	

This is Annex 3.6/E to Schedule 3 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 6

CUSTOMER CONTACT SERVICES

ANNEX 3.6/E – Third Party Damage

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 6

CUSTOMER CONTACT SERVICES

ANNEX 3.6/E – Third Party Damage

Typical Information collected and supplied by the Traffic Customer Care Line Operator to the Operating Company regarding third party damage shall include:

Time and Date of Incident
Location (including direction of travel and lane travelled in)
Vehicle Make, Model and Registration Number
Driver's full particulars
Alleged damage to vehicle
Caused of damage e.g. pothole, struck debris etc.
Additional information: (i) Where an Operating Company vehicle is involved in any damage, the Traffic Customer Care Line Operator will obtain from the caller the registration of any Operating Company vehicle involved. Such data shall be controlled in accordance with the Data Protection Act 1998.

This is Annex 3.6/F to Schedule 3 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 6

CUSTOMER CONTACT SERVICES

ANNEX 3.6/F – Network Customer Information Sign Showing Customer Contact Telephone Number

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 6

CUSTOMER CONTACT SERVICES

ANNEX 3.6/F – Network Customer Information Sign Showing Customer Contact Telephone Number



SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

1. INTRODUCTION

1.1 General

1.1.1 Network Operations is a branch of Transport Scotland which is responsible for the provision of a number of traffic, travel information and on road customer support services all of which are aimed at improving the operational efficiency and journey time reliability of the Trunk Road network. These services include the Traffic Scotland Service, the Scottish Roads Traffic Database service and Trunk Road Incident Support Service, all of which are managed by Network Operations and delivered on behalf of the Director by appointed Network Operations Service Providers.

1.1.2 The Operating Company shall undertake obligations that are required to support the Director in the delivery of the Traffic Scotland Service, the Scottish Road Traffic Database service and the Trunk Road Incident Support Service.

1.2 The Traffic Scotland Service

1.2.1 The Traffic Scotland Service provides Transport Scotland and its customers including the media, Scottish Ministers and Scottish Ministers' resilience staff with accurate and timely real time information relating to conditions, Incidents and events prevailing across the Trunk Road network and key routes on the local authority road network on a 24 hours a day, seven days a week basis.

1.2.2 The names, addresses and contact numbers of the Traffic Scotland Operator shall be as referred to in Annex 3.7/A of this Part or as otherwise notified to the Operating Company in writing by the Director. The Director will notify the Operating Company in writing of any changes made to the Traffic Scotland Operator role.

1.2.3 No later than 25 Working Days prior to the Commencement of Service Date, the Director will issue to the Operating Company in electronic format, an up-to-date inventory of all Traffic Scotland Equipment located on the Trunk Road network.

The Director will issue revised inventory to the Operating Company on a quarterly basis from the Commencement of Service Date.

1.2.4 The Operating Company shall take a proactive approach in liaison and coordination with the Traffic Scotland Operator regarding planned roadworks and events and current conditions, Incidents and events that impact on the journey time reliability of the Trunk Road network.

1.3 The Scottish Roads Traffic Database Service

1.3.1 The Scottish Roads Traffic Database service provides Transport Scotland and its customers with timely and accurate, high quality information relating to traffic volumes, vehicle composition and vehicle weights across the Trunk Road network. It is delivered by the Scottish Roads Traffic Database Contractor appointed by the Scottish Ministers.

The names, addresses and contact numbers of the Scottish Roads Traffic Database Contractor shall be as referred to in Annex 3.7/A of this Part or as otherwise notified to the Operating Company in writing by the Director. The Director shall notify the Operating Company in writing of any changes made to the Scottish Roads Traffic Database contractor role.

- 1.3.2 No later than 25 Working Days prior to the Commencement of Service Date, the Director shall issue to the Operating Company, in electronic format, an up-to-date inventory of all Scottish Roads Traffic Database equipment located on the Trunk Road network.

The Director shall issue revised inventory to the Operating Company on a quarterly basis from the Commencement of Service Date.

- 1.3.3 The Operating Company shall liaise and coordinate with the Scottish Roads Traffic Database Contractor to support the continuous operation of all Scottish Roads Traffic Database equipment and development of the Scottish Roads Traffic Database service.

2. CONSULTATION, LIAISON, NOTIFICATION AND COORDINATION REQUIREMENTS RELATING TO NETWORK OPERATIONS SERVICES

2.1 General

- 2.1.1 The Operating Company shall consult, liaise, notify and coordinate with the Director and Network Operations Service Providers as detailed in this Part.

- 2.1.2 Where the Trunk Road network is not operating within its normal operational conditions, including situations where delays exceed the limits defined in Annex 3.7/G of this Part or an Incident has occurred and the like, the Operating Company shall continually share its knowledge with, and report such conditions and the status of Incidents on the Trunk Road network to, the Traffic Scotland Operator and the Director. The delay and Incident status knowledge transfer shall be delivered in a continual and consistent manner and the Operating Company shall:

- (i) ensure that all its resources both internal and external are aware of the requirement of this knowledge transfer and are able to undertake such communications, and
- (ii) prepare documentation and tool box talks to ensure that delay and Incident status knowledge transfer becomes part of the operational culture of the Operating Company.

- 2.1.3 The Operating Company shall attend at least one meeting with the Director and each of the Network Operations Service Providers during the Mobilisation Period. Thereafter the Operating Company shall meet at least quarterly with the Traffic Scotland Operator, or additionally as requested by the Director, to provide feedback, learning and improvements in support of achieving the Director's key objectives and provide continual improvement in the delivery of duties specified within this Part.

2.2 Appointment of Journey Time Reliability Coordinator

- 2.2.1 The Operating Company shall appoint suitably qualified personnel accordance with the requirements of Schedule 5 Part 4 to deliver the Journey Time Reliability Coordinator role.

2.3 Journey Time Reliability Coordinator's Main Duties

- 2.3.1 The Journey Time Reliability Coordinator shall be responsible for supporting the Network Manager and Incident Liaison Officer in the delivery of the coordination, liaison and management requirements of the Operating Company specified within this Part, to ensure that the journey time reliability of the Trunk Road network is maintained at its optimum level.
- 2.3.2 The Journey Time Reliability Coordinator shall be proactive in gathering relevant information and continuously monitoring the Automated Diary Facility, the Scottish Road Works Register, the Traffic Scotland Service website and other relevant systems to ensure complete knowledge of all roadworks, events and Incidents occurring on or near the Unit.
- 2.3.3 The Journey Time Reliability Coordinator shall be the first point of contact within the Operating Company's organisation for all roadworks undertaken by the Operating Company and events occurring on or near the Unit during Normal Working Hours and outwith Normal Working Hours. The Journey Time Reliability Coordinator shall be contactable on dedicated landline and mobile phone numbers.
- 2.3.4 The Journey Time Reliability Coordinator shall be based within whichever offices the Operating Company deems are most suitable to fulfil the requirements of the role and shall undertake periodic site visits to assess the implementation and impact of roadworks and events. Such visits shall be used to assess how improvements in journey time reliability can be improved when similar roadworks and events take place in the future.
- 2.3.5 The Journey Time Reliability Coordinator shall:
- (i) liaise and communicate with relevant Operational Partners including:
 - (a) the dissemination of accurate and timely information to assist in the effective delivery and coordination of their roadworks and events throughout the Unit,
 - (b) supporting the Network Manager in ensuring representation by Operating Company personnel at all liaison meetings with the Operational Partners,
 - (c) supporting the Network Manager in ensuring representation by the Operating Company at seminars or working groups related to improving the methods by which Trunk Road management and maintenance activities shall be carried out, when required by the Director,
 - (d) ensuring that the minutes of all liaison meetings called by the Operating Company are prepared and copies issued to the Director via the Network Manager and relevant Operational Partners, within five Working Days of the meeting taking place, and
 - (e) ensuring that the issues arising from the liaison meetings are managed in accordance with the requirements of this Contract and that any actions required from the Operating Company are completed within the agreed or required timescales,

- (ii) providing a monthly report to the Director via the Network Manager no later than the fifteenth day of each calendar month throughout the Contract Period detailing:
 - (a) liaison meetings held,
 - (b) issues arising from such liaison meetings,
 - (c) actions taken or to be taken arising from such liaison meetings,
 - (d) action plans agreed between the Operating Company and the Director or Operational Partner, and
 - (e) the impacts of the Operating Company's activities on the journey time reliability of the Trunk Road network with recommendations for proposed improvements,
- (iii) preparing and submitting reports annually to the Director via the Network Manager, detailing the impacts of all the Operating Company's activities on the journey time reliability of the Trunk Road network including any proposed improvements and mitigation measures,
- (iv) ownership and management of the Automated Diary Facility ensuring that it is fully functional and kept updated at all times,
- (v) ensuring that all parties requiring the use of the Traffic Scotland Service are provided with a unique roadworks reference from the Automated Diary Facility to quote when contacting the Traffic Scotland Operator,
- (vi) ensuring the necessary temporary traffic regulation order is in place before requesting the Traffic Scotland Operator to implement roadworks settings to support the roadworks,
- (vii) when the appropriate functionality becomes available in the Automated Diary Facility, entering the temporary traffic regulation order reference,
- (viii) coordinating, monitoring and controlling all roadworks or events to minimise road closures, potential impacts and conflicts and maximising the capacity of the Trunk Road network, using the Automated Diary Facility and Scottish Roadworks Register where necessary,
- (ix) disseminating accurate and timely information to Operational Partners via the Automated Diary Facility, emails, regular meetings and telephone calls to assist in the effective coordination of their activities,
- (x) implementing escalation procedures for roadworks and events which exceed allowable delay thresholds,
- (xi) liaising with the Incident Liaison Officer and relevant Operational Partners in dealing with Incidents occurring during roadworks including coordination of the activation and implementation of Standard Incident Diversion Routes and managing the cancellation of roadworks if such cancellation will improve the capacity of the Trunk Road network when an Incident is taking place,
- (xii) utilising and managing support personnel on specific tasks relating to the planning and implementation of roadworks or events including ensuring such personnel are provided with adequate communications equipment,

- coordinating, mobilising, deploying and supervising Traffic Management arrangements and evaluating their impacts,
- (xiii) notifying the Director via the Network Manager promptly in writing of operational conflicts that may impact on the journey time reliability of the Trunk Road network and coordinating the implementation of any corrective action consented to by the Director with the Traffic Scotland Operator,
 - (xiv) coordinating the programming, planning and installation of traffic management and traffic control equipment in relation to the roadworks undertaken by the Operating Company to ensure the safety of Operating Company operational staff and Trunk Road users,
 - (xv) maintaining a record of all traffic management installations, including mobile lane closures on the Unit for each day of each Annual Period on a central database maintained by the Operating Company and ensuring that all updates are completed by 09.30 hours on the following Working Day, and
 - (xvi) management and dissemination of information required by the Operating Company and others for the preparation of Temporary Traffic Regulation Orders for roadworks and special events in accordance with the Specification.

2.4 Specialist Contractors Appointed by Network Operations

2.4.1 The Director has appointed a number of Network Operations Service Providers to undertake routine maintenance and emergency repair of Network Operations equipment and to undertake the design and construction of new Network Operations equipment. The Operating Company shall liaise and coordinate regularly with all Network Operations Service Providers to minimise the impact of Operations or works on the Network Operations equipment and journey time reliability of the Trunk Road network. The Operating Company shall facilitate Network Operations Service Providers' access to its planned maintenance schedules so that Network Operations Service Providers can plan works to coordinate with planned Operating Company maintenance activities.

2.5 Proposed Operations or Works Contract or Works in the vicinity of Network Operations Equipment

2.5.1 When:

- (i) the Operating Company proposes to carry out Operations or a Works Contract within or adjacent to locations containing Network Operations equipment, or
- (ii) the Operating Company becomes aware of authorised contractors, Undertakers or others proposing to carry out works within or adjacent to locations containing Network Operation equipment,

the Operating Company shall communicate with the Director and the appropriate Network Operations Service Providers as if the Network Operations Service Provider was an Undertaker as defined in the *New Roads And Street Works Act 1991*.

2.6 Proposed Operations or Works Contract or Works affecting Network Operations Equipment

2.6.1 When:

- (i) the Operating Company proposes to undertake any Operations or a Works Contract that may have a physical effect on any Network Operations equipment, or
- (ii) the Operating Company becomes aware of authorised contractors, Undertakers or others proposing to carry out works that may have a physical effect on any Network Operations equipment,

the Operating Company shall notify the appropriate Network Operations Service Provider by completing and submitting the form provided at Annex 3.7/B of this Part via e-mail at least 15 Working Days prior to the Operations, Works Contract or works commencing. The completion and submission of the form shall be in addition to all planning of relocation, design of relocation and consultation with the Director which the Operating Company shall undertake when it commences any planning of Operations, Works Contract or works that will impact on Network Operations equipment, as detailed in paragraph 2.6.4 of this Part.

2.6.2 Where the Operating Company deems that such Operations, Works Contracts or works shall have no physical effect on any Network Operations equipment, the form shall be submitted to show a nil return.

2.6.3 Where Operations or Works Contracts undertaken by the Operating Company involve the submission of a Statement of Intent and a Value for Money Assessment, these shall include reference to any work required at the Network Operations equipment site.

Where a Statement of Intent and Value for Money Assessment identifies that Network Operations equipment may be affected, a copy of the Statement of Intent and Value for Money Assessment shall be issued simultaneously to the appropriate Network Operations Service Provider and the Director.

2.6.4 The Operating Company shall consult and liaise with the Director and the appropriate Network Operations Service Provider regarding the nature of the Operations or Works Contract and shall make arrangements for the affected Network Operations equipment to be replaced or renewed. Such arrangements shall include detailed planning and design of works to accommodate the diversion and relocation of Network Operations equipment.

2.6.5 Where the Director agrees in writing that the Operating Company has the skills and competence to undertake the planning, design, diversion, relocation and renewal of the Network Operations equipment or any part thereof, the Operating Company shall undertake and complete this work as an integral part of the Operations or Works Contract and shall:

- (i) complete the planning and design of the diversion, relocation or renewal of Network Operations equipment as part of the planning and design of the Operating Company Operations or Works Contract in consultation with the Director and the relevant Network Operations Service Provider,

- (ii) complete any diversion and relocation of Network Operations equipment in advance of, or during, the Operation Company Operations or Works Contract as appropriate,
- (iii) when the Operations include road surfacing, ensure that Network Operations surface detection equipment is replaced and operational as part of the Operating Company Operations or Works Contract or, if approved in writing by the Director, within seven Working Days of the surface course being laid, and
- (iv) undertake all relevant and statutory testing of Network Operations equipment and the provision of records to enable the Director and the Network Operations Service Providers to maintain the relevant Health and Safety File and *New Roads and Street Works Act 1991* records.

Testing shall take place as an integral part of the Operating Company Operations or Works Contract and the records shall be provided within 10 Working Days of the completion of Operating Company Operations or Work Contract adjacent to the Network Operations equipment. If the Operating Company fails to provide the necessary records within 25 Working Days of such completion, the Director shall arrange for the relevant Network Operations Service Provider to undertake any tests and investigations necessary to prepare and provide all such records and shall recover any associated costs from the Operating Company.

- 2.6.6 The Operating Company shall ensure that any affected Network Operations equipment is replaced as part of the Operations or Works Contract in accordance with specifications that shall be supplied by the Director.
- 2.6.7 When the Director does not consent to the Operating Company undertaking the diversion, relocation or replacement of the Network Operations equipment or any part of the work required, the Operating Company shall liaise with the Director and the relevant Network Operations Service Provider in the planning of the works to ensure that the completion of such works complies with the timescales agreed as part of the planning of the works and any other timescale as referred to in this Part.
- 2.6.8 When works that affect or may affect Network Operations equipment are to be undertaken under a Works Contract, the Operating Company shall include within the Works Contract a requirement for:
 - (i) the Works Contractor to give notice in accordance with the timescales referred to in this Part, and
 - (ii) the Network Operations equipment to be diverted, relocated or replaced as part of the Works Contract within the previously planned timescales.
- 2.6.9 When works that affect or may affect Network Operations equipment are to be undertaken by authorised contractors, Undertakers or others, the Operating Company shall:
 - (i) on receiving notice of the works from the authorised contractor, Undertaker or others, notify the Director and the appropriate Network Operations Service Provider in writing of the proposed works, and
 - (ii) make arrangements with the authorised contractor, Undertaker or others for the Network Operations equipment to be diverted, relocated or replaced as part of the works within the previously planned timescales.

In such circumstances, the Director reserves the right to nominate Network Operations Service Providers to undertake the diversion, relocation or replacement of the Network Operations equipment.

2.7 Proposed Operations or Works Contract or Works Relating to New Network Operations Equipment

2.7.1 When the Operating Company proposes a location for any new Network Operations equipment which may be required within the Unit, the Operating Company shall complete the form provided at Annex 3.7/C of this Part and submit it via e-mail to the Director who shall either confirm his agreement to the proposed location or suggest revisions to the Operating Company. The Operating Company shall liaise and consult further until the Director consents to the revised location.

When the Network Operations Service Provider agrees to the Operating Company undertaking the installation of the new Network Operations equipment, the Operating Company shall undertake this work as part of the Operations in accordance with the requirements of this Part and the specification provided by the Director. Where the Director does not agree that the Operating Company can undertake this installation work, the Director shall arrange for the Network Operations Service Provider(s) to undertake such works and the Operating Company shall provide any information and support requested by the Director to the Network Operations Service Provider(s).

2.8 Damage to Network Operations Equipment

2.8.1 The Operating Company shall be aware of situations where Network Operations equipment is or may be susceptible to damage from Operations or from Works Contracts and shall ensure that all suitable precautions are taken to prevent damage to such equipment. Such situations shall include edge drainage works where the wiring from detector loops to cabinets may be damaged.

2.8.2 Where the Operating Company causes damage, suspects that it, or its subcontractors or a Works Contractor may have caused damage, or becomes aware of any external activities that may have caused damage to Network Operations equipment, it shall immediately inform the appropriate Network Operations Service Provider by telephone, providing an indication of what damage has occurred. The Operating Company shall subsequently complete the form provided at Annex 3.7/D of this Part and submit it to the Network Operations Service Provider via e-mail within 24 hours of the damage being caused.

2.8.3 When instructed by the Director, either the Operating Company or Network Operations Service Provider shall undertake repair of the damage at the earliest possible time.

When such a repair is temporary, the Operating Company shall liaise with the Director and the relevant Network Operations Service Provider regarding the nature of the damage and make arrangements for the Network Operations equipment to be repaired or replaced by either the Network Operations Service Provider or the Operating Company.

When such a repair is permanent, the Operating Company shall undertake the permanent repair in accordance with paragraph 2.6 of this Part. The timescales for completion of the permanent repair shall be agreed with the Director but shall usually be within 25 Working Days to 75 Working Days from the date of the initial

damage. If the Operating Company fails to complete the permanent repair within the agreed timescales, the Director shall arrange for the Network Operations Service Provider to undertake the repair. All costs associated with such repair shall be borne by the Operating Company. In such circumstances, the Director shall submit all costs incurred to the Operating Company and the Operating Company shall make payment to the Director.

3. SPECIFIC REQUIREMENTS RELATING TO THE TRAFFIC SCOTLAND SERVICE

3.1 The Automated Diary Facility

3.1.1 The Traffic Scotland Operator requires complete knowledge of:

- (i) all planned and emergency Site Operations, works, traffic management, lane closures and lane occupations, which for the purposes of this Part only shall be called 'roadworks', whether such roadworks are undertaken by the Operating Company, Works Contractor, Undertaker, authorised contractor or others, and
- (ii) all events expected to attract a minimum of 3,000 attendees, including concerts, sporting events and seasonal events which are likely to generate significant traffic.

3.1.2 The Operating Company shall use the Director's Automated Diary Facility for providing information to the Traffic Scotland Operator when:

- (i) the Operating Company proposes to undertake any Operations or Works Contracts, or
- (ii) the Operating Company becomes aware of authorised contractors, Undertakers or others proposing to carry out any works.

3.1.3 The Operating Company shall be responsible for ensuring that all information held in the Automated Diary Facility is accurate, complete and up to date at all times to enable the Traffic Scotland Operator to deliver reliable information to customers.

3.1.4 The Operating Company shall monitor both the Automated Diary Facility and Scottish Road Works Register to determine if there are any other roadworks scheduled or in progress by any Works Contractor, Undertaker, authorised contractor or others that may impact on the implementation of any proposed roadworks. Where other roadworks are identified as having such a potential impact, the Operating Company shall coordinate these roadworks to minimise potential impacts or mitigate against conflicts with the proposed implementation programme.

3.2 Access to the Automated Diary Facility

3.2.1 No later than 25 Working Days prior to the Commencement of Service Date, the Operating Company shall provide and maintain at the Central Office a broadband internet connection for access to the Automated Diary Facility.

3.2.2 Prior to ordering this connection, the Operating Company shall contact the Director to confirm the exact requirements.

3.3 Information to be Logged on the Automated Diary Facility

3.3.1 The Operating Company shall ensure that details of all roadworks undertaken within the Trunk Road unit are logged onto the Automated Diary Facility and kept updated at all times. Each item logged shall be allocated a unique referencing number which

shall be quoted by the Operating Company in all communications with the Traffic Scotland Operator and within its own organisation and by its subcontractors.

- 3.3.2 The information supplied by the Operating Company via the Automated Diary Facility shall allow the Traffic Scotland Operator to create messages on the Traffic Scotland variable message signs, informing road users of potential delays and of alternative routes where applicable.
- 3.3.3 The Traffic Scotland Service website shall serve as the single, reliable source for information on all events. The Operating Company shall ensure that the Traffic Scotland Service website is monitored on a daily basis to obtain information on forthcoming events that need to be incorporated into the planning of Operations or Works Contracts.
- 3.3.4 The Operating Company shall ensure that details of events expected to attract fewer than 3,000 attendees, but deemed by the Operating Company to have potential to cause significant delays, are logged on the Automated Diary Facility and kept updated at all times.
- 3.3.5 The Operating Company shall use the Network Access Form at Annex 3.7/F of this Part to request road works information from Works Contractors, authorised contractors, Undertakers and others with a right to work within the Unit, to ensure accurate and consistent information is utilised to meet the obligations of this Part. This information shall then be logged on the roadworks diary of the Director's Automated Diary Facility for each roadworks event.
- 3.3.6 The Operating Company shall ensure all details logged into the Automated Diary Facility are reviewed and updated no later than 09.30 hours daily. Where the Operating Company becomes aware of any significant change to such details, it shall ensure the Automated Diary Facility is updated within one hour of becoming aware.

3.4 Automated Diary Facility Severe Weather Information

- 3.4.1 During periods of Severe Weather, the Operating Company shall ensure the Severe Weather information being published on the Automated Diary Facility is regularly reviewed and updated at not less than hourly intervals.
- 3.4.2 Where the Operating Company becomes aware of:
- (i) any change in the situation at any location logged on the Automated Diary Facility, and
 - (ii) any other locations where Severe Weather is affecting driving conditions or traffic movements on the Trunk Road network,

the Operating Company shall ensure the Automated Diary Facility is updated at the next scheduled review.

The minimum information requirements for updating Severe Weather information on the Automated Diary Facility are referred to in Annex 3.7/I of this Part.

3.5 Remote Access to Closed Circuit Television

- 3.5.1 Where considered necessary by the Director, the Director shall make arrangements to provide a single close circuit television camera workstation to the Operating Company at the location agreed between the Director and the Operating Company.

3.5.2 The Operating Company shall make provision for the office space to accommodate a close circuit television camera workstation as stated in Annex 3.7/E of this Part, and shall facilitate communications connections and installation by Network Operations Service Providers.

3.6 Assessment of Roadworks Delays

3.6.1 Roadworks or any other activity being undertaken by the Operating Company or authorised contractors, Undertakers or others, which reduce the operational capacity of the Trunk Road network shall require an assessment by the Operating Company prior to commencement to assess the impact of the reduction in capacity. The Operating Company shall use the delay modelling tool provided in Annex 3.7/J of this Part to assess the impact and cost of traffic delay.

3.6.2 The Operating Company shall undertake reduction in capacity assessments for the full duration of any activity that reduces the operational capacity of the Trunk Road network and each assessment shall include the unique reference number as described in paragraph 3.3.1 of this Part.

3.6.3 The Operating Company shall not assess roadworks relating to emergency repairs prior to commencement but shall assess such roadworks on the next Working Day after implementation.

3.6.4 Where activities that reduce the operational capacity of the network are proposed which have been assessed as likely to cause traffic delays below the acceptable delay thresholds detailed in Annex 3.7/G of this Part, Operating Company shall implement such activities following the normal notification period.

3.6.5 The Operating Company shall record each delay modelling tool assessment in the Automated Diary Facility.

3.6.6 Where activities that reduce operational capacity are proposed which have been assessed as likely to cause traffic delays greater than the acceptable delay threshold of 12 minutes as detailed in Annex 3.7/G of this Part, the Operating Company shall implement such activities only following receipt of consent from the Director. To allow the Director to determine if consent can be given, the Operating Company shall prepare a delay management report detailing justification for implementing activities that will cause delay greater than the acceptable delay threshold of 12 minutes. The delay management report shall include as a minimum:

- (i) activity location and description,
- (ii) result of impact assessment using the delay modelling tool,
- (iii) data collection and modelling approach where modelling beyond the use of the delay modelling tool has been agreed by the Director, and
- (iv) description of existing and expected operational condition of that part of the Trunk Road network affected by the proposed activity, with a summary of recommendations for measures to be applied to reduce delay.

3.6.7 The Operating Company shall notify the Traffic Scotland Operator at least 25 Working Days prior to the commencement of the activity when the estimated delay is greater than eight minutes.

3.6.8 Complex roadworks are those where specific work activities and time periods may make it impossible to meet the delay thresholds detailed in Annex 3.7/G of this Part. Conditions where this may occur include:

- (i) roadworks located in areas where the existing Trunk Road is operating at or near capacity but where the existing traffic flow is relatively stable. At such locations, a slight reduction in capacity resulting from roadworks activities could have a significant impact on road users,
- (ii) roadworks where lane closures are required to preserve the safety of road users and Operating Company personnel or for environmental reasons, and
- (iii) roadworks being undertaken during periods of high traffic volume related to seasonal traffic, holidays and events.

For activities that may cause delay beyond the 12 minute delay threshold detailed in Annex 3.7/G of this Part, the Operating Company may propose the use of microscopic simulation models for the Director's consent.

3.6.9 When the Operating Company identifies an implementation option that reduces predicted delays below the 12 minute delay thresholds detailed in Annex 3.7/G of this Part, this implementation option shall be used by the Operating Company.

3.7 Notification of Roadworks Delays

3.7.1 Where roadworks are being undertaken which have been assessed as likely to cause traffic delays in excess of thresholds detailed in Annex 3.7/G of this Part, or which involve the closure of an off-slip or on-slip road, the Operating Company shall keep the Traffic Scotland Operator notified of traffic delays via regular telephone calls, quoting the unique Traffic Scotland Automated Diary Facility reference number for the Site, at the following intervals:

- (i) at code 3 and 4 delays, 15 minutes prior to traffic management commencing at a roadworks location,
- (ii) immediately when delays to traffic, assessed using the delay modelling tool, exceed 10 minutes,
- (iii) thereafter at no more than 30 minutes intervals or when delay changes of five minutes or more occur, giving details of the delay times until they have ceased to exceed 10 minutes, and
- (iv) immediately once the traffic management has been removed from a roadworks location.

3.7.2 The Operating Company shall notify the Traffic Scotland Operator by telephone and update the Automated Diary Facility within one hour of becoming aware of changed circumstances which would significantly affect movement of traffic, including:

- (i) when roadworks which were coded 1 to 2 in accordance with 'Coding for estimated traffic delays' detailed in Annex 3.7/G of this Part are causing traffic delays in excess of 10 minutes,
- (ii) when planned roadworks are cancelled at short notice and the cancellation has not yet been entered into the Automated Diary Facility,
- (iii) Incidents that have been notified to, or identified by, the Operating Company, and

- (iv) when road, lane or slip closures or lane occupations have been, or are likely to be, put in place.

3.8 Monitoring and Evaluation

- 3.8.1 To facilitate learning and feedback from the implementation of roadworks, the Operating Company shall monitor and evaluate predicted and actual delays. If the actual delay exceeds the predicted delay by any period greater than five minutes, the Operating Company shall include within the Automated Diary Facility actual delays for all code 4 works and for all codes of works designated in accordance with the 'Coding for estimated traffic delays' provided in Annex 3.7/G of this Part.
- 3.8.2 If necessary, the Operating Company shall utilise equipment which can automatically determine traffic delays through roadworks and disseminate appropriate messages to the Traffic Scotland Operator. Where the Operating Company considers the use of automatic traffic delay monitoring equipment necessary, it shall submit written proposals for the deployment of such equipment to the Director for consent. Where the Operating Company considers the use of automatic traffic delay monitoring equipment is not feasible, it shall instead deploy sufficient operational personnel to monitor traffic delays.
- 3.8.3 Where the actual traffic delays exceed the predicted traffic delays by any period greater than 15 minutes, the Operating Company shall immediately notify the Traffic Scotland Operator and the Director. The Operating Company shall provide details of the discrepancy between the predicted and actual delays and propose suitable on Site corrective actions and shall keep the Network Manager and Traffic Scotland Operator briefed fully on the status of such roadworks. The Network Manager shall notify the Director.
- 3.8.4 The Director may require the Operating Company to implement proposed corrective actions or suspend the implementation of roadworks in order to reduce traffic delays which he considers unacceptable. Where the suspension of roadworks due to unacceptable travel delays would have a negative impact on the safety of road users, the Director may allow the implementation of roadworks to continue until the Operating Company has resolved the negative impact by taking the necessary corrective actions. The Operating Company shall notify and liaise with the Traffic Scotland Operator in either situation.

3.9 Vehicle Activated Signs

- 3.9.1 The Operating Company shall use vehicle activated signs during roadworks where such use will address safety issues relating to inappropriate speeds. The Operating Company requests for use of vehicle activated signs shall be made in writing to the Director.
- 3.9.2 Vehicle activated signs shall only be deployed in addition to regulatory signs as a response to excessive speed and in accordance with the following requirements:
 - (i) the *Traffic Signs Regulations and General Directions 2002* and other relevant United Kingdom and European Union guidance and standards. Departures shall not be permitted unless specifically authorised by the Director,
 - (ii) be type approved by the Director for use on the Trunk Road network, and shall utilise only the legends approved by the Director,

- (iii) not be deployed where the works are located within those sections of the Trunk Road network that already have lane control signalling,
- (iv) where both directions within the roadworks area meet the criteria of this paragraph, one vehicle activated sign shall be deployed in each direction, and
- (v) be deployed where detailed accident investigation or risk assessment confirms that vehicle activated signs are an appropriate remedial measure.

3.9.3 Speed monitoring detectors shall be installed accurately to minimise errors in speed measurement.

3.9.4 When the signs are activated, the displays shall provide appropriate warning to motorists when the assigned speed limit is exceeded and shall not interfere with the visibility and general effectiveness of any other signs in the area.

3.10 Mobile Variable Message Signs

3.10.1 Traffic Scotland Equipment includes a network of permanently located variable message signs positioned at key locations throughout the Trunk Road network. These signs facilitate the provision of real time information to Trunk Road users.

3.10.2 The Scottish Ministers own a number of mobile variable message signs. These shall be made available for use by the Operating Company in advance of, or during, any major works or Operations in areas which are outwith the coverage of the permanent variable message sign system forming part of the Traffic Scotland Equipment.

3.10.3 Where the Operating Company requires the use of the mobile variable message signs, the Operating Company shall apply in writing to the Traffic Scotland Operator for consent to use these, giving as much notice as possible. The Traffic Scotland Operator shall have absolute discretion to decide when the use of the mobile variable message signs is allowed, based on the perceived benefits to road users.

3.10.4 Where the Traffic Scotland Operator gives written consent to the use of mobile variable message signs, the responsibilities of the Operating Company shall be as specified within the *Use Of Mobile Variable Message Signs On The Trunk Road Network* guidance provided in Annex 3.7/H of this Part.

3.10.5 In accordance with this guidance, the Transport Scotland mobile variable message signs shall be used by the Operating Company to cover situations including:

- (i) the signing of major roadworks where there are currently no permanent variable message signs,
- (ii) gauging driver reaction to the potential benefits of permanently locating a variable message sign at that position on the network,
- (iii) providing weather related information during the winter months, such as snowfalls which have the potential to require road closures or seriously affect traffic travelling these routes, and
- (iv) signing for large scale outdoor events that generate abnormally high levels of traffic in otherwise quiet areas for short periods such as pop concerts and sporting events.

3.10.6 The Operating Company shall be responsible for:

- (i) the collection and return of the signs in good working order by arrangement with the Traffic Scotland Operator, and
- (ii) the provision of suitable locations for the signs, which shall include:
 - (a) hard standing,
 - (b) protection for the signs by an existing permanent barrier or by a temporary barrier,
 - (c) a 230 volts power supply facility complete with appropriate methods of connecting to the mobile variable message signs,
 - (d) the supply of fuel and the changing of filters and all necessary servicing when using signs with an in-built generator,
 - (e) appropriate communications including electricity supplies, and
 - (f) inspection and maintenance during their operation.

4. SPECIFIC REQUIREMENTS RELATING TO THE SCOTTISH ROADS TRAFFIC DATABASE SERVICE

4.1 Before-and-After Traffic Counts

4.1.1 Certain road improvement Schemes require to be supported by before and after traffic counts.

When the Operating Company proposes the locations of any new traffic counting site required for undertaking before and after studies, the Operating Company shall complete the form provided at Annex 3.7/C of this Part and submit it to the Director and the Scottish Roads Traffic Database contractor via e-mail. The Operating Company shall obtain the written consent of the Director before such before and after studies are undertaken.

4.1.2 When the Director agrees in writing that the Operating Company shall undertake the deployment of the proposed new traffic counting equipment, the Operating Company shall undertake this work as an integral part of the Operations or Works Contract in accordance with the requirements of this Part and the specification provided by the Director. Where the Director does not agree that the Operating Company shall undertake this installation work, the Director shall arrange for the Network Operations Service Provider(s) to undertake such works and the Operating Company shall provide any information and support requested by the Director to the Network Operations Service Provider(s).

This is Annex 3.7/A to Schedule 3 Part 7 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/A – Contact List of Network Operations Service Providers

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/A – Contact List of Network Operations Service Providers

Group A - Main Network Operations Service Providers

Traffic Scotland Operator – Atkins

6th Floor,
3 Atlantic Quay,
20 York Street,
Glasgow
G2 8LH

Traffic Scotland Maintenance Contractor – Amey

Traffic Scotland

Cumbernauld Business Park
Wardpark Road
Wardpark South
Cumbernauld
G67 3JZ

The Scottish Roads Traffic Database Contractor

IBI Group

10 Newton Terrace
Glasgow
G3 7PJ
United Kingdom
Tel: 44 (0)141 222 5390

Group B - Network Operations Services Providers working on Trunk Road

Technology Services Provision – Serco

Transportation Systems – Road Services
Serco Civil Government
7 Teal Court
Strathclyde Business Park
Bellshill
ML4 3NN

Civils and Communication Contractor - Pegasus Power and Communications Ltd

2 Tollpark Road
Wardpark East
Cumbernauld
G68 0LW

This is Annex 3.7/B to Schedule 3 Part 7 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/B – Notification of Planned Operations and Works Contracts and Works in the Vicinity of Network Operations Equipment

- E Type of Operations, Works Contract or works to be derived from the digits set:
- Digit 1
1. Operations or works contracts.
 2. Accident or incident.
 3. Other events.
- Digit 2
- A: Works contracts by Operating Company or Works contactor.
- B: Works by authorised contractor.
- C: Works by undertaker.
- D: Works by other.
- F To include any Operations, Works Contract or works carried out to make situation safe and proposals for any necessary repairs or modifications to, or at, the network operation sites.
- G Network Operations Service Provider to acknowledge receipt of this form.
- H Any additional comments as appropriate.

This is Annex 3.7/C to Schedule 3 Part 7 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/C – Notification of Proposed New Network Operation Sites

General Notes

- 1 Use this form to record any proposals for the creation of new Network Operations services sites.
- 2 Use one line for each proposed site.

General Notes

- A eg A75.
- B The name by which the Operations or works contracts is known [within this Contract].
- C Dates can be approximate.
- D Dates can be approximate.
- E For example, whether resurfacing or road realignment, etcetera. If appropriate, sketches may be supplied to make Scheme type clear.
- F This can be either by description or by Ordnance Survey Grid Reference - if appropriate, sketches may be supplied.
- G This should specify the equipment type, for example, with traffic counting sites, whether volumetric or classifier.

This is Annex 3.7/D to Schedule 3 Part 7 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/D – Notice to Network Operations Service Provider of Damage or Suspected Damage to Network Operations Equipment

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/D – Notice to Network Operations Service Provider of Damage or Suspected Damage to Network Operations Equipment

Notice to Network operations providers of damage/suspected damage to Network operations equipment

Sheet Ref:

Date:

Name:

Network Unit:

(to be continuous with previous sheets - e.g. 2004/12)

(date when sheet submitted)

(of individual responsible for sheet contents)

(NE / NW / SE / SW)

Site Reference (A)	Date (s) damage occurred/identified (B)	Details (C)	Operation/ Works/ work Type(D)	Organisation which caused damage (if known) (E)	Additional Notes (F)

Column Notes:

- A References must be those contained within the inventory information.
- B Insert the date when the damage occurred or the date the damage was identified – indicate which is applicable.
- C Details of the damage and effects of the damage.
- D Insert details of the cause of the damage (if known).
- E Name and contact details of organisation which caused the damage (if known).
- F To include all relevant details not covered elsewhere in the form – to include contact details in all cases.

Use separate additional sheets if required, but make reference to them here.

This is Annex 3.7/E to Schedule 3 Part 7 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/E – Minimum Requirements for Closed Circuit Television Workstation

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/E – Minimum Requirements for Closed Circuit Television Workstation

Dual 20" monitors

Large footprint desk top personal computer

Keyboard

Mouse

Closed circuit television control panel

This is Annex 3.7/F to Schedule 3 Part 7 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/F – Network Access Form for the Request of Information on Planned Operations, Works Contracts, Works and Events from Utilities and Other Third Parties

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/F – Network Access Form for the Request of Information on Planned Operations, Works Contracts, Works and Events from Utilities and Other Third Parties

Input Operating Company references and logo in this area (Document, Issue, Related To, Page No. etc.)

Before completing this form, please read the conditions and general requirements for applicants wishing to carry out work on the network.

Documents required with application	Req	Rec'd	App'd	Sign'd	Unit
<i>Location Plan</i>					
<i>Site Specific TM layout</i>					Ref No.
<i>SRWR ref</i>					SRWR Ref No.
<i>Road Opening Permit</i>					Depot (if applicable)
<i>Planning Consent Approval</i>					
<i>TM Method Statement</i>					

Applicant / Originator of Works:												
Traffic Management Contractor:												
Contractor for the Works:												
Contractor Address:								Head Office Tel:				
								Site Contact Tel:				
								Contractor 24hr Tel:				
								Traffic Man. 24hr Tel:				
Contractor Email Address:												
Route No.:												
Location:												
OS Start	E									N		
OS End	E									N		
OS Centre Point (if applicable)	E									N		
Start Section (7 digits)												
End Section (7 digits)												
Chainage Start*****												
Chainage End*****												
List sections affected from start to finish												
Description of Works (include direction)												

Works Supervisor Details:							
Contact No. for Works Supervisor:							
Lane Occupation Start Date:				Lane Occupation End Date:			
Working Days	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Lane Occupation Start Time*							
Lane Occupation End Time*							
Closure Type**:							
Lanes Closed***:							
Speed Limit on Road / Proposed Speed Limit:							
Works Method Statement:					Health & Safety Plan:		
Consultation with Local Authorities, Police etc:							
Is Traffic Order required? (If Yes, approval is conditional):							
Expected Delays****							

Notes

Access will only be granted on condition that the Traffic Scotland Operator is informed by telephone (0141 300 8100) 15 minutes prior to the first cone being placed on the network and again when all traffic management has been lifted.

* Time Restrictions may apply

** A, B or C

*** L1, L2, L3, slip lane, hardshoulder, lay-by or verge

**** To be completed by the Traffic Officer

***** Relative to the start of that section

Required for Automated Diary Facility

Required for OC Audit trail

Add to Automated Diary Facility for OC & TS info



Operating Company Response

Approval - Yes / No:

Signed:

Date:

This is Annex 3.7/G to Schedule 3 Part 7 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/G – Coding for Estimated Traffic Delays

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/G – Coding for Estimated Traffic Delays

Number	Description	Time
1	Little or no delay	Up to 4 minutes
2	Slight delay	More than 4 minutes but less than 8 minutes
3	Moderate delay	More than 8 minutes but less than 12 minutes
4	Serious delay	12 minutes or more

Escalation of Delays

Base Level – code 1

The base Level is ascribed to any roadworks (as defined) on the trunk road network within the Unit, or in adjacent Unit or Units, or off the trunk road.

First Level – code 2

The first escalation is to slight delay as defined above. The notification requirements specified within Schedule 3 Part 7 shall apply.

Second Escalation – code 3

The Second escalation is to moderate delay as defined above. The notification requirements specified within Schedule 3 Part 7 shall apply.

Third Escalation – code 4

The third escalation is to serious delay as defined above. The Operating Company shall determine this escalation level and then seek agreement with the Traffic Scotland Operator. Notification requirements specified within Schedule 3 Part 7 shall apply in such circumstances.

This is Annex 3.7/H to Schedule 3 Part 7 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/H – Guidance Document on the 'Use of Mobile Variable Message Signs on the Trunk Road Network'

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/H – Guidance Document on the 'Use of Mobile Variable Message Signs on the Trunk Road Network'



USE OF MOBILE VARIABLE MESSAGE SIGNS ON THE TRUNK ROAD NETWORK

GUIDANCE NOTE NO 1



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1 Introduction

This document defines the procedural responsibilities of Operating Company's or external parties wishing to utilise Mobile Variable Message Signs (MVMS) on the Scottish Trunk Road network and provides details on the practises to be adopted for their location and operation.

2 The Purpose of this Document

The purpose of this document is to inform OC's/external parties involved in the management and movement of traffic across the Trunk Road network of the operational benefits and capabilities of MVMS whilst outlining the installation and signing requirements inherent in their use.

3 What is a Mobile VMS

They are normally trailer mounted to permit their rapid deployment to any location on the network requiring them which is currently without any permanent VMS coverage or where they are required to support the wider response. This could be in response to an incident or event where their provision would assist in the resultant traffic management of the incident or event.

They can also assist with the signing of abnormal events or conditions affecting the smooth movement of traffic across the network: both temporary and semi-permanent. These events can be either local to the sign or be at some distance forward of it.

Light emitting diode technology (LED) is used to ensure optimal message legibility in all likely weather conditions.

4 Traffic Scotland

4.1 The Traffic Scotland System

The Traffic Scotland system was established by Transport Scotland (TS) to provide drivers with accurate and timeous information on conditions and events prevailing across the Trunk Road network. Further information on Traffic Scotland can be found at www.trafficscotland.org/about/index.aspx.

Traffic Scotland collects data from sources located across the Trunk Road network, e.g. CCTV cameras, vehicle detection systems, the police and other interested bodies. The TSCC collates and analyses this information before disseminating it via its web-site (www.trafficscotland.org), and network of road-side and gantry mounted VMS signs. Traffic information is also distributed to the media and to those other organisations with an interest in the management and operation of the Scottish Trunk Road network.

4.2 The Traffic Scotland VMS Network

The Traffic Scotland system has a network of permanently located VMS signs at key locations throughout the road network www.trafficscotland.org/vms/index.aspx. The positioning of these signs allows important road traffic information to be displaced at key decision points in the network, presenting drivers with an opportunity to modify their journeys with the minimum amount of disruption to their overall travel plans.

These permanently sited VMS are a mixture of verge and cantilever design, and of differing size and type to suit their intended locations.

4.3 Transport Scotland MVMS

The MVMS currently in use by the TSOps are generally much smaller than permanently located VMS, with two rows of 12 discrete characters/ row (see figure 1 below).

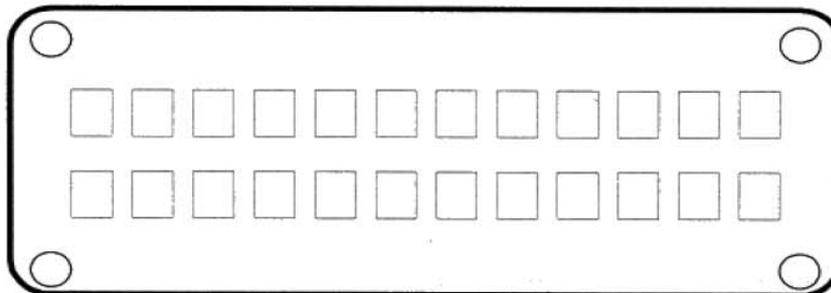


Figure 1: General Layout of a Mobile VMS sign face with 2x12 discrete characters

This limited character format impacts on the size and structure of the message that can be displayed and this can impact on their usefulness in clearly addressing network problems.

Consequently MVMS used in Scotland have been modified to provide a *virtual* 4x12 sign by alternating the sign face to provide messages with twice the content (i.e. 2x (2x12)). The message is split in two halves with each half displaying half of the overall message. It is vital that the message is structured in such a manner that the message remains clear and unambiguous; no matter the order in which the two halves are read.

4.3.1 VMS Technology

Mobile VMS use a similar technology to the permanent VMS with a single fixed character height module, and a fixed number of lines and characters per line.

VMS are normally defined in accordance with their maximum message displaying potential (see 1. below).

However, the new generation of VMS signs can vary the size of the characters displayed, hence the number of characters (and lines) that can

be displayed across the sign face. This technology requires a slightly different method of definition (see 2. below).

1. Current MVMS Technology

e.g. a 2x12, 240 Sign:

This has 2 discrete lines of text, with 12 discrete characters per line and a fixed character height of 240 mm.

2. New Technology

The new message signs have a continuous matrix of LED's allowing text of varying heights, pictograms or a combination.

4.3.2 VMS Modes of Operation

There are two main modes of VMS operation, as explained on the website at www.trafficscotland.org/about/index.aspx, these are:

1. Strategic

Here VMS provide advice on incidents or events that may impact on the long distance journey plans of drivers crossing the network. Early awareness of incidents may permit drivers the opportunity to modify travel plans or mode of travel, with the minimum of impact on their journey plans.

The diverting of traffic away from incidents reduces the traffic management requirements inherent in dealing with such incidents.

These are normally very large verge mounted signs which may provide alternative routing advice. In the Scottish Central Belt these will normally be the 3x18 cantilever type, whereas in the more remote areas they will normally be of the 4x15 post mounted design: mainly to minimise their overall environmental impact.

2. Local

Here VMS manage the impact of minor incidents and alert drivers to the possible impact on the local road network.

Diversion routing information will not normally be provided, only details of the event or incident, and its potential impact.

The VMS may be gantry or verge mounted, and will provide information on the immediate area. In areas equipped with cross carriageway gantries,

lane control indicators are mounted over individual lanes and these provide individual lane control information.

5 Key Stakeholders

The key stakeholders who make use of the VMS network on behalf of Transport Scotland include the OC's, DBFO's, the Police Forces, Transport Scotland and the TSOp who operate the Traffic Scotland system.

5.1 The Operating Company's (and DBFO Operators)

Maintenance of the Scottish Trunk Road network is divided into four geographic areas, each with its own OC who is responsible for the maintenance of the road network within that operating area. In addition to the OC's there are also 3 DBFO's.

The OC will advise the TSOp and the other relevant parties of roadworks planned in their respective areas, highlighting their potential impact on the smooth operation of the road network.

Details of these works, along with their locations, time for completion and their possible impact on traffic, are provided in the Automated Diary Facility (ADF).

The OC's will provide the TSOp with regular updates on progress or delays and estimated times for completion of the works.

On a number of sections of the Trunk Road network, the role of the OC is undertaken by a DBFO Operator: they are subject to similar operational responsibilities as the OC's.

5.2 The Police

The police have a key role in ensuring the safety of the travelling public and the delivery of safety requirements for any operations planned on it and work in partnership with Transport Scotland, OC's and TSOp.

5.3 **Transport Scotland**

Transport Scotland have responsibility for the entire Trunk Road network, both its general physical condition and for the safety of drivers travelling across it.

Network Managers, assisted by a number of Area Managers, monitor and control the maintenance operations and performance of the OC's charged with maintaining the Trunk Road network.

The Network and Area Managers have direct access to the Traffic Scotland web site (www.trafficscotland.org.uk), and to its Planned Event Register, Roadworks Diary, the Incident Log and to observe the operational status of the Transport Scotland equipment. This permits them to monitor the status of the network.

5.4 **The Traffic Scotland Operator**

The TSO operates and monitors the system on behalf of Transport Scotland from the Traffic Scotland Control Centre (TSCC) on a 7-day/ 24-hour basis.

The TSO liaise closely with the OC's, DBFO's and the police on issues that may impact on the movement of traffic across the network. These include emergency road repairs, planned roadworks, delays through roadworks, large-scale public events, and any other emergencies that may occur.

TSO monitors the network and informs road users of problems or constraints that may affect efficient movements across the network through the setting of the VMS to known incidents occurring on the network.

The TSO is one of the main contacts regarding Trunk Road issues and provide a coordinated response to any incidents occurring on the network.

6 The Requirement for Mobile Variable Message Signs

Although the coverage of the Traffic Scotland VMS system is extensive, it does not cover all major routes or strategic decision points around the network. This has prompted the need for a VMS that can be quickly dispatched to otherwise unsigned areas of the network.

The Transport Scotland MVMS have been used to cover situations such as:

- The signing of major roadworks where there are currently no permanent VMS,
- To gauge driver reaction to the potential benefits of permanently locating a VMS at that position in the network,
- To provide weather related information during the winter months, such as snowfalls on the M74 and A9, which have the potential to close or seriously impact on traffic travelling these routes, and
- Signing for large scale outdoor events that generate abnormally high levels of traffic in otherwise quiet areas for short periods: e.g. pop concerts such as T-in-the-Park and events like World Super Bikes at Knockhill.

The extensive use of MVMS has highlighted their usefulness and their potential to assist with the management of traffic on the road network.

7 The Operational use of MVMS

The TSO is responsible for the management of incidents on the Trunk Road network and will utilise all available VMS signs, including MVMS, to address such incidents.

7.1 Transport Scotland MVMS Signing Strategies

Six signing strategies have been adopted for using MVMS and these are as follows:

1. Roadworks



Face 1



Face 2

Informs drivers of delays or congestion ahead, and offers drivers the opportunity to make informed decisions regarding their route choice and/ or time of travel.

2. Incidents



Face 1



Face 2

Informs drivers of pre-planned or emergency roadworks, and where possible provides guidance of alternative routes during events that impact on the road network. Again this permits drivers the opportunity to modify their journey plans in advance of the problem area.

3. Weather/Safety



Face 1



Face 2

Informs drivers of hazardous conditions ahead and promotes careful driving.

4. Campaigns



Face 1



Face 2

To promote and complement both national and local road safety campaigns.

5. Advance Warning



Face 1



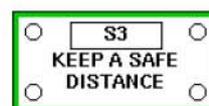
Face 2

To alert drivers of programmed works.

6. Safety or Educational



Face 1



Face 2

To promote safe driving practises.

Note: Safety/Educational messages are only displayed when MVMS are not being used for operational signing purposes.

8 Requests for MVMS

In the past requests have been received from a variety of sources, e.g. Roads Authorities, Police Forces, the OC's and the organisers of large scale public events. Transport Scotland own 6 MVMS in the format shown in Appendix B.

The following criteria will be used by the TSOp as part of the selection process for the deployment of a Mobile VMS:

1. The anticipated delay and congestion as a result of the event or works
2. The presence and availability of existing permanent VMS in the immediate area
3. Any potential for conflict with other works ongoing in that part of the network
4. The duration of the event
5. The proposed location/site
6. The availability of MVMS

Early notification of events where use of a MVMS is being considered is vital and liaison at an early stage with traffic management planning is paramount in obtaining access to existing Transport Scotland MVMS or procuring/hiring a MVMS, and to allow the TSOp the time to schedule the event in the Events Diary.

Requests are to be submitted in writing to the TSOp using the MVMS Request Form (see Appendix E), normally providing a minimum notice of two weeks. However, to meet emergencies, MVMS can be mobilised with minimal notice, but even then deployment still requires a suitable site to accommodate the sign and one that is equipped with a suitable mains electrical supply

Transport Scotland has a limited number of MVMS and in the event of any conflict of requirement the TSOp will determine which request is successful. However in the case where the OC may wish to purchase/hire alternative MVMS, the MVMS must be integrated into the Traffic Scotland

System. The decision on the use of a MVMS will be based on the criteria described in this section combined with the likely benefits that its deployment will provide to road users.

Following submission of the 'MVMS Request Form' the TSOp will request Transport Scotland to carry out an inspection of the site to ensure its suitability for accommodating a MVMS.

8.1 **Requirements to be adhered to**

1. If the MVMS is not a Transport Scotland MVMS and is supplied by another MVMS supplier then it must be integrated into the Traffic Scotland System. This is to ensure a co-ordinated operation is undertaken.
2. The messages displayed on MVMS must be accurate and not conflict with information being posted by Traffic Scotland on their VMS or website.
3. Approval must be gained from the TSOp via the local operating company/DBFO before signs are set or changed (see Appendix E – MVMS Request Form).
4. When the alternating option is in use, there should be no more than 2 faces of information. The message should make sense whether the driver sees face 2 before face 1 or vice versa and the timing should be sufficient on that speed of road for the driver to take in messages.
5. MVMS deployed on the network by external parties should only be permitted with the express approval of the local OC/DBFO and be bound by the same conditions as used by the OC/DBFO when deploying for their works.
6. The OC/DBFO will need to monitor the use of mobiles by external parties working on Scottish Trunk Roads.
7. The OC/external party operating the MVMS should have detailed records of the signing log in the event of queries.

9 Site Selection

Although the existing MVMS are patently mobile they are of such a size and complexity that locations must be selected with a degree of care to ensure their suitability (see Appendix A – Siting Requirements for MVMS).

The OC/external party requesting the MVMS is responsible for providing a suitable and safe location throughout the period of intended use. A number of factors require consideration when selecting a MVMS site, and these include:

1. If the MVMS is being used to allow motorists to make a route choice then the site shall be located a minimum of 500 metres in advance of any Strategic Route decision point exit, and at not less than 300 metres prior to any other exit.
2. If the MVMS is being used to provide delay information, the site shall be located at a location outwith the predicted queue length.
3. Clear unimpeded forward visibility of 300 metres to the sign is mandatory.
4. The site shall be level, and be of sufficient size to accommodate the MVMS with its outriggers deployed. A hardcore base may be required to provide additional sign support/ stability and this provision is the responsibility of the party requesting the MVMS.
5. The MVMS shall be protected with either existing permanent safety fence or by a suitable temporary barrier such as Pre-Cast Vehicle Barrier (PCVB) or Vario-guard. This must comply with the requirements of TD 19/06.
6. The mobility of MVMS permits a degree of flexibility in their siting, however they still require the provision of a permanent 230V, 1.5 kVA electrical mains supply for continuous operation. The electrical connections between the electrical supply pillar and the MVMS shall be in accordance with the requirements of BS 7671. It is also permissible for a diesel generator (3kVA) to be used.
7. The messages being displayed on the MVMS shall wherever possible use the destinations provided on the fixed directional signing infrastructure in the area.

8. The impact and proximity of bridges, structures, foliage and any existing signs/signals to the proposed location shall be considered to avoid any visual obstruction.
9. Care must be taken with to ensure that there is no obstruction of view to traffic from the deployment of a MVMS sign: such as to traffic entering from any adjacent junction.

A number of permanent hard standings for MVMS have been provided throughout the network in response to requests from the Transport Scotland Area Managers; a list of these locations is available from the TSOp. All of these sites are equipped with drive-on/drive-off facilities, safety fence protection and mains electrical supplies, all of which permit MVMS to be deployed with the minimum of delay.

10 Additional Information

Additional information to be submitted by the Operating Company/external party to the TSO shall include the following:

1. If roadworks delay information is to be displayed, the type of delay information shall change as conditions change, e.g. No Delays; 10, 15, 20 minutes delays (in 5-minute increments) or whether estimated Queue Lengths will be provided, e.g. 1 mile, 2 miles ... etc
2. Whether a Site Traffic Liaison Officer will be provided as a contract requirement, to provide accurate delay data as conditions alter and their relevant contact details
3. The methods proposed for the setting-up, removal, change of works/traffic management and the handling of incidents during the works

11 Deploying Transport Scotland MVMS

The TSO_p will advise the OC/external party in writing that the use of a MVMS has been approved and provide the identity number of the MVMS that has been allocated and the location from where it can be picked up.

The party requesting the use of a Transport Scotland MVMS is wholly responsible for its collection, its transfer to site and for its safety once on site and then for its eventual return in an undamaged condition. The OC/external party requesting the use of a MVMS will be held responsible for the cost of any repairs necessary to the sign on its return. Likewise, if the request is to provide alternatively owned MVMS, then the party shall be responsible for the MVMS.

The MVMS shall not be transferred to its intended location unless the weather conditions are considered suitable for both its transfer and for its deployment at the site (see Appendix D for additional MVMS deployment information).

12 The Transport Scotland MVMS and its Trailer

The signs are mounted on a trailer that permits them to be towed to their intended location by means of any suitably rated vehicle.

The sign can be raised, lowered and rotated by a single person, by means of its own manually operated hydraulic system.

The sign face can be rotated via its turn table through a 210⁰ arc relative to the trailer axis, with adjustment manually carried out in 15 equal steps. The sign face is secured in its final position via four holding down bolts.

The trailer houses enclosures for the electrical power controls, the local VMS controls and the manual hydraulic controls necessary for raising and lowering the VMS box.

The OC/external party shall prepare a method statement for the deployment of MVMS using the information in this document and the O&M Manual referred to in Appendix D.

More detailed information on the general arrangement of the trailer is provided in Appendix B, with further information on the general attributes of all Transport Scotland MVMS provided in Appendix C.

No Transport Scotland MVMS are fitted with on-board diesel generators.

13 Conclusion

Involvement of the TSOp at an early stage in any works / event planning / discussion is vital to allow the TSOp to provide support in the planning of where and when MVMS are to be deployed.

Requests for MVMS shall be made in writing to the TSOp, providing as much notice as is reasonably possible: normally two weeks is sufficient. The same applies when requesting to utilise an alternatively owned MVMS.

The TSOp will provide the requesting OC/external party with an Approval Form for their completion and submission.

Transport Scotland/TSOp will have absolute discretion in deciding which applicant is allocated a MVMS. This decision will be based on the perceived level of benefits that the deployment of the MVMS would accrue to the road users. In addition, the proposed location for the MVMS will be highly influential in the decision and Transport Scotland will carry out a site inspection to ensure its suitability.

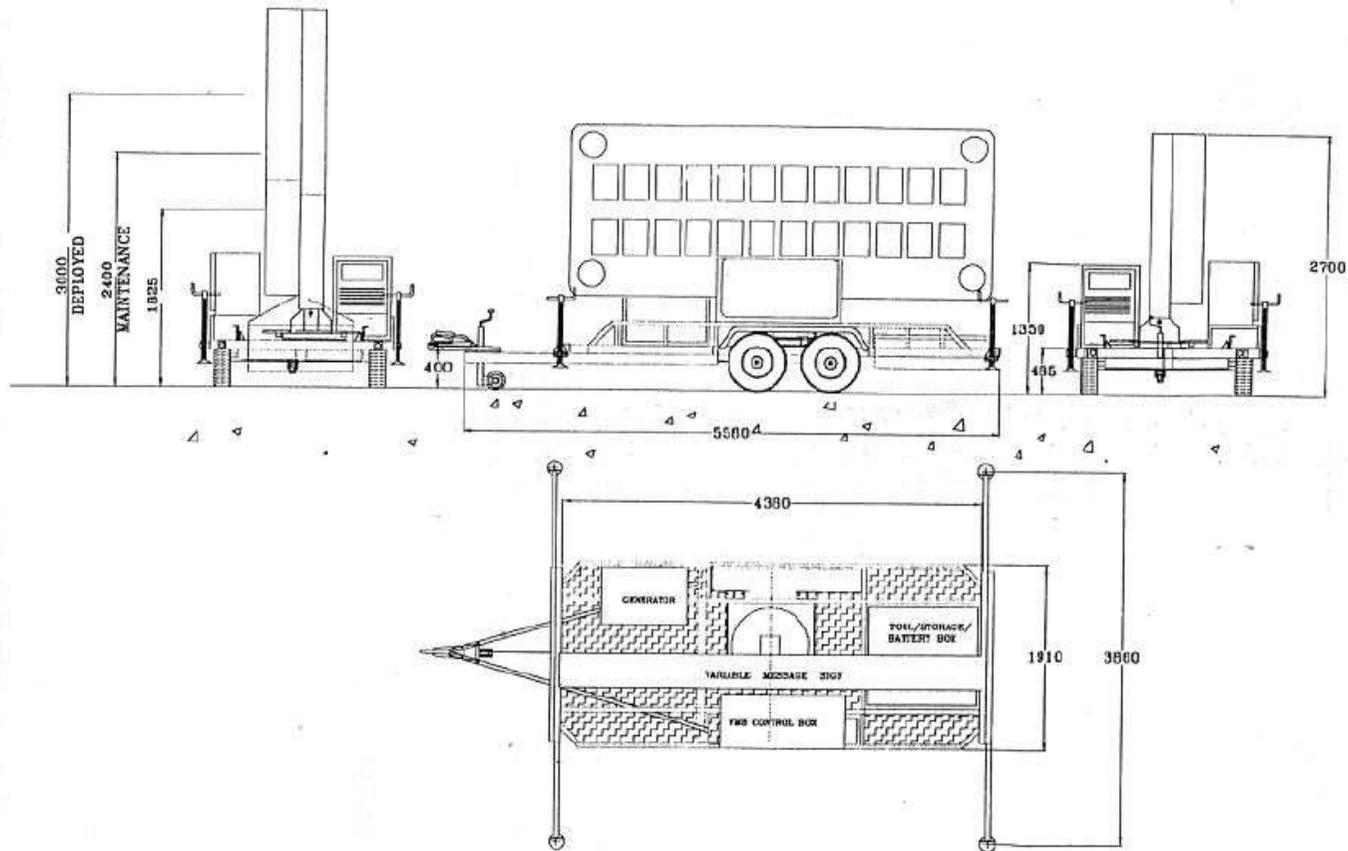
The OC/external party requesting the MVMS shall be wholly responsible for the collection, the operation and the eventual return in good working order of the MVMS. This is also the case if the MVMS is not owned by Transport Scotland.

All movements and operational usage of the MVMS will be done in liaison with the TSOp.

Appendix A Siting Requirements for Transport Scotland MVMS

PARAMETER	DESIRABLE	MIN REQUIREMENT	COMMENT
Site choice	A minimum of 500m prior to the exit for alternative route or diversion	300m prior to exit	Sufficient distance/time is essential too allow drivers to make safe route
Forward visibility	More than 300m	300m	Avoid siting near to existing structures, signs or foliage
Physical Protection	Safety fence or PCVB	Safety fence or PCVB	The MVMS must be protected
Distance from kerb to extremity of sign when erected	2m	0.5m (up to 40 mph) 1.2m (greater than 40 mph)	Chapter 8 Traffic Signs Manual section 2.5.1.4.
Verge Width behind barrier	6m	5m	Can the towing vehicle readily access the area
Verge Length behind barrier	7m	6m	
Condition of Verge	Flat and firm with good drainage	Flat or slight gradient and firm enough to prevent movement	Hard-core base may be required to make ground firm
Support for out-rigger	2'x2' standard slab	Firm ground	As above
Power	230v, 1.5 kVA single phase mains supply terminated in an external adjacent supply pillar i.a.w BS7671.	230v mains supply (single phase) with 1 kW power capacity terminated in external termination pillar.	A suitable battery supplied and maintained by the user
Live update information required by the TS Operator	Approximate traffic delays at works (e.g. NO DELAYS, 10, 15, 20 min delay) as conditions change. Or Queue length (1 mile, 2 mile..) as conditions change. Setup, removal or change of works/traffic management and Incident information (if occurs).	Telephone calls to TSOp to update on change of conditions at the site. Incidents reported as they occur.	Delays and queue lengths are related if no incident occurs. The contact Tel. No. of the STLO shall be provided to the TSOp

Appendix B General Arrangement of a Mobile VMS Trailer



Doc No 1: Date: March 2011

Appendix C Trailer Data

Note: These details are extracted from the Operating and Maintenance Manual for a Rolls Royce (VMS Ltd) MVMS and whilst these may not be wholly representative of all the Transport Scotland MVMS they provide a reasonably accurate representation of their general attributes

Volume 3 Data and Drawings
Chapter 1 Data and Drawings
Section 1.1 Trailer Data (Pages 3 & 4 of 12)

Trailer Data

Manufacturer	Smiths Electric Vehicles Ltd, Type 2000 (kg)
Dimensions:	
Length	5.580m + tow bracket length TBA
Height	2.700m
Width	1.910m
(Width with outriggers extended)	3.860m
Weight (including fuel and VMS)	2480kg
Tow Bar Coupling	50mm ball joint
	Indespension type CP57
Tow Bar Hitch Height	400mm
Wheels:	
No. of	4 (plus a spare)
Type	4.5J x 13 x 4 hole well-base
Bearing Lubrication	Shell Alvania No 2 high melting point lithium based grease or equivalent
Wheel-nut tightening torque	74Nm (55 LB ft)
Trailer Tyres	175 R 13 'C' 6 PR radial van tyre
Trailer tyre pressure (Fully Loaded)	54psi (3.72bar)
Jockey Wheel	Indespension telescopic type JW4
Lights:	
Front	
Side lights bulbs	12V 5W festoon
Marker reflectors	Rubolite type 91/03/00
Position marker lights	Rubolite type 50/07/00

Rear	
Stop/tail light bulb	12V 21W/5W offset bayonet
Brake light bulb	12V 21W bayonet
Number plate light bulbs	12V 10W bayonet
Direction Indicator light bulbs	12V 21W bayonet type
Lens	Smiths Electric type LAM1
Trailer Light Socket	Type 12N (7 pin)
Brake System	203 x 40mm Knott Auto reverse drum operated via compensator and cables, incorporating taper roller bearing hubs and grease seal. Studded 4 x 0.5" on 5.5" PCD.
Twin Axle Compensator	Indespension type BR3
Brake Cables	Two cables 1130mm Two cables 1430mm
Lock Nut	M8
Handbrake	Hydraulic damper and draw bar mounted.
Axle	Indespension type SB8 Two of each 1300kg superride full track axle beam
Mains Supply Socket	Legrand P17
Outrigger Prop Stand	Indespension type PJ14
Mudguards	Indespension type MG 12
Turntable	FAD type U01N075

Appendix D Mobile Sign Deployment

This information relates primarily to the O&M Manual for a Rolls Royce MVMS Unit:

Volume 2 System Description
Chapter 4 Mobile Sign Deployment

This can be obtained from the TSOp.

Appendix E MVMS Request Form

The MVMS REQUEST FORM shall be completed by the party requesting the use of a MVMS and they will submit it promptly to the Traffic Scotland Operator.

TRANSPORT SCOTLAND

MVMS Approval Form No. _____

MVMS APPROVAL FORM

Date	1	Organisation	2
------	---	--------------	---

PROPOSED EVENT

Route	3	Direction	4	From	5	To	6
Event Location							7
Event Description							8

MVMS REQUIREMENTS

Location of MVMS	9
Proposed MVMS usage	10

CHECKLIST

List	Details
1. Route Choice <input type="checkbox"/> 11	1. 12
2. Forward Visibility <input type="checkbox"/>	2.
3. Physical Protection <input type="checkbox"/>	3.
4. Kerb/Verge Length & Width <input type="checkbox"/>	4.
5. Power Supply <input type="checkbox"/>	5.

FOR TSOp USE

Authorised : <input type="checkbox"/> 13 Yes No Signature Date _____	Reason : 14
---	--

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This is Annex 3.7/I to Schedule 3 Part 7 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/I – Information Required for the Severe Weather Bulletin Board for the Automated Diary Facility

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/I – Information Required for the Severe Weather Bulletin Board for the Automated Diary Facility

The list below provides up-to-date information regarding any current Severe Weather problems being experienced on roads within the [to be inserted] Police Area which may have a significant impact on your journey.

Last Page Update: [to be inserted]

ROUTE	LOCATION	ROAD STATUS	COMMENTS	INFORMATION FROM	LAST STATUS CHANGE
		Road Open	Snow. Passable with care.	Grampian Police	
			Icy conditions. Passable with care.		
			Single lane operation. Passable with care.		
			Route not recommended unless journey is absolutely necessary.		
		Road Closed	Heavy snow.		
			Drifting snow.		
			Snow clearing in progress.		
			Road estimated to re-open at	Trunk Road Operator	
		Road Re-opened	Passable with care.		
			Single lane operation. Passable with care.		
			Route not recommended unless journey is absolutely necessary.		

This is Annex 3.7/J to Schedule 3 Part 7 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/J – Overview of Delay Modelling Tool

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 7

NETWORK OPERATIONS SERVICES

ANNEX 3.7/J – Overview of Delay Modelling Tool

Provision of the Delay Modelling Tool

The delay modelling tool facilities will be supplied by the Director.

Access to the Delay Modelling Tool

No later than 25 Working Days prior to the Commencement of Service Date the Operating Company shall provide and maintain at the Central Office a broadband internet connection for access to the delay modelling tool.

Prior to ordering this connection, the Operating Company shall contact the Director to confirm the exact requirements.

Features

The delay modelling tool will use a simple demand/capacity flow model to simulate conditions at a location on the Scottish Trunk Road network.

The delay modelling tool will estimate the delay in minutes and the approximate queue length in kilometres resulting from a reduction in operational capacity at a specified location on the Scottish Trunk Road network. Estimated delays will take into account delays that are the result of recurrent congestion. The delay modelling tool will provide a delay value relating to the additional journey time that is in excess of the free flow journey time (total delay) and a further delay value for the additional time in excess of the typical journey time for the specified time of day and day of week (normal delay). The location will be defined by network link(s), typically junction to junction, or by subsections of a link.

For roadworks that extend over a number of links, the capacity reduction will be assumed to apply at the most upstream link or section.

Roadworks interventions that affect both directions at a network location will require separate analysis and identification by the Operating Company.

The delay modelling tool will estimate the delay cost based on average traffic composition and value of time figures provided by Scottish Transport Appraisal Guidance (Scot-TAG).

A facility to specify an upstream diversion rate as a percentage of the demand flow in vehicles per hour will be provided. The Operating company shall use this to estimate the cost saving resulting from the implementation of the diversion.

The delay modelling tool will have access to tables of normal flow rates and speeds at different times of the day and days of the week for network links that have monitoring facilities. These will be in three minute or 15 minute periods depending on the level of equipment provision at the location of the monitoring facilities.

The delay modelling tool will have access to tables of normal journey times for some network links. The Operating Company may use these in addition to the point information from monitoring sites to improve the accuracy of the delay estimation.

The Operating Company shall record the output from the delay modelling tool analysis relating to a confirmed roadworks entry in the Automated Diary Facility using the appropriate Automated Diary Facility identifier.

The delay modelling tool will provide details of capacity flow rates and capacity reductions for different road types and typical closure scenarios based on values in the Design Manual for Roads and Bridges. These may be overridden by a delay modelling tool user.

Data Inputs

The delay modelling tool will contain appropriate details of:

- (i) Normal traffic flow, speed and composition.
- (ii) Normal link journey times.
- (iii) Link length, free flow speed and journey time and capacity.
- (iv) Value of time figures.

Additional information required to model a capacity reduction will be required to be entered by a delay modelling tool user; this will include:

- (i) Location of the works in terms of links and/or sections of links.
- (ii) Chainage in metres from start of link/section to start of works.
- (iii) Length of works.
- (iv) Day(s) of week.
- (v) Start/end time.
- (vi) Lanes closed.
- (vii) Confirmation of free flow speed on the link/section (suggested by the delay modelling tool).
- (viii) Confirmation of link capacity remaining after roadworks implemented (suggested by the delay modelling tool).
- (ix) Expected diversion rate (to estimate benefit of diversion).
- (x) Length of diversion route.

Report Outputs

The Operating Company shall estimate the following information for each model analysis:

- (i) Details of works location (links/sections).
- (ii) The delay in minutes during the period while the roadworks are implemented and until resultant queues have cleared (at intervals of three minutes or 15 minutes).
- (iii) The queue length (at intervals of three minutes or 15 minutes).
- (iv) The total delay in vehicle hours.
- (v) The total queue size in vehicle kilometres.
- (vi) The cost/diversion benefit of the roadworks in terms of lost time/saved time.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 8

STATUTORY FUNCTIONS

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 8

STATUTORY FUNCTIONS

1. STATUTORY FUNCTIONS

1.1 General

- 1.1.1 The Operating Company shall be responsible for carrying out the Statutory Functions on behalf of the Scottish Ministers referred to in Annex 3.8/A of this Part.
- 1.1.2 When the Operating Company undertakes its duties in accordance with these Statutory Functions, it shall prepare and maintain any appropriate records and registers in accordance with the requirements of this Contract.
- 1.1.3 If an authorisation to carry out a Statutory Function on behalf of the Scottish Ministers referred to in Annex 3.8/A of this Part expires, or is withdrawn or revoked by the Scottish Ministers, the Operating Company shall cooperate with the Scottish Ministers as required to facilitate a transfer of such Statutory Functions to the Scottish Ministers or a replacement nominated by them in the timescales provided by the Scottish Ministers.
- 1.1.4 Before exercising any of the Statutory Functions of the Scottish Ministers referred to in Annex 3.8/A of this Part, the Operating Company shall notify any interested parties in writing of its intentions.
- 1.1.5 For the avoidance of doubt, the Operating Company shall not subcontract or delegate responsibility for any Statutory Functions of the Scottish Ministers referred to in Annex 3.8/A of this Part.
- 1.1.6 Where the Operating Company is either a private sector firm or a company, it shall be authorised within the Contract entered into between the Scottish Ministers and that firm, company or public private partnership to carry out the Statutory Functions of the Scottish Ministers referred to in Annex 3.8/A of this Part under the terms of *The Secretary of State's Trunk Road Functions (Contracting Out) (Scotland) Order 1996 (Statutory Instrument 1996 No. 878 (s.99))* ("the Contracting Out Order"), made under Section 69 of the *Deregulation and Contracting Out Act 1994*.

This is Annex 3.8/A to Schedule 3 Part 8 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 8

STATUTORY FUNCTIONS

ANNEX 3.8/A – Statutory Functions

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 8

STATUTORY FUNCTIONS

ANNEX 3.8/A – Statutory Functions

1. The function of the Scottish Ministers as roads authority conferred by or under section 2 of the *Local Government (Omnibus Shelters and Queue Barriers) (Scotland) Act 1958* in relation to giving and withholding consent and attaching conditions to any consent.
2. The function of the Scottish Ministers as roads authority conferred by or under section 25(2) of the *Water (Scotland) Act* in relation to giving and withholding consent.
3. The function of the Scottish Ministers as persons having an interest in the land as roads authority conferred by or under section 7(4) of the *Litter Act 1983* in relation to giving and withholding consent and arranging terms of any consent.
4. The function of the Scottish Ministers as traffic authority conferred by or under section 65(1) of the *Road Traffic Regulation Act 1984* in relation to the power to cause or permit traffic signs to be placed on or near a road.
5. The functions of the Scottish Ministers as roads authority conferred by or under the following provisions of the *Roads (Scotland) Act 1984*:
 - (i) section 2(1) (powers and duties with respect to Trunk Roads etc),
 - (ii) section 4(1) (power of the Scottish Ministers to enter into agreements with local roads authorities for them to carry out their functions as roads authority for Trunk Roads etcetera) but only for carrying out those functions specified in sub paragraph (i) above and sub paragraphs (iii) to (xxx) inclusive of this Annex,
 - (iii) section 34 (duty of roads authority with respect to snow and ice on roads),
 - (iv) section 50 (power of roads authority to plant trees, shrubs etc within road boundary),
 - (v) section 51 (power of roads authority to consent to persons planting trees, shrubs etc within a road boundary),
 - (vi) section 56 (power of roads authority to consent to works and excavations in roads),
 - (vii) section 57 (power of roads authority with respect to dangerous works in roads),
 - (viii) section 58 (power of roads authority to permit occupation of parts of roads for the deposit of building materials etc),
 - (ix) section 59 (power of roads authority with respect to obstructions in roads),

- (x) section 60 (power of roads authority to fence and light obstructions and excavations in roads on default of person required to do so and to recover the expenses thereof),
- (xi) section 61 (power of roads authority to give permission to place and maintain etc appliances in roads),
- (xii) section 63 (power of roads authority with respect to new accesses over verges and footways),
- (xiii) section 64 (power of roads authority to consent to statutory Undertakers using appliances or vehicles on footways, footpaths and cycle tracks),
- (xiv) section 66 (power of roads authority with respect to maintenance of vaults and cellars etc under roads),
- (xv) section 67 (power of roads authority with respect to doors etc opening outwards into roads),
- (xvi) section 85 (power of roads authority to permit the deposit of builders' skips on roads),
- (xvii) section 86 (power of roads authority to remove or reposition builders' skips and to recover the expenses thereof),
- (xviii) section 87 (power of roads authority with respect to unauthorised structures on roads),
- (xix) section 88 (power and duty of roads authority with respect to projections impeding or endangering road users),
- (xx) section 89 (power and duty of roads authority with respect to accidental obstructions on roads),
- (xxi) section 90 (power of roads authority to consent to the placing of bridges, beams, rails, pipes, cables and other apparatus over roads),
- (xxii) section 91 (power of roads authority to prevent danger to a road from nearby vegetation and fences etc or from inadequate retaining walls) except sub-section (5),
- (xxiii) section 92 (power of roads authority with respect to trees etc planted within 5 metres of the edge of carriageways),
- (xxiv) section 93 (powers of roads authority to protect road users from roadside dangers),
- (xxv) section 94(1)(a) (power of roads authority to fill in unnecessary roadside ditches subject to the consent of owners and occupiers),
- (xxvi) section 95 (power of roads authority to recover expenses of removing mud etc deposited from vehicles onto roads so as to be dangerous),
- (xxvii) section 98 (power of roads authority with respect to stray and other animals on roads),
- (xxviii) section 99 (power of roads authority with respect to the prevention of the flow of water etc onto roads),
- (xxix) section 120 (duty of roads authority to have regard to the needs of disabled and blind persons in executing works etc in roads), and

- (xxx) section 141 (power of roads authority to execute works etc on default of persons required to do so) but only in relation to those functions specified in the foregoing sub-paragraphs of this paragraph).
6. The functions of the Scottish Ministers as road works authority conferred by or under the following provisions of *the New Roads and Street Works Act 1991*:
- More details on the requirements of the sections of the *New Roads and Streetworks Act 1991* listed below are contained in Schedule 7 Part 6, Annex 7.6/A.
- (i) section 109 (power of road works authority to permit execution of works and power to substitute existing permission with new one),
 - (ii) section 115 (power of road works authority to give directions as to the timing of road works),
 - (iii) section 117 (power of road works authority to restrict road works following substantial works carried out for road purposes),
 - (iv) section 118 (duty of road works authority to co ordinate execution of works of all kinds on roads),
 - (v) section 122 (power of road works authority to designate roads as having special engineering difficulties),
 - (vi) section 123 (power of road works authority to designate roads as traffic sensitive), and
 - (vii) section 131 (power of road works authority with respect to reinstatement of roads by Undertakers).
7. The function of the Scottish Ministers conferred by or under section 150 of the *Local Government etc (Scotland) Act 1994* (power of the Scottish Ministers to place mandatory traffic signs on roads in extraordinary circumstances).

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 9

COLLABORATION REQUIREMENTS

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 9

COLLABORATION REQUIREMENTS

1. REQUIREMENTS

1.1 General Requirements

1.1.1 The Operating Company shall assist the Director to identify collaboration opportunities with other public sector organisations within the region covered by the Unit. Other public sector organisations may include other Scottish and United Kingdom Government departments and local authorities.

1.1.2 In assisting the Director, the Operating Company shall identify:

- (i) opportunities for improving the efficiency and effectiveness of service delivery,
- (ii) opportunities for developing and implementing arrangements for Mutual Aid, and
- (iii) opportunities for sharing best practice, innovation, skills and experience to support collaborative working between the Operating Company and other public sector organisations.

1.1.3 No later than one month following the identification of a potential collaborative opportunity, the Operating Company shall provide a report to the Director that:

- (i) describes the collaborative opportunity,
- (ii) details the potential benefits to all parties involved, and
- (iii) identifies any additional costs associated with developing and delivering the collaborative opportunity.

The Director shall consider the report and confirm to the Operating Company if the collaborative opportunity shall be pursued.

1.2 Collaboration Forums

1.2.1 The Operating Company shall establish a Trunk Road collaboration forum within the region covered by the Unit. The Trunk Road collaboration forum shall comprise the Director, the Operating Company, the Performance Audit Group and other public sector organisations. The Trunk Road collaboration forum may also, at the discretion of the Director, include other service delivery companies.

1.2.2 The Operating Company shall assist the Director in co-ordinating and sharing opportunities for efficiency savings and service improvements with other Trunk Road collaboration forums in other Units.

1.2.3 The Operating Company shall assist the Director by attending and promoting collaborative opportunities at other collaboration forums.

1.3 Reporting Requirements

1.3.1 The Operating Company shall record details of all collaborative opportunities and provide a quarterly report to the Director detailing:

- (i) the collaborative opportunities identified,
- (ii) the potential benefits of each collaborative opportunity for all parties involved,
- (iii) the collaborative opportunities pursued,
- (iv) the service improvements delivered by each collaborative opportunity entered into, and
- (v) the efficiency savings achieved by each collaborative opportunity entered into.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 10

PARTNERING

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 10

PARTNERING

1. REQUIREMENTS

1.1 General Requirements

1.1.1 This Part details the requirements for the development and establishment of partnering arrangements between the Director and the Operating Company. The purpose of such arrangements is to:

- (i) provide the leadership and direction required to establish an integrated team and successful delivery partnership,
- (ii) provide a framework to deliver innovation and flexibility,
- (iii) develop a performance based culture focussed on delivery of the requirements of this Contract, and
- (iv) demonstrate that such arrangements are delivering these objectives, the requirements of this Contract and value for money in all services provided by the Operating Company.

1.1.2 No later than 30 days after the Commencement of Service Date, the Director and the Operating Company shall establish a Partnering Leadership Board. The Partnering Leadership Board shall be responsible for developing an integrated team focussed on the objectives set out in paragraph 1.1.1 of this Part.

1.1.3 The Partnering Leadership Board means a group consisting of a minimum of four senior management representatives, two representing the Director's organisation and two representing the Operating Company, who are responsible for implementing the partnering requirements stated in this Part.

1.2 The Partnering Leadership Board

1.2.1 The Director shall appoint one of the representatives to act as the chairman of Partnering Leadership Board. At the Director's discretion, the Performance Audit Group may also be invited to attend any meetings of the Board.

1.2.2 The Partnering Leadership Board shall meet at quarterly intervals at a time and location to be determined by the Board and all decisions made by the Partnering Leadership Board shall be made through consensus.

1.2.3 No later than 30 days after the start of the first Annual Period and each subsequent Annual Period, the Partnering Leadership Board shall develop, agree and publish an annual business plan for the Unit. When developing the annual business plan for the Unit, the Partnering Leadership Board shall consider the Director's corporate documents. The annual business plan for the Unit shall set out how the integrated team will deliver the objectives set out in paragraph 1.1.1 of this Part.

- 1.2.4 During the quarterly meetings, the Partnering Leadership Board shall:
- (i) review progress of the delivery of the annual business plan for the Unit and agree any actions required to ensure delivery, and
 - (ii) review the performance of the integrated team and agree any corrective actions required to meet these targets.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 11

COMMUNITY BENEFITS

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 3 PART 11

COMMUNITY BENEFITS

1. INTRODUCTION

1.1 General

- 1.1.1 This Part details the Operating Company's obligations for implementing community benefits that support Transport Scotland in delivering the objectives stated in the Scottish Government's *Scotland's Transport Future (2004)* and the UK Government's *Get Britain Working* policies.
- 1.1.2 No later than 30 days prior to the Commencement of Service Date, the Operating Company shall provide to the Director its Training and Employment Plan. This plan shall, as a minimum, contain details of the Operating Company's approach for training and employing its staff.
- 1.1.3 From the Commencement of Service Date, the Operating Company shall provide a quarterly report to the Director demonstrating its compliance with the requirements of this Part.
- 1.1.4 For the purpose of this Part, "New Entrant" means an individual new to the construction industry or who has been out of work for six months or more.

2. REQUIREMENTS

2.1 Training and Employment

- 2.1.1 In addition to its usual methods of advertising vacancies, the Operating Company shall advertise all jobs through Jobcentre Plus and local employability partnerships within the Unit.
- 2.1.2 The Operating Company shall, as a minimum, ensure that an average of 10 percent of all new recruits are New Entrants. All New Entrants shall have either an apprenticeship, trainee or employment contract with the Operating Company.
- 2.1.3 During each Annual Period the Operating Company shall, as a minimum:
- (i) ensure that either two members of existing staff or two new recruits are trained in a relevant qualification to Scottish Vocational Qualifications Level 2 or equivalent,
 - (ii) ensure that either one member of existing staff or one new recruit is undertaking relevant professional training, and
 - (iii) provide three work experience placements in accordance with the requirements of the Work Experience element of the UK Government's *Get Britain Working* policy. All travel costs incurred by each person undertaking a work experience placement shall be paid by the Operating Company.

These requirements shall apply to the first and every subsequent £10,000,000 of the annual budget for the Unit. The Operating Company shall increase the minimum values stated above in proportion to the annual budget for the Unit.

For the purposes of this Part, the annual budget for the Unit shall mean the Director's annual budget for the Unit excluding the costs of all Works Contracts for the same Annual Period.

2.2 Use of Supply Chain

2.2.1 Following the Commencement of Service Date, the Operating Company shall advertise all new sub-contracting opportunities related to the execution of this Contract through the Public Contracts Scotland portal.

2.3 Community Engagement

2.3.1 The Operating Company shall engage proactively with the communities adjacent to the Trunk Road network and community groups within the region of the Unit. The Operating Company's Management System shall contain details of the processes and procedures connected with this activity.

2.3.2 During each Annual Period, the Operating Company shall:

- (i) identify, develop and deliver a minimum of four themed community initiatives,
- (ii) develop and implement a minimum of four engagement projects with schools and colleges within the Unit that support the Director in the delivery of his objectives,
- (iii) identify and implement at least one opportunity for developing young people within the Unit in accordance with the Scottish Government's *Creating Opportunities Together* document. Such opportunities shall be in addition to the other requirements stated in this Part, and
- (iv) support one Work Club within the Unit, in accordance with the UK Government's *Get Britain Working* policy.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

1. INTRODUCTION

- 1.1.1 The Director will provide a web based, hosted Integrated Roads Information System with contract control and management function for use by the Operating Company in:
- (i) the provision of programmes and budgets for Schemes,
 - (ii) the issuing of Orders, recording details of Scheme delivery and making claims for payment, and
 - (iii) reporting on the material and transport carbon arising from the Operations of the Operating Company.
- 1.1.2 The Operating Company shall include documented procedures in its Management System to deliver the requirements of this Part. Detailed requirements relating to the processes and procedures to be included in the Management System are stated throughout this Part. Such requirements for processes and procedures shall apply to the Operating Company and its contractors and sub-contractors when executing Operations.

2. THE OPERATING COMPANY'S GENERAL OBLIGATIONS FOR FINANCIAL AND CONTRACT MANAGEMENT

2.1 Staffing

- 2.1.1 The Operating Company shall appoint both a Business Manager and Management System Manager to undertake the relevant key responsibilities over financial and contract management shown in Annex 5.4/B of Schedule 5 Part 4.
- 2.1.2 No later than 25 Working Days prior to the Commencement of Service Date, the Operating Company shall identify individuals from within its organisation who shall have responsibility for all elements of programme and budget preparation. During the Mobilisation Period and for the duration of this Contract, the Operating Company shall train its staff in programming and budget preparation and ensure that there are sufficient staff trained to deliver the requirements of this Part at all times.
- 2.1.3 The Operating Company shall identify an individual or individuals to train Operating Company staff in the specific activities and tasks required for relevant functions of the Integrated Roads Information System operated by the Director, including the contract control and management function. The Operating Company shall ensure that sufficient staff are available at all times to operate and maintain such systems.
- 2.1.4 The Director shall provide appropriate training on the contract control and management function of the Integrated Roads Information System to the trainer, or trainers nominated by the Operating Company in accordance with the requirements of paragraph 2.1.3 of this Part. Training by the Director will be provided prior to the Commencement of Service Date and throughout the duration of this Contract as required.

2.1.5 Following training on the contract control and management function of the Integrated Roads Information System by the Director, the Operating Company shall provide training via its trainer, or trainers, to all relevant staff.

2.2 Procedures

2.2.1 The Operating Company shall develop, implement and maintain written financial procedures in its Management System to ensure the preparation of robust estimates of costs for a Scheme which is the subject of a Bid and that records are maintained to provide an audit trail for all information contained on such Bids so that the financial commitment within the Annual Programme does not exceed the funds allocated for Operations by the Director.

2.2.2 The Operating Company shall develop, implement and maintain documented procedures for:

- (i) the provision of records for each Scheme, tracing the origin and location in the Unit of everything incorporated into the Unit by the Operating Company as part of each Scheme,
- (ii) the provision of records for each Works Contract tracing the origin and location in the Unit of everything incorporated into the Unit by a Works Contractor as part of each Scheme,
- (iii) the provision of records substantiating the quantities and value of items for the Operations for which payment under this Contract is claimed by the Operating Company (this provision shall include all activities, regardless of the method of payment referred to in Schedule 2 Part 2),
- (iv) the provision of documented evidence that the Operating Company has discharged its obligations under this Contract in respect of all matters for which payment under this Contract is claimed, and
- (v) the provision of records for measurement of materials and transport carbon in accordance with the requirements of Schedule 5 Part 8.

2.2.3 The Operating Company shall ensure that all quantities and measurements which form the basis of any Statement are supported by the use of written financial procedures. Such written financial procedures shall ensure that:

- (i) any information required by either the Operating Company or the Director is collected at the time of the measurement and is recorded within the contract control and management function of the Integrated Roads Information System,
- (ii) all measurements and quantities are recorded on Site copy Operations Instructions and pro-forma supporting forms as soon as reasonably practicable as referred to in paragraph 4.13 of this Part, and
- (iii) there is a sufficient degree of internal control specified within such procedures to instruct, supervise and check the Operations, which ensures the correctness of such measurements and quantities and their recording in the contract control and management function of the Integrated Roads Information System.

2.2.4 The Operating Company's written financial procedures shall include requirements which are applicable to the following categories of Operations:

- (i) Series 100 to 5000 inclusive and 6800:
 - (a) demonstrable evidence that the selected rates are the correct payment mechanism,
 - (b) evidence of any subsequent verification checks carried out,
 - (c) evidence to support completion of Operations,
- (ii) Series 6100:
 - (a) records of Operations carried out in respect of charges,
- (iii) Series 6200:
 - (a) creation and maintenance of a Professional Services register of suitably qualified Operating Company staff in the form provided for in Annex 4.1/G (22) of this Part,
 - (b) demonstrable evidence that Professional Services rates are the correct payment mechanism,
 - (c) timesheet analysis in sufficient detail to describe the Operations performed,
 - (d) suitable authorisation and verification of timesheets,
 - (e) completion and signature of timesheets by all relevant staff no later than the end of the week after which Operations were carried out,
 - (f) demonstrable evidence to support the rate or price being charged,
 - (g) demonstrable evidence to support the completion of Operations,
- (iv) Series 6300:
 - (a) demonstrable evidence that procurement and supervision of Works Contracts is the correct payment mechanism,
 - (b) records to support the finalisation of values (rates and prices) claimed for procurement or supervision of Works Contracts in relation to the stage of Operations provided,
- (v) Series 6500:
 - (a) demonstrable evidence that Time Work Schedule is the correct payment mechanism and authorised by the Director where applicable under the other provisions of this Contract,
 - (b) labour timesheet analysis in sufficient detail to describe the Operations performed,
 - (c) suitable authorisation and verification of labour timesheets,
 - (d) completion and signature of timesheets by all labour no later than the end of the week after which Operations were carried out,
 - (e) demonstrable evidence to support the labour rate being claimed,
 - (f) material cost records from statements and invoices,

- (g) Constructional Plant charges and any other charges or costs,
 - (h) evidence of any subsequent verification or checks carried out,
 - (i) demonstrable evidence to support completion of Operations,
 - (vi) Series 6600:
 - (a) records of accounts and invoices, and demonstrable evidence of payment of accounts and invoices,
 - (vii) Series 6700:
 - (a) record of network change by a Scottish Ministers' trunking or de-trunking order,
 - (viii) Series 7000:
 - (a) demonstrable evidence that lump sum is the correct payment mechanism, and
 - (b) demonstrable evidence to support completion of Operations.
- 2.2.5 The Operating Company shall document and control all information transferred from the measurement processes referred to in this Part and, wherever relevant, such information is reconciled and verified with the source records held by the Operating Company.
- 2.2.6 The Operating Company's written financial procedures shall ensure that the collation of Statement information is controlled and verifiable. Records shall be maintained within the contract control and management function of the Integrated Roads Information System to provide an audit trail for all information contained in such Statements.
- 2.2.7 The Operating Company shall establish documented controls for the Statement and payment processes as part of its written financial procedures contained within its Management System. Such documented controls shall ensure that the following Statement information is contractually valid and correct in accordance with:
- (i) rates and prices claimed under this Contract,
 - (ii) Order numbers, Scheme Identifiers, Work Codes routes and combinations thereof,
 - (iii) series or item numbers, and
 - (iv) the integrity of Statement calculations including quantity, rate and price multiplication, additions of totals, subtotals and cumulatives.
- 2.2.8 The Operating Company's documented controls shall require a review of Statements and Statement information by the Operating Company's Core Management Team prior to the submission of each Statement to the Director.
- 2.2.9 Works Contractor payment applications shall be submitted by the Operating Company to the Director in accordance with the procedures referred to within this Part and Schedule 6 Part 1.

2.2.10 The Operating Company shall ensure that:

- (i) details of each Works Contract are logged within the contract control and management function of the Integrated Roads Information System as referred to in Annex 4.1/G (17) of this Part,
- (ii) where a Works Contract includes more than one Scheme, the Operating Company produces the required details for each Scheme,
- (iii) a complete copy, including all information, of the Works Contractor's statement requesting payment issued immediately after the issue of the Certificate of Completion for the Scheme is held by the Operating Company for review by the Performance Audit Group, and
- (iv) submission of the Works Contractor's payment application is subject to controls and reviews by the Operating Company to allow accurate monthly reporting by the Operating Company to the Director.

3. CONTRACT CONTROL AND MANAGEMENT

3.1 Introduction

- 3.1.1 Contract control and management shall be undertaken by the Operating Company through use of the contract control and management function of the Integrated Roads Information System as supplied by the Director.
- 3.1.2 The Operating Company shall provide sufficient terminals in its offices and depots to allow input of data and use of the contract control and management function of the Integrated Roads Information System to meet the requirements of this Contract.
- 3.1.3 The Operating Company shall follow the security requirements of the Director in its use of the contract control and management function of the Integrated Roads Information System.

3.2 General Requirements

- 3.2.1 The Operating Company shall supply the Director with a list of its staff who require access to the contract control and management function of the Integrated Roads Information System. This list shall include each person's role and responsibilities under this Contract.
- 3.2.2 Each of the following shall be deemed to be a document within the contract control and management function of the Integrated Roads Information System:
 - (i) Scheme Identifier generation,
 - (ii) programmes,
 - (iii) budgets,
 - (iv) Core Operations,
 - (v) Bids,
 - (vi) Orders,
 - (vii) Works Contract Instructions,
 - (viii) Confirmation of Oral Orders,
 - (ix) Further Detailed Enquiries,

- (x) Further Detailed Directions,
- (xi) Operations Instructions,
- (xii) Scheme Completion Date,
- (xiii) Statements or Works Contractor payment applications,
- (xiv) Payment Notified Records,
- (xv) Payment Received Records,
- (xvi) Works Contract payment certification,
- (xvii) Professional Services Register amendments or additions,
- (xviii) Trunk Roads damages claims,
- (xix) Contract Price Fluctuation indices amendments, and
- (xx) carbon factors amendments.

3.2.3 Up to the point of transaction by any party, the other parties shall not be allowed to see the information contained in a document.

When a transaction has been executed, the Integrated Roads Information System shall make the document available to all parties and automatically send electronic notification, in the form of an external e-mail message, to the responsible persons in the other organisations, identifying what action has occurred.

3.2.4 The e-mails referred to in paragraph 3.2.3 of this Part shall contain as a minimum the following information:

- (i) the type of transaction,
- (ii) the identity of the responsible person that the e-mail is intended to be viewed by,
- (iii) a general description relating to the transaction, which shall include any time dependencies relating to it, and
- (iv) for those transactions relating to Schemes, the Scheme Identifier with the Route number and Work Code.

3.2.5 For all Schemes, the contract control and management function of the Integrated Roads Information System shall be capable of attaching other information to such documents including textual documents, spreadsheets, databases, presentations, photographs, drawings, programmes and any other documentation or data relevant to that Scheme. The Operating Company shall notify the Director of any file type it wishes to use within the contract control and management function of the Integrated Roads Information System for which a reader is not available.

3.2.6 The Director shall provide report writing facilities within the contract control and management function of the Integrated Roads Information System for the use of himself, the Performance Audit Group and the Operating Company.

All reports on the Operating Company's activity for a particular month shall be available within the contract control and management function of the Integrated Roads Information System no later than the 14th day of the next month.

3.2.7 As a minimum, the following reports from the contract control and management function of the Integrated Roads Information System shall be deemed standard

reports to be produced by the Operating Company on a monthly basis for the use of the Director and Performance Audit Group:

- (i) Order versus spend,
- (ii) costs by Item series,
- (iii) Statement by Operations Instructions for current month,
- (iv) Scheme Completion Date and Scheme Closure Date,
- (v) Payment Notified Record checking facility,
- (vi) Works Contractors – tender costs and outturn costs,
- (vii) Operations Schemes outturn costs compared to Estimated Bid Values,
- (viii) Order register showing related Further Detailed Enquiries and Further Detailed Directions,
- (ix) Further Detailed Enquiries,
- (x) Further Detailed Directions,
- (xi) Bids not the subject of an Order,
- (xii) Schemes the subject of an Order but not started,
- (xiii) rates and prices for new items,
- (xiv) Contract Price Fluctuation Indices by month,
- (xv) material and transport carbon outputs in accordance with the requirements of Annex 4.1/G (23) of this Part,
- (xvi) fields for ad hoc reports, and
- (xvii) programme for the current and following Financial Year detailing the Operation type and route.

3.2.8 Where particular Schemes or Orders, or parts of Schemes or Orders, are to be paid under Time Work Schedule as referred to in Schedule 2 Parts 1 and 2, the contract control and management function of the Integrated Roads Information System shall, as a minimum, be populated by the Operating Company with:

- (i) measurement data,
- (ii) actual cost data, and
- (iii) supporting calculations in relation to labour staff, Constructional Plant and materials.

Annex 4.1/G (20) of this Part details the supporting documentation under individual Operations Instructions to be held by the contract control and management function of the Integrated Roads Information System.

The Director shall be entitled to omit from payment any amounts due for Operations undertaken under Time Work Schedule where the appropriate cost and measurement data in accordance with Annex 4.1/G (20) has not been logged onto the contract control and management function of the Integrated Roads Information System.

The back-up source documentation for the reports listed in paragraph 3.2.7 of this Part shall be made available to the Director and the Performance Audit Group for inspection as follows:

- (iv) held within the contract control and management function of the Integrated Roads Information System with suitable permissions in place, or
- (v) retained at the Operating Company's Central Office, or
- (vi) sent to the offices of the Performance Audit Group within three Working Days of a written request for such information from the Director.

4. FINANCIAL AND CONTRACT MANAGEMENT PROCEDURES

4.1 The Annual Process

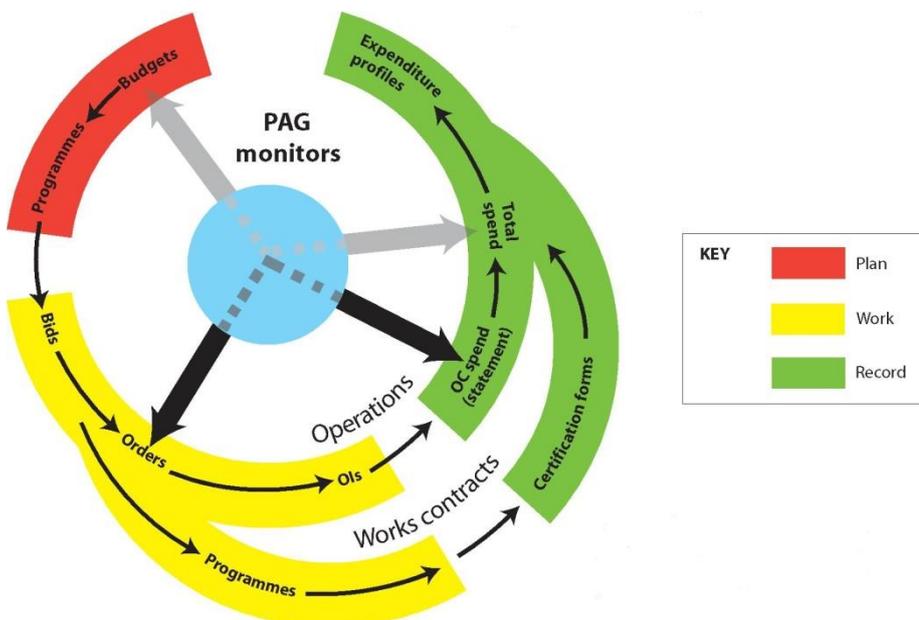
4.1.1 The Director and the Operating Company shall manage and monitor budgets based on the Financial Year. The annual budget will be supplied to the Operating Company by the Director and will identify sums available for Core Operations, Operations and Works Contract Schemes.

4.1.2 The Business Manager shall have day to day responsibility for all matters related to budgetary expenditure and control and shall be the Operating Company's point of contact for all issues related to budgetary management and control specified in this Part.

4.1.3 The financial management and monitoring process of programmes and budgets for this Contract shall be based on operating through an Annual Cycle of events.

4.1.4 Each Annual Cycle shall include the tasks described in paragraphs 4.1.5 to 4.1.23 of this Part. The process is illustrated in Figure 4.1.4.A below.

Figure 4.1.4.A – Annual Cycle



- 4.1.5 The Director shall use the contract control and management function of the Integrated Roads Information System to generate Schemes for Core Operations covering the duration of this Contract. Core Operations will be outwith the annual Bid process but shall be included within the one and three year maintenance programmes to fully record the commitment of Annual Budget.
- 4.1.6 The Operating Company and Director shall undertake the various assessments and inspections described in paragraph 4.2 of this Part.
- 4.1.7 For roads structural maintenance Schemes, the Operating Company shall analyse the results of these assessments and inspections in accordance with the requirements contained within Transport Scotland's *Annual Process for Roads Structural Maintenance*. The Director shall provide *Annual Process for Roads Structural Maintenance* to the Operating Company no later than 25 Working Days prior to Commencement of Service Date and stipulate the relevant timescales for submission and approval of roads structural maintenance Schemes.
- 4.1.8 For Structures maintenance Schemes, the Operating Company shall analyse the results of assessments and inspections in accordance with the *Design Manual for Roads and Bridges* together with any relevant guidance provided by the Director.
- 4.1.9 The Planned Maintenance Manager and the Bridges Manager shall analyse the data within the pavement management, routine maintenance and management and structures management functions of the Integrated Roads Information System as part of the preparation and maintenance of an annual and three year rolling programme.
- 4.1.10 The Operating Company shall address the requirements of the *Disability Discrimination Act: Good Practice Guide for Roads* on all proposed Schemes as part of the preparation and maintenance of an annual and three year rolling programme.
- 4.1.11 Based on the assessments and inspections described in paragraph 4.2 of this Part, the Operating Company shall submit to the Director annually:
- (i) a draft three year programme of Operations, Core Operations and Works Contract Schemes,
 - (ii) a draft one year programme of Operations, Core Operations and Works Contract Schemes,
 - (iii) recommendations for improvements that could be incorporated into Operations and Works Contract Schemes,
 - (iv) recommendations for further investigations required to enable Operations and Works Contract Schemes to be accurately defined, and
 - (v) outline Bids, including preliminary estimates, for Operations and Works Contract Schemes for the one year and three year programmes.
- The Operating Company shall meet with the Director to discuss the proposed programmes, recommendations and outline Bids in accordance with the requirements of paragraphs 4.4 and 4.5 of this Part.
- 4.1.12 Following this meeting, the Director will confirm the accepted indicative one and three year programmes for Operations to be the subject of an Order, Core Operations and Works Contract Schemes to the Operating Company. The Director will also confirm the indicative budget for the next Financial Year.

- 4.1.13 The Operating Company shall submit to the Director revised Bids within the timescales required in Transport Scotland's *Annual Process for Roads Structural Maintenance* and the requirements shown at Figure 4.1.4.A, including:
- (i) detailed estimates for each Operations and Works Contract Scheme,
 - (ii) a detailed one year programme, and
 - (iii) a detailed financial profile.
- 4.1.14 Bids shall be submitted in accordance with the requirements of paragraph 4.7 of this Part. The Director shall thereafter issue Orders to the Operating Company to undertake those Operations that he has selected from the Bids submitted.
- 4.1.15 The Operating Company shall issue Operations Instructions for both Core Operations and Operations.
- 4.1.16 For approved Schemes to be executed as a Works Contract, the Director shall issue a Works Contract Instruction to the Operating Company. A Works Contract Instruction shall not be issued until such time as Statements of Intent and Value for Money Assessments in accordance with the requirements of paragraph 4.5 of this Part have been undertaken and submitted by the Operating Company and approved by the Director.
- 4.1.17 The Operating Company shall make arrangements for approved Works Contract Schemes to be progressed and executed in accordance with the requirements of Schedule 6 Part 1 and Schedule 6 Part 4.
- 4.1.18 The Operating Company shall monitor all Operations and Works Contract Schemes and provide a monthly report to the Director demonstrating compliance with the one year programme.
- 4.1.19 In the event of any deviation from the one year programme, the Operating Company shall provide a revised programme to the Director indicating how Operations will be brought back onto programme.
- 4.1.20 All written correspondence, including e-mail, raised by the Operating Company with the Director relating to Schemes, Bids and Orders, shall be attached to the relevant Scheme details recorded within the contract control and management function of the Integrated Roads Information System.
- 4.1.21 Where changes occur which have an effect on the financial value of Operations or Works Contract Schemes, the Operating Company shall submit a revised Bid to the Director. The Director shall consider such Bid and, at his discretion:
- (i) may issue a further Order, or
 - (ii) approve the revised bid for the Works Contract to vary the value of any such Scheme.

4.1.22 The key dates and actions within the cycle of events for Scheme programme and budget preparation are those contained within Tables 4.1.22A and 4.1.23A below. For roads structural maintenance Schemes, the requirements of Transport Scotland's *Annual Process for Roads Structural Maintenance* will apply for Scheme Programme preparation. For other Schemes the key activities and dates within the cycle will be as follows:

Table 4.1.22.A Annual Process - Timetable

Stage	Action
1.	Operating Company supplies to the Director by 15 August annually: Draft three year and one year programmes – the Operating Company shall supply to the Director all of the information referred to in paragraph 4.1.11 of this Part.
2.	Programme meeting – the Director shall meet the Operating Company and discuss the draft indicative programmes and estimates referred to in paragraph 4.1.11 of this Part by 15 September annually.
3.	Indicative three year and one year programmes and annual budget – the Director shall provide a copy of: (a) the indicative three year programme, and (b) the indicative one year programme, to the Operating Company by 15 October annually together with an accepted indicative budget for the next Financial Year as referred to in paragraph 4.1.12 of this Part.
4.	Annual detailed one year programme of Bids and financial profile – the Operating Company shall submit to the Director by 15 November annually, revised Bids including: (a) detailed estimates for each Operations to be the subject of an Order Scheme and Works Contract Scheme, (b) a detailed one year programme, and (c) a detailed financial profile as referred to in paragraph 4.1.13 of this Part.
5.	Orders – the Director shall issue sufficient Orders to the Operating Company to allow Operations to be undertaken within the next Financial Year by 15 January annually.
6.	Orders – the Director shall, at his discretion, issue further Orders to the Operating Company for other Operations which he requires to be undertaken. Orders for further investigation, detailed Design, tender, procurement and construction of Schemes may be issued during the year.

4.1.23 For the first Annual Period only the following actions shall apply with revised latest dates as follows:

Table 4.1.23.A – Year 1 Annual Process Timetable

Stage	Latest Date	Action
1	10 weeks prior to Commencement of Service Date	The Director shall provide the Operating Company with details of the current three and one year programmes to request revised Estimated Bid Values for all Schemes therein. The Operating Company shall submit revised Bids for all Schemes.
2	6 weeks prior to Commencement Of Service Date	Annual detailed one year programme of Bids and financial profile – the Operating Company shall submit to the Director revised Bids including: <ul style="list-style-type: none"> (a) detailed estimates for each Operations to be the subject of an Order Scheme and Works Contract Scheme, (b) a detailed one year programme, and (c) a detailed financial profile as referred to in paragraph 4.1.13 of this Part.
3	2 weeks prior to Commencement Of Service Date	Orders – the Director shall issue sufficient Orders to the Operating Company to allow Operations to be undertaken within the next Financial Year.

4.2 Inspection and Assessments Types

4.2.1 The Operating Company shall consider the findings of the most up to date inspections and assessments as undertaken by the Director in determining future maintenance needs:

- (i) road condition survey information provided through the Integrated Roads Information System,
- (ii) results of further investigations, tests and surveys noted in this Part, carried out by the Operating Company as required by the *Design Manual for Roads and Bridges*,
- (iii) asset, Defect and condition information recorded in the routine management and maintenance function of the Integrated Roads Information System referred to in Schedule 4 Part 2 and Schedule 7 Part 1,
- (iv) Defects and condition information associated with bridges and other Structures recorded in the structures management function of the Integrated Roads Information System referred to in Schedule 7 Part 6 and Schedule 7 Part 7,
- (v) the results of the Sideways Coefficient Routine Investigation Machine (SCRIM) skidding resistance testing, and
- (vi) potential road safety Schemes as referred to in Schedule 8 Part 3.

4.3 Skid Resistance Management

- 4.3.1 The Operating Company shall appoint a Skid Resistance Manager in accordance with the requirements of Schedule 5 Part 4. The Skid Resistance Manager shall manage the Operating Company's skid resistance team.
- 4.3.2 The Operating Company shall comply with the requirements of *Design Manual for Roads and Bridges* for skid resistance management and the requirements and advice contained in the *Guidance Document for Implementing a Skid Resistance Policy for Transport Scotland*. If there is any conflict between these documents, the *Guidance Document for Implementing a Skid Resistance Policy for Transport Scotland* shall take precedence.
- 4.3.3 The Operating Company shall undertake investigations as described in the *Guidance Document for Implementing a Skid Resistance Policy for Transport Scotland* and record the information included in Appendix 1 of that document and submit the records to the Director. During the course of this Contract, the Director may require the Operating Company to record this information in the Integrated Roads Information System.
- 4.3.4 After 31 October in each Annual Period, the Operating Company shall use the Integrated Roads Information System to generate the long-list of Sites to be investigated. The Operating Company shall assign each of the Sites a priority in accordance with the *Guidance Document for Implementing a Skid Resistance Policy for Transport Scotland*.
- 4.3.5 The Operating Company shall complete the initial investigations arising from the long-list no later than 28 February in each Annual Period and identify which Sites require detailed Site investigations.
- 4.3.6 The Operating Company shall proceed with detailed Site investigations in the established priority order. Detailed Site investigations for all priority 1 Sites and not less than 200 Sites in total shall be investigated by the Operating Company by 15 August in each Annual Period.
- 4.3.7 Following completion of the detailed Site investigations, the Operating Company shall submit proposals for the erection, maintenance and removal of warning signs in accordance with the *Guidance Document for Implementing a Skid Resistance Policy for Transport Scotland* for the Director's consent. Following receipt of the Director's consent and subject to an Order, the Operating Company shall erect, maintain and remove such warning signs.
- 4.3.8 The Operating Company shall submit to the Director and the Performance Audit Group a skid policy progress report in a form to be agreed with the Director before the 15th day of each month.
- 4.3.9 Before 31 August in each Annual Period, the Operating Company shall prepare and submit to the Director an annual report which summarises its activities in respect of skid resistance management. The Operating Company shall propose a form and content for the annual report to the Director for his consent. As a minimum, the report shall contain:
- (i) the extent of Site category reviews completed and where changes are proposed,

- (ii) a summary of the monthly progress reports submitted during the Annual Period,
- (iii) the long-list of Sites indicating:
 - (a) where initial and detailed Site investigations have been completed,
 - (b) where action has and has not been taken,
 - (c) where Sites have been added to a programme of works,
 - (d) where changes to investigatory levels are proposed, and
 - (e) where further monitoring is proposed,
- (iv) the Operating Company's view on any common findings or outcomes from the investigations which might influence future Transport Scotland policy decisions,
- (v) identification of any conflicts within the Transport Scotland *Guidance Document for Implementing a Skid Resistance Policy for Transport Scotland*, or between the policy and other Contract systems or processes, and
- (vi) suggestions for any aspects of skid resistance management which could be improved or developed.

4.3.10 The Operating Company's Skid Resistance Manager and a practitioner from its skid resistance team shall attend a Transport Scotland Skid Policy User Group a minimum of four times each year on dates to be notified by the Director.

4.4 Programme Development

4.4.1 The Operating Company shall use the current information available from inspections and assessments when developing one year and three year maintenance programmes. The Operating Company shall record the one year programme within the contract control and management function of the Integrated Roads Information System. The three year programme shall be capable of being viewed using the contract control and management function of the Integrated Roads Information System.

4.4.2 The Operating Company shall undertake the development of the programmes to meet the dates referred to in Tables 4.1.22.A and 4.1.23.A of this Part. For roads structural maintenance Schemes, the requirements of Transport Scotland's *Annual Process for Roads Structural Maintenance* will apply. The development of programmes shall not be delayed pending the results of any ongoing inspections or assessments.

4.4.3 The Operating Company's analysis of assessments and inspections shall be presented in sufficient detail and in a format acceptable to the Director, to allow the proposed maintenance Schemes to be assessed.

4.4.4 Guidance on methods of analysis is provided in the *Design Manual for Roads and Bridges*. Any further investigations required to clearly define Schemes and provide detailed estimates shall be identified as part of the Operating Company's proposed programme.

4.4.5 Where the analysis referred to in paragraph 4.4.3 of this Part indicates conditions that may be responsive to a number of different treatments or solutions, the

Operating Company shall submit a list of the different treatments or solutions together with a relevant whole life costing analysis as part of providing its recommended option to the Director. Such information shall be in sufficient detail to be able to provide an indicative Estimated Bid Value and a quantification of the extent of the Operations or the Works that are needed.

- 4.4.6 Where a maintenance Scheme is identified that encompasses a section of road which is scheduled to be replaced by a planned Scheme, the Operating Company shall consider deferring the maintenance Scheme. In such situations the Operating Company shall consider and report to the Director on the implications of such a deferral.

4.5 Statements of Intent and Value for Money Assessments

- 4.5.1 The Operating Company shall agree a programme annually with the Director for the submission of Statements of Intent in accordance with the requirements of Transport Scotland's *Annual Process for Roads Structural Maintenance* for Schemes under Work Series 0100. For all other Schemes, a programme shall be agreed annually with the Director in accordance with paragraphs 4.1.22 and 4.1.23 and Tables 4.1.22.A and 4.1.23.A of this Part.
- 4.5.2 The programme shall ensure that submission of Statements of Intent is in a timely and phased manner, at least 25 Working Days prior to the commencement of any works, allowing time for effective consideration of each submission by the Director. The Operating Company shall ensure that Statements of Intent are developed and submitted for year two and year three programmes for consideration to accommodate any changes to programme or budget.
- 4.5.3 All Statements of Intent (Scheme approval) and Value for Money Assessments shall provide sufficient detail to demonstrate to the Director that the proposed Scheme represents value for money. An outline Statement of Intent (Scheme approval) and (Inception) form is provided at Annex 4.1/A.
- 4.5.4 For all Schemes in excess of an Estimated Bid Value of £1,000,000, the feasibility of the Works Contractor sourcing at least 10 percent of the materials required for the Works from recycled, secondary or re-used sources shall be fully considered within Statements of Intent.
- 4.5.5 For all Schemes subject to submission of a Statement of Intent, the list of accessibility barriers present within each Scheme shall be discussed with the Director to determine if all barriers can be addressed within the available budget in accordance with the *Addressing Barriers to Accessibility on the Trunk Road Network: Guidance Note for Operating Companies*.
- 4.5.6 For proposed roads structural pavement maintenance Schemes within Work Series 0100, the Operating Company shall submit Statements of Intent and, where appropriate, Value for Money Assessments to the Director in accordance with the timescales and financial thresholds given in Transport Scotland's *Annual Process for Roads Structural Maintenance*.

- 4.5.7 For proposed bridges general maintenance Schemes within Work Series 1200 and with an Estimated Bid Value of more than £50,000, the Operating Company shall submit to the Director:
- (i) a Statement of Intent (Scheme approval) for those Schemes with an Estimated Bid Value of under £350,000 for the Director's consideration using the outline form provided at Annex 4.1/A of this Part,
 - (ii) for all Schemes with an Estimated Bid Value of more than £350,000 a Statement of Intent (Inception), together with a Value for Money Assessment,
 - (iii) details of any departures from the *Design Manual for Roads and Bridges*, and *Disability Discrimination Act: Good Practice Guide for Roads*,
 - (iv) an approval in principle, where appropriate under the *Design Manual for Roads and Bridges*,
 - (v) a list of all accessibility barriers recorded in the routine maintenance and management function of the Integrated Roads Information System on the DDA1 or DDA2 Scheme pro forma provided in Annex 4.1/I of this Part and any other barriers identified, with:
 - (a) the estimated cost to resolve each item,
 - (b) a recommendation itemising barriers that will be addressed within the proposed Scheme, and
 - (c) reasons for each item which is not being addressed in the proposed Scheme,
 - (vi) any other relevant information in support of the Scheme.
- 4.5.8 Following review by the Director of Schemes with an Estimated Bid Value of more than £350,000, the Operating Company will complete the Statement of Intent (Scheme approval) for the Director's approval using the outline form provided at Annex 4.1/A of this Part,
- 4.5.9 When the Estimated Bid Value of a Work Series 1200 Scheme is greater than £350,000, a technical workshop shall be held between the Director and the Operating Company to discuss potential remedial options and proposals for further studies and investigations. The Director retains the right to instigate a technical workshop for Schemes under £350,000 where deemed appropriate.
- 4.5.10 The Operating Company shall submit a written report containing the recommendations agreed at the technical workshop to the Director for consent within 25 Working Days of such workshop being held.
- 4.5.11 For proposed Schemes within Works Series other than 0100 and 1200, to be ordered as Operations or a Works Contract with an Estimated Bid Value of over £10,000, the Operating Company shall complete a Statement of Intent (Scheme approval) which shall contain details that confirm the need for the Scheme, using the outline form provided at Annex 4.1/A of this Part.
- 4.5.12 For proposed Schemes within Works Series, other than 0100 and 1200, to be ordered as Operations or a Works Contract with an Estimated Bid Value of over £50,000, the Operating Company shall complete a Statement of Intent (Inception) using the outline form provided at Annex 4.1/A of this Part, together with a Value for

Money Assessment which shall contain details that confirm the need for the Scheme.

4.5.13 Subject to an order, the Operating Company shall undertake further studies and investigations as required by the Director. Such further studies and investigations may include, but not be limited, to:

- (i) analysis of the comparative costs of delaying Schemes, and
- (ii) value engineering and value management assessments in accordance with Part 5 of the Scottish Government Transport and Planning Group's *Value for Money Manual*.

4.5.14 Following the Director's consideration of the Statement of Intent (Inception), Value for Money Assessments and any further studies and investigations, the Operating Company shall submit a Statement of Intent (Scheme approval) using the outline form provided at Annex 4.1/A of this Part.

4.5.15 For proposed Schemes within Works Series other than 0100 and 1200, to be ordered as Operations or a Works Contract where the estimated value of any Scheme is greater than £350,000, a technical workshop shall be held between the Director and the Operating Company to discuss potential remedial options and proposals for further studies and investigations. The Director retains the right to instigate a technical workshop for Schemes under £350,000 where deemed appropriate.

4.5.16 The Operating Company shall submit a written report containing the recommendations agreed at the technical workshop to the Director for consent within 25 Working Days of such workshop being held.

4.6 Programmes and Profiles

4.6.1 For the first Financial Year in which the Commencement of Service Date arises, the Operating Company shall not be required to submit the draft programmes referred to in paragraph 4.1.11. Table 4.1.23.A specifies the steps and timescales to be followed for the first Financial Year.

4.6.2 For each subsequent Financial Year, the Operating Company shall prepare and submit draft one and three year programmes covering all proposed Schemes to the Director using the steps and timescales referred to in:

- (i) Transport Scotland's *Annual Process for Roads Structural Maintenance*, and
- (ii) Table 4.1.22.A of this Part.

4.6.3 Draft one year programmes shall contain the Schemes to be undertaken for Core Operations, Operations and Works Contracts proposed for the next Financial Year. Draft three year programmes shall contain all proposed Schemes for Operations at individual locations, or which are Route based, or which are proposed as Works Contracts.

4.6.4 The Operating Company shall create and record within the contract control and management function of the Integrated Roads Information System, the detailed one year programme and financial profile to allow activity monitoring and appropriate financial control by the Director. This shall be in a format and at a level of detail in accordance with that shown at Annex 4.1/B of this Part.

4.7 Bids

- 4.7.1 For Core Operations, the Director shall utilise the contract control and management function of the Integrated Roads Information System to generate an annual Bid and approval for inclusion within the annual programme.
- 4.7.2 When submitting the detailed one year programme, the Operating Company shall also submit Bid reports to the Director for the next Financial Year that complement the detailed one year programme. This shall be done within the timescale referred to in Transport Scotland's *Annual Process for Roads Structural Maintenance* and Table 4.1.22.A of this Part.
- 4.7.3 A Bid shall contain the information shown at Annex 4.1/G (4) and (5) of this Part.
- 4.7.4 The Operating Company shall seek approval from the Director through Works Contract Instructions for:
- (i) developments in a Works Contract that lead or may lead to changes in cost or value as soon as they become apparent to the Engineer or Project Manager or equivalent, and
 - (ii) changes or expected changes in the bills of quantities, programme, milestone schedules and the like allowed for in the Works Contract that may materially affect the final cost or value of the Works Contract,
- in accordance with the requirements stated in Schedule 6 Part 1.
- 4.7.5 In addition to the submission of the annual detailed one year programme of Bids to the Director, further Bids may be submitted by the Operating Company at any time during the Financial Year. Further Bids submitted during the Financial Year shall relate to:
- (i) amending existing Bids, either in terms of work content or value, or
 - (ii) additional Schemes.
- 4.7.6 When a further Bid relates to an additional Scheme, the Operating Company shall submit the Bid to the Director at least 25 Working Days before the proposed Scheme commencement date. Such Schemes shall not commence until consent to the Bid has been given by the Director.
- 4.7.7 The Operating Company shall identify each element of an Estimated Bid Value, as to Design, investigation and construction, to enable the element to be approved separately at the Director's sole discretion.

4.8 Orders for Operations and Works Contract Instructions

- 4.8.1 An Order may contain one or more Schemes. Each Scheme within an Order shall, as a minimum, contain the information shown at Annex 4.1/G (6) of this Part.
- 4.8.2 There are two categories of Scheme which operate differently with regard to the use of Scheme Identifiers:
- (i) Schemes where the Scheme Identifier remains the same over the complete period of the Scheme and may cover a number of Financial Years. These shall be Site or Route specific Schemes generally related to structural pavement maintenance, planned general repair, technical survey, strategic road safety, minor improvement and general bridge maintenance, together with all Schemes undertaken under Works Contracts, and

- (ii) Schemes where the Scheme Identifier relates only to the Financial Year of the Order.

Should the Operating Company have any doubt as to the category of a Scheme, it shall seek written clarification from the Director.

- 4.8.3 Where Operations for a Scheme have not been completed within the Financial Year, the Operating Company shall issue a Bid for the next Financial Year to cover the completion of such Operations. Operations which are undertaken in one Financial Year shall not be inserted into a Statement using an Order from a previous Financial Year, unless the Operating Company is instructed to do so by the Director.
- 4.8.4 Orders for Schemes with an Estimated Bid Value of less than £350,000 shall be issued by the Director based upon the Bids submitted by the Operating Company.
- 4.8.5 The Director retains the right to generate Scheme Identifiers and issue Orders that are not based upon Bids submitted by the Operating Company.
- 4.8.6 The Director may vary the work content, extent and value of a Scheme by issuing a further Order.
- 4.8.7 Schemes with an Estimated Bid Value of more than £350,000 shall be approved and controlled in accordance with paragraph 4.1.16 of this Part through the issue of a Works Contract Instruction by the Director.
- 4.8.8 The Director shall issue Works Contract Instructions through the contract control and management function of the Integrated Roads Information System based upon Bids submitted by the Operating Company. The Director retains the right to generate Scheme Identifiers and issue Works Contract Instructions that are not based upon Bids submitted by the Operating Company.
- 4.8.9 A Works Contract Instruction can contain one or more Schemes. Each Scheme within a Works Contract Instruction shall, as a minimum, contain the information shown at Annex 4.1/G (7) of this Part.
- 4.8.10 The Director may vary the work content, the extent and the value of a Scheme which is the subject of a Works Contract Instruction by issuing a further Works Contract Instruction.

4.9 Further Detailed Enquiries

- 4.9.1 The Operating Company shall submit any requests for clarifications regarding Operations to be undertaken via a Further Detailed Enquiry to the Director. All clarifications sought verbally or electronically shall be confirmed by the issue of a Further Detailed Enquiry within two Working Days of the clarification being sought.
- 4.9.2 A Further Detailed Enquiry shall contain as a minimum the information shown at Annex 4.1/G (10) of this Part.
- 4.9.3 The Director shall have sole discretion as to whether or not it is appropriate to issue a response to a Further Detailed Enquiry.
- 4.9.4 In those cases where a general enquiry is being made through a Further Detailed Enquiry, the routine services activity Scheme and Order shall be used. The routine services activity Work Code shall be 0701.

4.10 Further Detailed Directions

- 4.10.1 The Director shall issue a Further Detailed Direction to the Operating Company either in response to a Further Detailed Enquiry, or when considered appropriate, to clarify or provide further details in respect of existing Orders.
- 4.10.2 A Further Detailed Direction shall be treated by the Operating Company as if it was an Order issued under this Contract.
- 4.10.3 A Further Detailed Direction shall contain, as a minimum, the information shown at Annex 4.1/G (11) of this Part.
- 4.10.4 The Director shall have sole discretion as to whether or not it is appropriate to issue a Further Detailed Direction in response to a Further Detailed Enquiry.
- 4.10.5 When a Further Detailed Enquiry or Further Detailed Direction is issued, the Order register shall be updated to identify that a dependent Further Detailed Enquiry or Further Detailed Direction exists.
- 4.10.6 Within 10 Working Days of the completion of the Further Detailed Direction, the Operating Company shall enter the date that it completed all parts of the Further Detailed Direction.

4.11 Scheme Completion and Closure

- 4.11.1 For all Core Operations within the annual programme, the contract control and management function of the Integrated Roads Information System shall insert a Scheme Closure date 10 Working Days after the end of the Annual Period.
- 4.11.2 The Operating Company shall record within the contract control and management function of the Integrated Roads Information System:
 - (i) the actual date when all Operations within each individual Scheme subject to an Order have been completed, within five Working Days of actual completion of the Operations. This date shall be known as the Scheme Completion Date, and
 - (ii) the actual date when all Further Detailed Directions within each individual Scheme have been completed.
- 4.11.3 Schemes shall not be recorded as complete until all Further Detailed Directions have been completed and the "Director objects" flag in the contract control and management function of the Integrated Roads Information System has been changed to "no" by the Director.
- 4.11.4 The Operating Company shall record within the contract control and management function of the Integrated Roads Information System the date on which it considers that all costs for a Scheme subject to an Order have been included in a Statement. This date shall be known as the Scheme Closure Date. The Scheme Closure Date shall be logged as soon as possible but in any case no later than 56 days from the Scheme Completion Date being logged as referred to in paragraph 4.11.2.

The Operating Company shall not be entitled to claim any further costs for a Scheme after the Scheme Closure Date.
- 4.11.5 The Director shall monitor the performance of the Operating Company with regards to the period between the completion of Schemes and finalisation of costs within Statements.

- 4.11.6 Should the Operating Company not log a Scheme Closure Date within 56 days of a Scheme Completion Date being logged, the contract control and management function of the Integrated Roads Information System shall enter that date automatically on the 56th day as the Scheme Closure Date and prevent the Operating Company from entering any further costs against the Scheme.

The contract control and management function of the Integrated Roads Information System shall allow the Director to lift this bar at his sole discretion.

- 4.11.7 The Operating Company shall provide a status report giving reasons for active Schemes not having a Scheme Completion Date to the Director, copied to the Performance Audit Group, quarterly on the 14th day of the month in each Annual Period.
- 4.11.8 Within five Working Days following completion of the Scheme, the Operating Company shall provide the Director with the completed DDA1 or DDA2 Scheme pro forma provided in Annex 4.1/I of this Part, noting the actual construction cost and confirming which barriers were addressed.
- 4.11.9 The Operating Company shall provide to the Director quarterly reports in each Annual Period summarising the barriers to accessibility that have been addressed to date and related costs.

4.12 Oral Orders

- 4.12.1 On receipt of an oral Order, the Operating Company shall issue a Confirmation of Oral Order with a Bid to cover the Operations which are the subject of such oral Order to the Director by 10:00 hours of the next Working Day. A Confirmation of Oral Order shall, as a minimum, contain the information stated in Annex 4.1/G (8) of this Part.
- 4.12.2 Within one Working Day of receipt of a Confirmation of Oral Order and the supporting Bid, the Director shall:
- (i) issue an Order accepting the Bid as submitted and respond to the Confirmation of Oral Order with a Further Detailed Direction, or
 - (ii) issue an Order revising the Bid as submitted and confirm the changes made using a Further Detailed Direction, or
 - (iii) issue a Further Detailed Direction explaining why he considers that an oral Order has not been issued.
- 4.12.3 Should the Operating Company for any reason not issue a Confirmation of Oral Order and Bid to cover an oral Order within the timescale described in paragraph 4.12.1 of this Part or should the Director for any reason not undertake one of the actions referred to in paragraph 4.12.2 of this Part within the relevant timescale, then such Order shall be deemed to be terminated with immediate effect and the Operating Company shall terminate the relevant Operations as quickly as possible.

4.13 Operating Company Operations Instructions

- 4.13.1 The Operating Company shall issue Operations Instructions for the undertaking of all Operations. The information to be contained in an Operations Instruction is stated in Annex 4.1/G (13) of this Part.

- 4.13.2 The Operating Company shall use the contract control and management function of the Integrated Roads Information System to issue Operations Instructions to its Operations personnel and sub contractors.
- 4.13.3 All Operating Company depots and sub-offices shall have the capacity to issue paper copies of Operations Instructions to Operations personnel omitting the series and items within the Schedule of Rates and Prices. The paper Site copy of each Operations Instruction shall include a section allowing Site changes to Operations to be recorded together with the reasons for such changes.
- 4.13.4 For Work Series Codes 0100, 0300, 0800, 0900, 1200, and 9802, (other than for those Operations Instructions raised in respect of Category 1 Defects), any Operations Instruction shall have an estimate of the Principal Distance for the Scheme inserted within it in accordance with the requirements of Annex 4.1/G (23) of this Part.
- 4.13.5 The Operating Company shall record all changes on each Site Operations Instruction including any changes to the Operations undertaken or to the quantity of work undertaken. All such changes shall be recorded at the Site either prior to, or at the completion of, the Operations.
- A copy of this Site Operations Instruction shall be retained in the depot sub-office with a copy returned to the Central Office within five Working Days of the Operation being completed.
- 4.13.6 An Operating Company authorised member of staff shall sign off each Site Operations Instruction to verify that the nature and extent of the Operations shown on the Operations Instruction, including any changes, were necessary and were undertaken satisfactorily.
- Each Site Operations Instruction shall be countersigned by the Operating Company's authorised manager responsible for the Operations.
- 4.13.7 The Operating Company shall record in the contract control and management function of the Integrated Roads Information System all measurements, including changes to Operations Instructions and reasons for differences to estimated quantities which have been recorded on the Site copy of the Site Operations Instruction, within five Working Days of completion of the Operations.
- 4.13.8 Where the Operating Company wishes to undertake a number of Site Operations related to different Scheme Identifiers at the same location, it may issue a Consolidated Operations Instruction containing a number of Site Operations Instructions. Each Consolidated Operations Instruction shall be issued with a unique consecutive identifier number.

4.14 New Rates

- 4.14.1 Where the Operating Company considers that the items within the Schedule of Rates and Prices are not applicable to the Operations to be undertaken and proposes to use:
- (i) rates or prices deduced from applicable rates and prices as referred to in Schedule 1, or
 - (ii) rates or prices by measurement and valuation in accordance with fair rates and prices as referred to in Schedule 1, or

(iii) a Lump Sum Quotation as referred to in Schedule 1,
it shall use the procedure described at paragraphs 4.14.2 to 4.14.8 below.

4.14.2 The Operating Company shall submit to the Director:

- (i) a proposed item description, a unit of measurement and a rate or price deduced from applicable rates and prices, or
- (ii) a rate or price in accordance with fair rates and prices, with a supporting calculation of the build up of such rate or price, or
- (iii) a quotation supported by calculations showing the build-up of the price. For the purposes of this paragraph 4.14 and the contract control and management function of the Integrated Roads Information System, a quotation shall be considered as a single rate of £1 and with a quantity of the quotation value and a unit of 'sum'.

4.14.3 The Director shall review the wording of the item description. If the Director considers that existing rates and prices contained in the Schedule of Rates and Prices are not applicable to the Operations, he shall insert a suitable description together with a new series or item number and a unit of measurement into the Schedule of Rates and Prices held within the contract control and management function of the Integrated Roads Information System.

4.14.4 The Director shall fix a rate or price, in consultation with the Operating Company, if considered necessary. This shall be called the Fixed Rate or Price. The Director shall insert such Fixed Rate or Price into the Schedule of Rates and Prices held within the contract control and management function of the Integrated Roads Information System.

4.14.5 Where the Director fixes a rate or price he will supply a mass conversion factor for each relevant new Schedule of Rates and Prices item. Where no rate or price is supplied then a zero factor value will be inserted.

4.14.6 Where a Fixed Rate or Price is held within the contract control and management function of the Integrated Roads Information System, it shall remain in place unless it has been reviewed and changed by the Director and a Determined Rate or Price is notified.

4.14.7 The Operating Company shall validate the Operations Instruction and insert it into the next Statement.

4.14.8 Where the Operating Company undertakes Operations which were unforeseen at the time of the issue of the Operations Instruction and it considers that the series or items within the Schedule of Rates and Prices do not cover the scope of the unforeseen Operations, it may propose the use of:

- (i) rates or prices deduced from applicable rates and prices as referred to in Schedule 1, or
- (ii) rates or prices by measurement and valuation in accordance with fair rates and prices as referred to in Schedule 1, or
- (iii) a Lump Sum Quotation as referred to in Schedule 1.

In such a situation, the requirements of paragraph 4.14.2 of this Part shall be submitted to the Director within five Working Days of the Scheme Completion Date.

4.15 Operating Company Statements for Payment Purposes

- 4.15.1 The Statement shall have two parts. Part A will hold those sums eligible for payment by the Director to the Operating Company. Part B will hold any sums deemed by the Director to be in dispute at the date of the Statement. The Operating Company shall prepare and record the following two reports within the contract control and management function of the Integrated Roads Information System:
- (i) the simplified Statement report referred to in Annex 4.1/D of this Part, and
 - (ii) a Scottish Executive accounting system Statement (SEAS) report allocating all costs within the Statement to the Scottish Executive accounting system codes.

These reports, together with supporting documentation for Operations that are paid under the Time Works Schedule, shall form the Statement for each month.

Where any element of any Statement is identified by the Director as a disputed element, the Performance Audit Group, on behalf of the Director, shall transfer any such elements from part A to part B of the Statement and create a Payment Notified Record. The transfer from part A to part B of the Statement for each disputed element shall not change the Scheme Identifier and Work Code.

Payment in respect of Statements submitted by the Operating Company will be made by the Director using the contract control and management function of the Integrated Roads Information System by raising a Payment Notified Record in accordance with the functionality and roles stated in Annex 4.1/G (15) of this Part. The Operating Company shall confirm payment through the contract control and management function of the Integrated Roads Information System by a Payment Received Record in accordance with Annex 4.1/G (16) of this Part.

- 4.15.2 All Operating Company Statements in the format referred to in this Part shall be submitted in Electronic Copy to the Director and the Performance Audit Group. Such statements shall be supported by the other Statement reports referred to in paragraph 4.15.1 of this Part logged within the contract control and management function of the Integrated Roads Information System.
- 4.15.3 The Operating Company shall retain all supporting cost measurement documentation related to Operations for which Statements have been prepared. This documentation shall be held for a period of at least six years after the end of the Defects Liability Period.

4.16 9901 Activation

- 4.16.1 Where the Operating Company issues a Claim Notification in accordance with Schedule 1, the Operating Company shall activate a 9901 Bid in accordance with the provisions of Paragraph 4.7 of this Part for submission of a Bid, showing the Estimated Bid Value to allow the creation of a Scheme Identifier. Such an activation shall be known as a 9901 Activation. Subject to the other provisions of this paragraph of this Part, the activation of a 9901 Activation shall not entitle the Operating Company to any payment. The information requirements for 9901 Activations are stated in Annex 4.1/G (21) of this Part.
- 4.16.2 A 9901 Activation shall be deemed to be disputed by the Director. The Operating Company shall place a Scheme created under a 9901 Activation in part A of the Statement. Where any such part of a Scheme continues to be identified by the

Director in Statements as disputed, the Performance Audit Group shall transfer any such part from part A to part B of the Statement. The transfer from part A to part B of the Statement for each disputed part of a Scheme shall not affect the Scheme Identifier and Work Code 9901.

4.16.3 When the Director decides that any Scheme created under a 9901 Activation or any part of any such Scheme is no longer disputed, he shall notify the Operating Company accordingly, in writing. On receipt of such notification, the Operating Company shall:

- (i) create and issue a new Bid and Scheme Identifier to the Director, using the Work Code 9902. The Bid shall include reference to the original Scheme Identifier created under the 9901 Activation and the appropriate value against the new Scheme Identifier, and
- (ii) submit a revised Bid for the original Scheme created under the 9901 Activation, reducing the Estimated Bid Value by the equivalent of the Estimated Bid Value of the new Scheme.

The Operating Company shall create the Bid for the new Scheme and a 9902 Activation for the revised Bid for the original Scheme.

4.16.4 If the 9901 Bid continues to have an Estimated Bid Value at the expiry of the period described in Clause 10.8.4 of Schedule 1, the 9901 Activation shall be set to zero by the Operating Company on receipt of an Order from the Director.

4.17 Operating Company Financial Management Flexibility

4.17.1 The requirements of this paragraph allow the Operating Company to manage changed circumstances found on Site and ensure continued delivery of Site Operations. The Director retains the right to withdraw the provisions of paragraph 4.17.5 of this Part from this Contract, on either a temporary or permanent basis. In the event of such a withdrawal, all resulting costs of whatsoever nature shall be borne by the Operating Company.

4.17.2 The requirements of this Part do not apply to:

- (i) Works Contracts which shall be procured, supervised, managed and monitored as referred to in Schedule 6 Part 1, or
- (ii) Core Operations.

4.17.3 The Operating Company shall undertake the financial management and monitoring of the Operations at individual Scheme level for the Total Order Value of Scheme within the Financial Year.

4.17.4 The following procedures shall apply:

- (i) if any Scheme seems likely to exceed the Total Order Value of Scheme within the Financial Year referred to in the latest Order, as indicated by the cumulative value of associated Operations Instructions for such Scheme, the Operating Company shall issue a revised Bid to the Director immediately for the Scheme, setting out the reasons for the increase in costs,
- (ii) this revised Bid shall be accompanied by a revised Bid for other Schemes within the same Work Series to produce a matching saving. The cumulative value of associated Operations Instructions shall be the total of all

Operations Instructions that have been measured against that Scheme added to the total of all Operations Instructions that have been issued against that Scheme but not yet measured,

- (iii) if any Scheme seems likely to be less than the Total Order Value of Scheme within the Financial Year referred to in the latest Order, as indicated by the cumulative value of associated Operations Instructions, the Operating Company shall issue a revised Bid to the Director immediately for such Scheme, setting out the reasons for the decrease in costs, and
- (iv) this revised Bid shall be accompanied by a revised Bid for Operations where the unused budget may be used.

4.17.5 When the Operating Company requires to authorise a variation to the scope of the Operations within a Scheme at a specific Site that may result in additional costs not exceeding 10 percent of the Total Order Value of Scheme within the Financial Year, each variation within the Financial Year, referred to in the latest Order, may be incurred by the Operating Company without the prior written consent of the Director.

Within two Working Days of having issued such authorisation, the Operating Company shall issue a revised Bid for the Scheme showing the increased Estimated Bid Value to the Director, setting out the reasons for such increase in costs. This shall be accompanied by a revised Bid for other Schemes within the same Work Series to produce a matching saving.

Within five Working Days of receipt of the revised Bid, the Director will issue a further Order to cover the increase and revise other Schemes as appropriate.

4.17.6 Notwithstanding the Total Order Value of Scheme within the Financial Year, the Operating Company shall deal with Incidents in compliance with the Scottish Minister's Requirements.

4.17.7 With the exception of the allowances made in this Part with regard to Incidents, where the final valuation of a Scheme made by the Operating Company exceeds the Total Order Value of Scheme within the Financial Year, the Director shall not be obliged to pay any excess costs over and above the Total Order Value of Scheme within the Financial Year.

4.18 Works Contractor Financial Control

4.18.1 Paragraphs 4.7 and 4.23 of this Part state the Director's requirements for the Operating Company to:

- (i) use the contract control and management function of the Integrated Roads Information System in seeking Bid approval,
- (ii) issue Works Contractors' payment applications and payment certification forms (CCIA), and
- (iii) issue forms for the payment of monies to Works Contractors for Works Contract Schemes.

Annex 4.1/G (17) of this Part specifies the information to be held within the contract control and management function of the Integrated Roads Information System in respect of Works Contracts Schemes.

4.18.2 The procedures for the financial control of Works Contractors' payment applications are referred to in Schedule 6 Part 1.

4.19 Payment of Works Contractors

4.19.1 The Operating Company shall submit to the Director an Electronic Copy and one paper copy of all original Works Contractors' payment applications and payment certification forms (CCIA) referred to in Schedule 6 Part 1. These shall be submitted to:

Transport Scotland
Finance and Corporate Services Directorate
Accounts Payable and Administration Team – TRBO
9th Floor, Buchanan House
58 Port Dundas Road
Glasgow
G4 0HF

4.19.2 The Operating Company shall issue the supporting certificates (CCII and CCIII) referred to in Schedule 6 Part 1 where appropriate and store the same on the contract control and management function of the Integrated Roads Information System.

4.19.3 The Operating Company shall enter into the contract control and management function of the Integrated Roads Information System copies of all tender reports and draft tender document certificates as referred to in Schedule 6 Part 1.

4.19.4 On the completion of the Works for a Works Contract, the Operating Company shall enter the appropriate series or item number related to the Work Code for the Scheme, and the appropriate quantity, into the contract control and management function of the Integrated Roads Information System in the form given in Annex 4.1/F of this Part.

4.20 Financial Monitoring and Forecasting Process

4.20.1 The Operating Company shall undertake financial monitoring and forecasting to generate reports using the contract control and management function of the Integrated Roads Information System and the data contained therein. All reports shall be available to be read by the Director and Performance Audit Group.

4.20.2 There are three main areas of financial reporting which shall be addressed within the contract control and management function of the Integrated Roads Information System:

- (i) annual programmes including monthly Operations Instruction and Works Contract activity predictions,
- (ii) monthly updates of the value of Statements, the value of Operations and Works Contract activity carried out and the re-profiling of monthly expenditure profiles, and
- (iii) monthly consolidated financial reports in the form given in Annex 4.1/I of this Part, detailing all Statements submitted by the Operating Company and payment applications submitted by Works Contractors.

4.20.3 During each Financial Year, the Operating Company shall review, update and complete monitoring forms and record them in the contract control and management function of the Integrated Roads Information System no later than 10 Working Days after the last day of each calendar month. All costs and estimated costs for

Schemes entered on the monitoring form shall exclude Value Added Tax and Contract Price Fluctuation.

4.20.4 When completing the monthly reporting forms, the Operating Company shall include changes to the value of estimates for Schemes.

4.20.5 The Operating Company shall attend monthly programming meetings with the Director and discuss any changes to the value of estimates for Schemes with a view to the Operating Company and Director using the contract control and management function of the Integrated Roads Information System to bid for and consent to any required changes to the Annual Programme and budget.

4.20.6 The Operating Company shall include documented procedures as part of its Management System that include the production and monitoring of the accuracy of the Estimated Bid Values to ensure the accuracy of the time and financial outturn estimates for Schemes provided to the Director.

Should monitoring indicate that Estimated Bid Values have been produced which are not accurate, the Operating Company shall implement any required changes, including changes required by the Director, to these procedures to improve the accuracy of the estimates.

4.21 Carbon Reporting

4.21.1 The Operating Company shall produce a carbon emissions report, providing the carbon factor score for material usage and transportation in Schemes within the one year Programme. Such reports shall be produced by the Operating Company on a monthly and annual basis showing carbon scoring for individual Schedule of Rates and Prices items on a monthly- and annually-to-date basis.

4.21.2 The output requirements for carbon reporting by the contract control and management function of the Integrated Roads Information System are shown in Annexes 4.1/G (23) and 4.1/H of this Part together with their associated appendices.

4.22 Damage to Crown Property

4.22.1 The Operating Company shall comply with the requirements stated in Annex 4.1/G (18) of this Part.

4.23 Professional Services Register

4.23.1 The Operating Company shall comply with the requirements stated in Annex 4.1/G (22) of this Part.

This is Annex 4.1/A to Schedule 4 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PARTS 1

FINANCIAL AND CONTRACT MANAGEMENT

ANNEX 4.1/A – Statement of Intent (Inception and Scheme Approval)

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

ANNEX 4.1/A – Statement of Intent (Inception and Scheme Approval)

Statement of Intent (SOI) Form: Planned Maintenance Resurfacing						 TRANSPORT SCOTLAND <small>The Scottish Government</small>	
1. Scheme Name	Click here to enter Scheme Name.						
2. Scheme ID	Enter Scheme ID.	3. Sol Revision	Revision No.				
4. Work Year	Work Year	5. Work Code	Choose an item.				
SCHEME LOCATION							
6. Road	Road.	7. Location description	Location Description.				
8. Network referencing (from IRIS)	Start	Section	Start Section.				
		Chainage	Start chainage.				
	Intermediate	Section(s)	Intermediate section(s).				
	End	Section	End Section.				
Chainage		End chainage.					
SCHEME DETAILS							
9. Carriageway x Section	Cway X Section.	11. Traffic flow	AADT	% HGV	Year of count		
10. Scheme length (m)	Scheme length.		AADT.	%HGV.	Count year.		
12. Traffic management restrictions	Confirm if scheme is within any App 1/17 restrictions and enter details of any other TM restrictions. E.g. Narrow carriageway width, Noise sensitive location, access route for schools or critical infrastructure, Abnormal load route Etc.						
13. Network Operations equipment affected	<input type="checkbox"/> YES (provide details)		Enter details of any Net Ops. Equipment.				
	<input type="checkbox"/> NO						
14. Other relevant site details	Enter details of any other relevant Engineering or network details that may influence the design or implementation of the works. E.g. Drainage details, Edge of pavement details, VRS, Structures, Environmental factors.						
CONDITION ASSESSMENT							
15. Summary defect photographs attached?	<input type="checkbox"/> YES <input type="checkbox"/> NO (GIVE details)		Enter summary of photographs or reasons for not attaching photographs.				
Comments	Describe why this has been highlighted as a potential scheme. Provide a description of any routine condition data that is held for this asset or a description of any initial surveys that led to its promotion as a potential scheme.						
16. Pavement condition data from IRIS	Summarise the routine condition data (SCRIM, Deflectograph, and SCANNER) held within IRIS. State how it justifies the proposed scheme						

17. Maintenance history/overview	Summarise the related interventions (planned and unplanned) that have been required at this site in the last three years		
FURTHER INVESTIGATION			
18. Further Investigation required?	<input type="checkbox"/> YES <input type="checkbox"/> NO (GIVE details)		
19. Scope, intended purpose and cost of any proposed further investigation and design works	Enter details of scope of investigation and design works. E.g. Coring and DCP, utilities investigation, Drainage survey, Design. Add additional rows in necessary.		Cost of I and D
	Indicative Construction cost		
20. Approval to undertake the further investigation works (SOI(i)ONLY) as outlined above	Operating Company representative name	Signature	Date
NB. If no further investigation is required then please complete the full form SOI(sa) and submit	Transport Scotland representative name	Signature	Date
SUMMARY OF MAINTENANCE NEED			
21. Summary of findings from further investigation works (if applicable)	Summarise findings of investigation.		
22. Main driver for proposed works	Identify the single main reason why patching is required.		
23. Deterioration mechanism(s) and probable cause(s)	Provide an assessment of how and why the pavement is deteriorating.		
24. Patching schedule attached? (Showing chainage, XSP, Patch depth, surfacing material)	<input type="checkbox"/> YES		
	<input type="checkbox"/> NO (provide details)		
PROPOSED WORKS			
25. Sustainable options considered (if scheme is > £50,000)	<input type="checkbox"/> Tick to confirm		Where feasible consideration shall be given to retaining, re-using or recycling existing materials where possible.
	Comments		
26. Disability Discrimination Act (DDA)	<i>We confirm that barriers to accessibility have been considered and the DDA proforma has been signed off for this scheme by both the Operating Company and Transport Scotland</i>		<input type="checkbox"/> Tick to confirm
27. Attached information	Mandatory:		Other attachments (list):
	Visual Condition Survey	<input type="checkbox"/> Tick to confirm	
	Scheme Photographs	<input type="checkbox"/> Tick to confirm	
	Supporting data from RMMF	<input type="checkbox"/> Tick to confirm	
	If the scheme is proposed on the basis of SCRIM then all HD28 investigatory records must be attached.		
	If total scheme > £50,000:		
	VFM assessment	<input type="checkbox"/> Tick to confirm	
28. Revised/ Total cost estimate	Year (20__/20__)	Activity (description)	Cost (£)
	Work Year	E.G. Survey work, scheme preparation, Scheme design, site works, supervision, construction.	

	Work Year	E.G. Survey work, scheme preparation, Scheme design, site works, supervision, construction.	
	Work Year	E.G. Survey work, scheme preparation, Scheme design, site works, supervision, construction.	
	TOTAL:		
29. Approval to undertake patching works as outlined above	Operating Company representative name	Signature	Date
	Transport Scotland representative name	Signature	Date
SOI DOCUMENT HISTORY			
Revision number	Date issued	Comments	

<h1>Statement of Intent (SOI) Form: Other Assets</h1>		1. Asset type		 TRANSPORT SCOTLAND <small>The Scottish Government</small>		
		Choose an item.				
		If "Other" enter Asset type.				
2. Scheme Name	Click here to enter Scheme Name.					
3. Scheme ID	Enter Scheme ID.		4. Sol Revision	Revision No.		
5. Work Year	Work Year		6. Work Code	Choose an item.		
SCHEME LOCATION						
7. Road	Road.	8. Location description		Location Description. E.g. 100m west of Junction 'A' to 150m east on junction 'B'.		
9. Network referencing (from IRIS)	Start	Section	Start Section.			
		Chainage	Start chainage.			
	Intermediate	Section(s)	Intermediate section(s).			
	End	Section	End Section.			
Chainage		End chainage.				
10. Asset specific location reference or identifiers (if applicable)		Provide details of other asset identifiers e.g. electrical asset ref.				
SCHEME DETAILS						
11. Carriageway x Section	Cway X Section.		13. Traffic flow	AADT	% HGV	Year of count
12. Scheme length (m)	Scheme length.			AADT.	%HGV.	Count year.
14. Asset construction records & maintenance history	Provide summary of the construction details (incl. year built). Record when the asset was last subject to planned maintenance (if applicable).					
15 Traffic management restrictions	Enter details of any TM restrictions. E.g. Narrow carriageway width, Noise sensitive location, access route for schools or critical infrastructure, Abnormal load route Etc					
16. Network Operations equipment affected	<input type="checkbox"/> YES (provide details) <input type="checkbox"/> NO		Enter details of any Net Ops. Equipment.			
17. Other relevant site details	Enter details of any other relevant Engineering or network details that may influence the design or implementation of the works. E.g. Drainage details, Edge of pavement details, VRS, Structures, Environmental factors.					
CONDITION ASSESSMENT						
18. Transport Scotland "Trunk Road Condition Manual" - Condition Category						
<i>Select the single most representative option</i>	A. Excellent <input type="checkbox"/>	b. Good <input type="checkbox"/>	c. Fair <input type="checkbox"/>	D. Poor <input type="checkbox"/>	E. very poor <input type="checkbox"/>	
19. Summary defect photographs attached?	<input type="checkbox"/> YES <input type="checkbox"/> NO (GIVE details)		Enter summary of photographs or reasons for not attaching photographs.			
Comments (including, where applicable the number of defective units)	Describe why this has been highlighted as a potential scheme. Provide a description of any routine condition data that is held for this asset or a description of any initial surveys that lead to its promotion as a potential scheme.					

20. Defect history / overview	Summarise the unplanned maintenance interventions that have been required at this site in the last three years		
FURTHER INVESTIGATION			
21. Further Investigation required?	<input type="checkbox"/> YES <input type="checkbox"/> NO (GIVE details)	Describe further investigations required.	
22. Scope, intended purpose and cost of any proposed further investigation and design works	Enter details of scope of investigation and design works. E.g. Coring and DCP, utilities investigation, Drainage survey, Design. Add additional rows in necessary.		Cost of I and D
	Indicative Construction cost		
23. Approval to undertake the further investigation works (SOI(i)ONLY) as outlined above NB. If no further investigation is required then please complete the full form SOI(sa) and submit	Operating Company representative name	Signature	Date
	Transport Scotland representative name	Signature	Date
SUMMARY OF MAINTENANCE NEED			
24. Summary of findings from further investigation works (if applicable)	Summarise the further investigation works findings. Attach the results to the submitted Sol.		
25. Main driver for proposed works	Identify the single main reason why maintenance is required.		
26. Deterioration mechanism(s) and probable cause(s)	Provide an assessment of how and why the asset is deteriorating.		
27. Statement of justification for proposed works	Provide a clear assessment of why the works are deemed to be necessary.		
28. Likely consequences of not undertaking proposed works	Provide an assessment of the risks associated with a "Do Nothing" approach.		
PROPOSED WORKS			
29. Works summary	Chainage (m)	XSP	Works description
			Insert more lines if required.
30. Sustainable options considered (if scheme is > £50,000)	<input type="checkbox"/> Tick to confirm	Where feasible consideration shall be given to retaining, re-using or recycling existing materials where possible.	
	Comments		
31. Disability Discrimination Act (DDA)	<i>We confirm that barriers to accessibility have been considered and the DDA proforma has been signed off for this scheme by both the Operating Company and Transport Scotland</i>		<input type="checkbox"/> Tick to confirm
32. Attached	List:		

information			
33. Revised/ Total cost estimate	Year (20__/20__)	Activity (description)	Cost (£)
	Work Year	E.G. Survey work, scheme preparation, Scheme design, site works, supervision, construction.	
	Work Year	E.G. Survey work, scheme preparation, Scheme design, site works, supervision, construction.	
	Work Year	E.G. Survey work, scheme preparation, Scheme design, site works, supervision, construction.	
	TOTAL:		
20. Approval to undertake patching works as outlined above	Operating Company representative name	Signature	Date
	Transport Scotland representative name	Signature	Date
SOI DOCUMENT HISTORY			
Revision number	Date issued	Comments	

Statement of Intent (SOI) Form: Minor Improvement



1. Scheme Name	Click here to enter Scheme Name.				
2. Scheme ID	Enter Scheme ID.	3. Sol Revision	Revision No.		
4. Work Year	Work Year	5. Work Code	0901 Individual Improvement Schemes	6. Work Type	e.g. Straitening, drainage etc.

SCHEME LOCATION

7. Road	Road.	8. Location description	Location Description. E.g. 100m west of Junction 'A' to 150m east on junction 'B'.		
9. Network referencing (from IRIS)	Start	Section	Start Section.		
		Chainage	Start chainage.		
	Intermediate	Section(s)	Intermediate section(s).		
		End	Section	End Section.	
Chainage	End chainage.				

SCHEME DETAILS

10. Carriageway x Section	Cway X Section.	12. Traffic flow	AADT	% HGV	Year of count
11. Scheme length (m)	Scheme length.		AADT.	%HGV.	Count year.
13. Background	Include (where applicable) the history of scheme, construction records, recent planned maintenance, accident statistics (incl. Common trends), local contentious issues etc.				
14. Defect history	Summarise the unplanned interventions that have been required at this site in the last 3 years.				
15 Traffic management restrictions	Enter details of any TM restrictions. E.g. Narrow carriageway width, Noise sensitive location, access route for schools or critical infrastructure, Abnormal load route Etc				
16. Network Operations equipment affected	<input type="checkbox"/> YES (provide details)	Enter details of any Net Ops. Equipment.			
	<input type="checkbox"/> NO				
17. Other relevant site details	Enter details of any other relevant Engineering or network details that may influence the design or implementation of the works. E.g. Drainage details, Edge of pavement details, VRS, Structures, Environmental factors.				

SCHEME APPRAISAL (i)

18. Identification of problem	Describe how and why a potential scheme was identified at this site. Summarise relevant condition data held in IRIS. State if/how the existing IRIS data has been validated or supplemented.				
19. Key objectives of proposed scheme	Refer to Scottish Transport Appraisal Guidance (STAG).				
20. Initial treatment options/ solutions that have been considered to solve the problem	Describe the initial treatment options / solutions identified				

FURTHER INVESTIGATION

21. Further Investigation required?	<input type="checkbox"/> YES <input type="checkbox"/> NO (GIVE details)	Describe further investigations required.			
22. Scope, intended	Enter details of scope of investigation and design works. E.g.				Cost of I and D

purpose and cost of any proposed further investigation and design works	Coring and DCP, utilities investigation, Drainage survey, Design. Add additional rows in necessary.		
	Indicative Construction cost		
23. Approval to undertake the further investigation works (SOI(i) ONLY) as outlined above	Operating Company representative name	Signature	Date
	Transport Scotland representative name	Signature	Date
SUMMARY OF MAINTENANCE NEED			
24. Summary of findings from further investigation works (if applicable)	Summarise findings of investigation.		
25. Statement of justification for proposed scheme	Based on the above, summarise why the proposed scheme is justified and cross-reference to supporting data (condition, accidents, drainage, defects etc.) all of which must be supplied with the SOI.		
26. Likely consequences of not undertaking proposed works (i.e. "Do Nothing" works option)	Provide an assessment of the risks associated with a "Do Nothing" approach.		
27. Description of "Do Minimum" works option	Description of "Do Minimum" Works .		
28. Description of "Do Something" works option(s)	Description of "Do Something" works.		
29. Scottish Transport Appraisal Guidance (STAG) criteria - describe how the various works options impact upon the following.....			
Environment			
Safety			
Economy			
Integration			
Accessibility & social inclusion			
30. Whole life costing	WLC analysis shall be provided in accordance with S4P3 and Value for Money guidance. All relevant data shall be attached. Allowances for Risk and Uncertainty must be documented.		
PROPOSED WORKS			
31. Works summary	Provide summary of works proposed.		
32. Other schemes that may be affected by this proposal	Include details of opportunities to combine schemes/works (hybridisation).		
33. Sustainable options considered (if scheme is > £50,000)	<input type="checkbox"/> Tick to confirm	Where feasible consideration shall be given to retaining, re-using or recycling existing materials where possible.	
	Comments		

34. Disability Discrimination Act (DDA)	<i>We confirm that barriers to accessibility have been considered and the DDA proforma has been signed off for this scheme by both the Operating Company and Transport Scotland</i>		<input type="checkbox"/> Tick to confirm
35. Revised/ Total cost estimate	Year (20__/20__)	Activity (description)	Cost (£)
	Work Year	E.G. Survey work, scheme preparation, Scheme design, site works, supervision, construction.	
	Work Year	E.G. Survey work, scheme preparation, Scheme design, site works, supervision, construction.	
	Work Year	E.G. Survey work, scheme preparation, Scheme design, site works, supervision, construction.	
TOTAL:			
36. Proposed monitoring plan	Outline the key measures of how the success of the scheme will be measured. This may include accident statistics and comparison back to the original Transport Scotland Planning Objectives.		
37. Evaluation plan	Make reference to the First Year Rate of Return or other method used to justify the scheme. Provide proposals on when, and how monitoring will be undertaken.		
38. Approval to undertake patching works as outlined above	Operating Company representative name	Signature	Date
	Transport Scotland representative name	Signature	Date
39. Attached information	List:		
SOI DOCUMENT HISTORY			
Revision number	Date issued	Comments	

Statement of Intent (SOI) Form: Structural Maintenance



1. Scheme Name	Click here to enter Scheme Name.		
2. Scheme ID	Enter Scheme ID.	4. Sol Revision	Revision No.
3. Scheme Manager Ref	Enter IRIS Scheme Manger Reference.	5. Work Year	Work Year

SCHEME LOCATION

6. Road	Road.	7. Location description	Location Description.	
8. Network referencing (from IRIS)	Link/Section	Start Chainage	End Chainage	Length(m)
	Start Section.	Start chainage.	End chainage.	Length.
	Subsequent section.	Start chainage.	End chainage.	Length.
	Subsequent section.	Start chainage.	End chainage.	Length.
	Subsequent section. (Add more rows if required)	Start chainage.	End chainage.	Length.
Scheme Length(m)				Length.

SCHEME DETAILS

9. Traffic flow	AADT/AADF		% HGV	Year of count
	Traffic Measure	AADT/AADF value.	%HGV.	Count year.
10. Other relevant site details	Enter details of any other relevant Engineering or network details that may influence the design or implementation of the works. E.g. Drainage details, Edge of pavement details, VRS, Structures, Environmental factors.			

CONDITION ASSESSMENT

11. Construction Detail and Recorded Maintenance	Enter Information about construction records and last recorded maintenance.
12. IRIS / Visual Survey Justification for Scheme	Enter IRIS / Visual survey justification for scheme. Insert findings from the detailed visual survey to validate SERIS data. Describe the reasoning for progressing this location as a potential scheme following the initial findings. Confirm the extents of the scheme have been reviewed and are appropriate.
13. IRIS Report Detail, Routine Maintenance	RMMS Defect Data

History, Accident data and HD28	No. of C/way Defects	Current financial year	Last 3 full financial years		
		Financial Year	Financial Year	Financial Year	Financial Year
	CAT1 Defects				
	CAT2 Defects				
	IRIS Accident Data				
	No. of Injury Accidents	Current financial year	Last 3 full financial years		
		Financial Year	Financial Year	Financial Year	Financial Year
	Total No. of Injury Accidents				
	Wet Only				
	Skid Only				
	Wet Skid				
	Describe RMMS defect information (No. CAT1 and CAT2, Carriageway defects and other relevant defects) routine maintenance history, extent of current routine maintenance and Accident data. .				
	Describe any relevant accident information or state "No accidents".				
	Describe any relevant HD28 sites, in particular state if there are any HD28 sites from the current or previous years with a recommendation to carry out treatment, Include any relevant Secondary Investigations reports in the Appendix.				
FURTHER INVESTIGATION					
14. Scope, intended purpose and cost of any proposed further investigation and design works	Enter details, scope and cost estimates of all investigation and design works required to complete Sol(sa). E.g. Coring and DCP, FWD, GPR, utilities investigation, Drainage survey, other surveys and Design.				
	Estimated Investigation Cost	Estimated Inv Cost			
POTENTIAL TREATMENT					
15. Potential Treatment Options	Provide detail of any preliminary treatment options that have been considered based upon the available condition data.				
16. Potential Sustainability Treatment Options	Provide detail of any potential sustainable treatment options that have been identified and will be considered and investigated.				
APPROVAL TO UNDERTAKE FURTHER INVESTIGATION					

17. Approval to undertake the further investigation works as outlined above NB. If no further investigation is required then please complete and submit the full form SOI(sa)	Operating Company Representative name	Signature	Date
	[]	[]	[]
	Transport Scotland Representative name	Signature	Date
	[]	[]	[]

SUMMARY OF MAINTENANCE NEED

18. Summary of findings from further investigation works (if applicable)	If coring was undertaken did cores confirm IRIS Construction records are correct?	Yes/No/Na
	If “No” has a Corrective MSD been submitted	Yes/No/Na
	Have the scheme extents changed following investigation	Yes/No/Na
	If “Yes” has Section 8 above been amended	Yes/No/Na
	If “Yes” has Scheme Manager – Section details been updated	Yes/No/Na
Document the findings of the investigation(s) to provide defect details including construction detail. .		
19. Deterioration mechanism(s) and probable cause(s)	Provide detail on the deterioration mechanisms of the pavement. This should identify the probable cause of the defects present.	
20. Justification for Works	The justification for works shall contain a clear assessment of why the works are deemed to be necessary and shall refer to all supplied condition data from IRIS (see model format), accident data, visual surveys, drainage surveys, site investigations, RMMS defects and shall show locations of structures and highlight any associated non-pavement works required as part of the scheme. Pavement assessments shall be in accordance with DMRB Volume 7 Chapter 3 HD29/94, HD30/99, HD28/04, Value for Money guidance and others as appropriate. All available data shall be attached to the Statement of Intent. Where the scheme contains –ve SCRIM difference, all relevant HD28/04 investigation data shall be supplied.	

PROPOSED OPTIONS

21. Sustainability Options Considered	This section should report sustainable options that have been considered also including discussion of opportunities for low carbon / recycling.
22. Do Something Option	Details of Do Something treatment(s) for pavements and other assets within the scheme that have been considered.
23. Do Minimum Option	Details of Do Minimum maintenance required if scheme is not funded.
24. Other Options Considered	Treatment options that have been considered including the Reduced Do Something.

25. Whole Life Costing Results	Option Title	Discounted WLC (£)	Discounted Works Cost (£)	Comments
	Do Something			
	Do Minimum			
	Add other options and more lines (if required).			
PROPOSED WORKS				
26. Proposed Works	Provide detail of the Proposed Works based upon the data provided. .			
27. Preliminary Value Management Score			Weighting	Un-weighted Score
	Safety		0.3	
	Journey Time Reliability		0.2	
	Environmental Sustainability		0.1	
				VfM Indicator
	Value for Money		0.4	
	Importance Ranking	Importance Ranking		
28. Disability Discrimination Act (DDA)	We confirm that barriers to accessibility have been considered and the DDA proforma has been signed off for this scheme by both the Operating Company and Transport Scotland			<input type="checkbox"/> Tick to confirm
	Enter any reason why box was not ticked or any other relevant information.			
29. Network Operations Equipment	Network Operation Equipment affected?	Choose an item.		
	If Yes, Enter Details of Network Operations Equipment and works required.			
30. Proposed Works Cost Estimates	Year	Activites	Estimated Cost	
	2016/2017	Investigation	£	-
	2016/2017	Design	£	-
	2016/2017	Construction	£	-
	2016/2017	Other xxx	£	-
	2016/2017	xxx	£	-
			TOTAL	£
31. Attached information	Mandatory:		Other attachments (list):	
	Visual Condition Survey	<input type="checkbox"/> Tick to confirm	Core Logs	<input type="checkbox"/> Tick to confirm
	Scheme Photographs	<input type="checkbox"/> Tick to confirm		
	IRIS Data Graphs	<input type="checkbox"/> Tick to confirm		

	WLC/vfM report	<input type="checkbox"/> Tick to confirm	
APPROVAL OF STATEMENT OF INTENT			
33. Statement of Intent Agreement: Type and Extent of Pavement and Non-Pavement Treatments	Operating Company Representative name	Signature	Date
	Transport Scotland Representative name	Signature	Date
SOI DOCUMENT HISTORY			
Revision number	Date issued	Comments	

Value for Money Assessment

Option	Proposal	Proposal +	Proposal -	Do Nothing
Treatment Costs (£)				
Treatment Details				
Technical Solution				
Safety				
Impact on Network				
Sustainability				
Additional Comments				

Guidance notes on how to complete this assessment are provided over the page.

Guidance Notes

<i>Table Heading</i>	<i>Description of Requirement</i>	<i>Example response</i>
<i>Treatment Cost</i>	The anticipated works cost of the proposed work	-
<i>Treatment Details</i>	Details of proposed the proposed works should be provided in this box.	Machine laid surface course patched to remove badly fretted surface course in lane 1.
<i>Technical Solution</i>	The OC should highlight the technical benefits of the treatment and justify why the proposed treatment is most appropriate at this time	This treatment will replace the life expired surfacing and delay the need for structural maintenance for a period of approximately five years.
<i>Safety</i>	The OC should outline the benefits / risks that this treatment proposal will have.	Currently records show reactive maintenance interventions are occurring at a frequency of three per month and have risen rapidly over the last six months. Undertaking machine patching at this time will minimise the risk to road users and operatives as the condition of the surfacing will be improved and exposure to traffic management restrictions will be reduced.
<i>Impact on Network</i>	This section should look to assess the impact on the road network that the proposal will have.	Minimal off peak disruption is expected during the resurfacing works with no ongoing disruption foreseen compared to more frequent emergency interventions, that may be disruptive, if small scale hand patching is undertaken.
<i>Sustainability</i>	Environmental benefits of the proposed works should be highlighted.	The overall number of vehicle movements will be reduced if the resurfacing is undertaken in one hit reducing the amount of CO ₂ released into the atmosphere.
<i>Additional Comments</i>	This box should be used for any additional justification that has not already been covered in the Value for Money Assessment.	There is potential to complete these works concurrently with drainage scheme 13/OC/XXX/XX reducing the overall amount of traffic management on the network.
<i>Proposal</i>	This should preferred maintenance solution	Machine laid surface course replacement in lane 1
<i>Proposal +</i>	This should be the "gold plated" maintenance solution and may in fact be a structural maintenance scheme	A 100mm inlay using TS2010 surface course will remove the need for future maintenance for the next 15 to 20 years.
<i>Proposal -</i>	This should be the do minimum works	Had laid patches to address the worst of the defects
<i>Do Nothing</i>	This is to allow a comparison of the other treatments to be made against doing nothing at this time.	-

General

In addition to the technical information available in IRIS each Value for Money Assessment should utilise all available information e.g. RMMf intervention frequencies, accident statistics, complaints from road users / local residents.

Statement of Intent (SOI) Form: Structures



1. Structure type	Choose an item.	If "Other" Structure Type type.
2. Structure Reference(s)	Click here to enter Structure Reference(s).	
3. Scheme Name	Click here to enter Scheme Name.	
4. Scheme ID	Enter Scheme ID.	5. Sol Revision Revision No.
6. Work Code	Choose an item.	7. Work Year Work Year

SCHEME LOCATION

8. Route	Route.	9. Location description	Location Description. E.g. 100m west of Junction 'A' to 150m east on junction 'B'.
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SCHEME DETAILS

10. Details of existing Structure and site	Enter details of existing structures, structural form, construction, arrangement details of the site.		
11. Traffic flow	AADT	% HGV	Year of count
	AADT.	%HGV.	Count year.
12 Traffic management restrictions	Enter details of any TM restrictions. E.g. Appendix 1/17 restrictions, narrow carriageway width, Noise sensitive location, access route for schools or critical infrastructure, Abnormal load route Etc		
13. Utilities Affected	Enter details of any utilities on or surrounding the Structure and their likely impact.		

CONDITION ASSESSMENT

14. Defects from last PI / GI	Provide details of defects recorded from last PI / GI along with their maintenance priority.		
15. SMS report and Maintenance History	Provide details of SMS reports and previous maintenance history.		
16. BCI _{ave}	BCI _{ave} .	17. BCI _{crit}	BCI _{crit}

DETAILS OF INVESTIGATION AND SURVEYS – COMPLETED AND PROPOSED

18. Scope, intended purpose and cost of any completed and proposed further investigation, surveys and Indicative cost	Details of completed or proposed further Investigation and Surveys		Cost of I and D
	Enter details of scope of investigation or surveys already completed or proposed and their cost estimate. E.g. special inspection, ground investigation, topographical survey, asbestos survey, coring, traffic survey, utilities investigation, drainage survey. Add additional rows in necessary.		£
	Investigation/Survey component.		£
	Investigation/Survey component.		£
	Insert more lines if required.		£
Indicative Construction cost			£
19. Approval to undertake the further investigation/surveys works (SOI(i)ONLY) as outlined above NB. If no further investigation is required then please	Operating Company Representative Name	Signature	Date
			Enter Dater.
	Transport Scotland Representative Name	Signature	Date

complete the full form			Enter Dater.
20. Environmental Screening	Is the Scheme a “Relevant project” under EIA Regulations		Choose an item.
	Will a Record of Determination &/or Appropriate Assessment screening be required		Choose an item.
	Will mitigation measures and construction best practice fully mitigate Project impacts?		Choose an item.
DETAILS OF LAND			
21. Status of land requirement	Choose an item.		
22. Land Purchase Dates	Draft Orders Date	Made Orders Date	Land Vested Date
	Date.	Date.	Date.
SUMMARY OF MAINTENANCE NEED			
23. Summary of findings from further investigation and surveys already carried out.	Summarise the further investigation and surveys already carried out. Attach the results to the submitted Sol.		
24. Main driver and Justification for proposed works	Identify the main reason why maintenance is required.		
25. Do Something Option	Description of the “Do Something” option.		
26. Do minimum Option	Description of the “Do Minimum” option .		
27. Likely consequences of not undertaking proposed works (i.e. “Do Nothing works option”)	Provide an assessment of the risks associated with a “Do Nothing”_approach.		
28. Whole life costing	Provide a summary of the Whole Life Cost analysis and attach details to the Appendix.		
29. Sustainability option considered	Provide description of proposals to retain, re-use or recycle existing materials (where feasible).		
PROPOSED WORKS			
30. Works summary	Provide a summary of chosen option		
31. Value Management Score	Enter VM Scoring result		
32. Disability Discrimination Act (DDA)	<i>We confirm that barriers to accessibility have been considered and the DDA proforma has been signed off for this scheme by both the Operating Company and Transport Scotland</i>		<input type="checkbox"/> Tick to confirm
33. Attached information	List:		
	e.g. PI/GI Reports, land plans, Scheme Photographs, WLC report, VFM Assessment, Environmental Assessments etc.		
	e.g. PI/GI Reports, land plans, Scheme Photographs, WLC report, VFM Assessment, Environmental Assessments etc. Add more lines if required.		
34. Revised/ Total cost estimate	If scheme total > £350,000:	VFM assessment	<input type="checkbox"/> Tick to confirm
	Year (20__/20__)	Activity (description)	Cost (£)
	Work Year	E.G. Investigation, Design, construction.	£

	Work Year	E.G. Investigation, Design, construction.	£
	Work Year	E.G. Investigation, Design, construction.	£
	Work Year	Insert more lines if required.	£
	TOTAL:		£

35. Approval to undertake works as outlined above	Operating Company representative name	Signature	Date
	Transport Scotland representative name	Signature	Date

SOI DOCUMENT HISTORY

Revision number	Date issued	Comments

Value for Money Assessment

Option	Proposal	Proposal +	Proposal -	Do Nothing
Option Costs (£)				
Option Details				
Technical Solution				
Safety				
Impact on Network				
Sustainability				
Additional Comments				

Guidance notes on how to complete this assessment are provided over the page.

Guidance Notes

Table Heading	Description of Requirement	Example response
<i>Option Cost</i>	The anticipated works cost of the proposed work	-
<i>Option Details</i>	Details of proposed the proposed works should be provided in this box.	“Machine laid surface course patched to remove badly fretted surface course in lane 1.” or “Concrete repairs to beams and abutment wall, replacement of expansion joint.”
<i>Technical Solution</i>	The OC should highlight the technical benefits of the treatment and justify why the proposed treatment is most appropriate at this time	“This treatment will replace the life expired surfacing and delay the need for structural maintenance for a period of approximately five years.” or “Replacing spalled and chloride laden concrete with repairs to reinforcement, restoring passivity to steel and deterring incipient anode effect with installation of sacrificial anodes, replacement of expansion joint to arrest water ingress.”
<i>Safety</i>	The OC should outline the benefits / risks that this treatment proposal will have.	“Currently records show reactive maintenance interventions are occurring at a frequency of three per month and have risen rapidly over the last six months. Undertaking machine patching at this time will minimise the risk to road users and operatives as the condition of the surfacing will be improved and exposure to traffic management restrictions will be reduced.” or “The risk of spalling concrete falling onto the carriageway is removed by undertaking repairs.”
<i>Impact on Network</i>	This section should look to assess the impact on the road network that the proposal will have.	“Minimal off peak disruption is expected during the resurfacing works with no ongoing disruption foreseen compared to more frequent emergency interventions, that may be disruptive, if small scale hand patching is undertaken.”
<i>Sustainability</i>	Environmental benefits of the proposed works should be highlighted.	“The overall number of vehicle movements will be reduced if the resurfacing is undertaken in one hit reducing the amount of CO ₂ released into the atmosphere.”
<i>Additional Comments</i>	This box should be used for any additional justification that has not already been covered in the Value for Money Assessment.	“There is potential to complete these works concurrently with drainage scheme 13/OC/XXX/XX reducing the overall amount of traffic management on the network.”
<i>Proposal</i>	This should preferred maintenance solution	“Machine laid surface course replacement in lane 1.”

		Or "Concrete repairs."
<i>Proposal +</i>	This should be the "gold plated" maintenance solution and may in fact be a structural maintenance scheme	"A 100mm inlay using TS2010 surface course will remove the need for future maintenance for the next 15 to 20 years."
<i>Proposal -</i>	This should be the do minimum works	"Hand laid patches to address the worst of the defects."
<i>Do Nothing</i>	This is to allow a comparison of the other treatments to be made against doing nothing at this time.	-

General

In addition to the technical information available in IRIS each Value for Money Assessment should utilise all available information e.g. RMMS intervention frequencies, SMS inspection reports, accident statistics, complaints from road users / local residents.

Statement of Intent (SOI) Form:

Landscaping Assets



1. Scheme Name	Click here to enter Scheme Name.		
2. Scheme ID	Enter Scheme ID.	3. Revision	SoI Revision No.
4. Work Year	Work Year	5. Work Code	Choose an item.

SCHEME LOCATION

6. Road	Road.	7. Location description	Location Description including. E.g. Region/area/place name or '100m west of Junction A to 150m east on junction B'.
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8. Network referencing (from IRIS)	Link/Section	Start Chainage	End Chainage	Length
	Start Section.	Start chainage.	End chainage.	Length.
	Subsequent section. (Add more rows if required)	Start chainage.	End chainage.	Length.
	Scheme Length(m)			Length.

SCHEME DETAILS

9. Summary of proposal	<input type="checkbox"/> Maintenance Works <input type="checkbox"/> New Scheme/development
	Description of the proposal as a potential scheme or maintenance activity. This should include a statement describing the general works involved, the extent covered, the intended outcome and the relationship with the wider local setting of the road.
10. Summary condition including photographs	<input type="checkbox"/> Photos attached (if no photos are attached provide an explanation below).
	Describe why this has been highlighted as a potential scheme. Provide a description of any routine condition data that is held for this asset, including summary of recent inspections, defects raised and condition ratings, or a description of any initial surveys that led to its promotion as a potential scheme.
11. Link to Landscape Strategy / Development Plan	Describe the relationship with the Landscape Strategy / Landscape Development Plan and include reference from documents

SCHEME OBJECTIVES AND PRIORITY

12. Scheme Objectives	<input type="checkbox"/> General amenity	<input type="checkbox"/> More efficient/appropriate maintenance	<input type="checkbox"/> Road safety/reliability
	<input type="checkbox"/> biodiversity/nature conservation	Improved <input type="checkbox"/> Sustainability/Climate change	<input type="checkbox"/> Other (Describe below)

	Select all appropriate objectives from the list above and describe the general objectives, refer to Schedule 7 Part 4 cl 1.4.4.
13. Scheme development	<input type="checkbox"/> TS instruction <input type="checkbox"/> ORI (PAG) <input type="checkbox"/> Landscape Development Plan <input type="checkbox"/> Result of inspection (OC/Landscape Architect) <input type="checkbox"/> Local/Community pressure <input type="checkbox"/> Other (Describe below)
	Select all relevant options from the list above and provide relevant background information regarding the source of the scheme and the issues it will address.

SCHEME COST ESTIMATES

	Year (20__/20__)	Activity (description)	Cost (£)
14. Cost estimate	Work Year	E.G. Survey work, scheme preparation, Scheme design, site works, supervision, construction.	
	Work Year	E.G. Survey work, scheme preparation, Scheme design, site works, supervision, construction.	
	Work Year	E.G. Survey work, scheme preparation, Scheme design, site works, supervision, construction.	
	TOTAL:		

SUPPORTING DOCUMENTATION

	Mandatory:	Other attachments (list):	
15. Attached information. Refer to Schedule 7 Part 4 Clause 1.5.2	Location/context plan(s) <input type="checkbox"/> Tick to confirm	Sketches / design sections	<input type="checkbox"/> Tick to confirm
	Detailed site plan(s) <input type="checkbox"/> Tick to confirm	Third party representations	<input type="checkbox"/> Tick to confirm
	Scheme Photographs <input type="checkbox"/> Tick to confirm		
	Inspection, defect and condition records <input type="checkbox"/> Tick to confirm		

SCHEME APPROVAL

16. Scheme comments by Landscape Architect	Additional comments in support of the scheme by the Landscape Architect..		
17. Scheme endorsed by Landscape Architect	Landscape Architect name	Signature	Date

18. Approval to undertake landscaping works as outlined above	Operating Company representative name	Signature	Date
	Transport Scotland representative name	Signature	Date

SOI DOCUMENT HISTORY

Revision number	Date issued	Comments

This is Annex 4.1/B to Schedule 4 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

ANNEX 4.1/B – Financial Profiling

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

ANNEX 4.1/B – Financial Profiling

<OPERATING COMPANY>

Year

Financial Profile

Scheme ID	Route	OC/WC	Contract Description	Work Code	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total Operations Cost (£)	Total Works Cost (£)	Total Cost (£)
		OC																	
		WC																	
		OC																	
		WC																	
		OC																	
		WC																	
		OC																	
		WC																	
		OC																	
		WC																	
		OC																	
		WC																	
Total					£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Discrete Schemes												
Year												
Operations Programme												
CARRY OVER/RETENTIONS												
Route	Scheme I.D.	Contract Description	Work Code	Start Design & Document Preparation	Design Complete (%)	Documents sent to PAG	Tender Issue	Award Works Contract	Start Operations or Works	Complete Operations or Works	Final Invoice /Statement Submitted	Current Year Estimated Costs
											Total	£0.00

<OPERATING COMPANY>

Year

Expenditure Profile

Scheme ID	Route	OC/WC	Contract Description	Work Code	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total Operation Cost (£)	Ordered Value (£)	Total Works Cost (£)	Total Cost (£)
		OC																		
		WC																		
		OC																		
		WC																		
		OC																		
		WC																		
		OC																		
		WC																		
		OC																		
		WC																		
		OC																		
		WC																		
Total					£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

This is Annex 4.1/C to Schedule 4 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

ANNEX 4.1/C – Work Series and Codes

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

ANNEX 4.1/C – Work Series and Codes

Work Series 0100 – Roads – Structural Pavement Maintenance

- 0101 Reconstruction
- 0102 Overlay
- 0103 Resurfacing
- 0104 Surface Dressing
- 0105 Provision of special anti skid treatment

Work Series 0200 – Roads –Maintenance

- 0201 Maintenance (Monthly Lump Sum)

Work Series 0300 – Roads – General Repair and Maintenance

- 0301 Patching flexible roads
- 0302 Patching concrete roads
- 0303 Maintenance of footways and cycle tracks
- 0304 Raising and replacing existing kerbs
- 0305 Maintenance of safety fence
- 0306 Maintenance of pedestrian guard rails
- 0307 Maintenance of road traffic signals, signs and bollards
- 0308 Retaining wall under 1.5m
- 0309 Remedial earthworks to embankments & cuttings
- 0310 Drainage and culverts under 2m
- 0311 Road markings & reflector studs
- 0312 Fences, walls, screens and noise barriers
- 0313 Landscape and planting
- 0314 Pedestrian crossings and furniture
- 0315 Road lighting and electrical work
- 0316 New footways and cycle tracks
- 0317 Graffiti removal
- 0318 Routine Reactive Maintenance (Monthly Lump Sum)

Work Series 0400 – Roads – Technical Surveys & Investigations

0401 Technical surveys and investigations

Work Series 0500 Roads – Winter Service

0501 Winter Service (Monthly Lump Sum)

0502 Salt Supply – national resilience initiative

Work Series 0600 – Roads – Emergencies

0601 Emergencies

Work Series 0700 – Roads – Resource Costs

0701 Routine Services (Monthly Lump Sum)

0702 Electricity charges

0703 Changes in Scope of Operations

Work Series 0800 – Roads – Strategic Road Safety

0801 Individual Strategic Road Safety Schemes

Work Series 0900 – Roads – Minor Improvement Schemes

0901 Individual Improvement Schemes

Work Series 1000 – Roads – Traffic Counts

1001 Traffic counts

1002 Network Operations

Work Series 1100 – Roads – General Expenditure

1101 General expenditure

Work Series 1200 – Bridges – General Maintenance

1201 Bridges and culverts 2 metres and over, retaining wall over 1.5 metres and other Structures

1202 Bridge strengthening

1203 Major bridges

1204 Silane treatment

1205 Protective coatings to steel Structures

Work Series 1300 – Bridges – Inspection, Assessment and Investigation

1301 Principal and General Inspections (Monthly Lump Sum)

1302 Structural assessment

1303 Special investigations

Work Series 1400 – Bridges – General Expenditure

1401 General expenditure

Work Series 9800 – Roads and Bridges – Damage to Crown Property

9801 Damage repair & cost recovery service >£10,000

9802 Payment for damage repair <£10,000

Work Series 9900 – Roads and Bridges – Claims

9901 Claims for additional payment – not accepted by Director

9902 Claims for additional payment - accepted by the Director

This is Annex 4.1/D to Schedule 4 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

ANNEX 4.1/D – Statement Reports

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

ANNEX 4.1/D – Statement Reports

Simplified Statement Report Example

Part A

Scheme ID	Scheme Description	Amount £	Cumulative Amount £	Cumulative CPF £	Cumulative Amount Incl. CPF £
11/NE/0102/003	Roadworks Scheme – Muchalls S/B overlay	5,150.00	5,150.00	370.00	5,520.00
11/NE/0102/007	Design of Discrete Roadworks Scheme Drumuillie overlay	6,700.00	26,600.00	1,515.00	28,115.00
	Total Work Code	11,850.00	31,750.00	1,885.00	33,635.00
11/NE/0703/003	Routine Manager Activities	150.00	900.00	132.00	1,032.00
	Total Work Code	150.00	900.00	132.00	1,032.00
11/NE/1201/003	General Bridge Repair	817.60	3,270.40	150.00	3,624.80
	Total Work Code	817.60	3,270.40	150.00	3,624.80
	Total Value Part A	12,817.60	36,124.80	2,167.00	38,291.80
	Total Previously Billed Part A		23,511.60	1,902.90	25,414.59
	Less Part B Adjustments (PNR)		204.40	10.00	214.40
	Revised Total Previously Billed Part A		23,307.20	1,892.99	25,200.19
	Total Value for Month for PART A		12,817.60	274.01	13,091.61
11/NE/1201/003	General Bridge Repair	204.40	613.20		
	Total Work Code	204.40	613.20		
	Total Value Part B	204.40	613.20		

Scheme ID	Scheme Description	Amount £	Cumulative Amount £	Cumulative CPF £	Cumulative Amount Incl. CPF £
	Total Value to Date				
	Part A		36,124.80	2,167.00	38,291.80
	Part B		613.20	0.00	613.20
	Total Value for Unit		36,738.00	2,167.00	38,905.00

This is Annex 4.1/E to Schedule 4 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

ANNEX 4.1/E – Financial Monitoring and Forecasting Reports

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

ANNEX 4.1/E – Financial Monitoring and Forecasting Reports

OPERATING CONTRACT FOR THE XX UNIT CONSOLIDATED FINANCIAL REPORT – APPLICATION

Month being reported – 30 June 2013

Date of Issue – 14 July 2013

OPERATING COMPANY

Statement Number	Statement Date	Statement Value £	CPF £	Total Value (net of VAT) £
Total 2011/12	-	15,000,000	1,000,000	16,000,000
2012/13				
2012/13				
NE113	10/05/2013	1,000,000	100,000	1,100,000
NE114	08/06/2013	2,500,000	250,000	2,750,000
NE115	07/07/2013	1,500,000	125,000	1,625,000
Total 2012/13		5,000,000	475,000	5,475,000
Cumulative Operating Company		20,000,000	1,475,000	21,475,000

WORKS CONTRACTORS

Payment Application Number	Date Submitted	Recommended Payment Value	Total Value (net of VAT)
		£	£
Total 2011/12		12,000,000	12,000,000
2012/13			
April		1,956,000	1,956,000
May		2,536,000	2,536,000
June			
NECOR009	08/06/2013	300,000	300,000
NETHI017	10/06/2013	285,000	285,000
NEMDS005	05/07/2013	1,250,000	1,250,000
NEBDN025	06/06/2013	750,000	750,000
		2,585,000	2,585,000
Total 2012/13		7,077,000	7,077,000
Cumulative Works Contractors		19,077,000	19,077,000
Cumulative Expenditure for Unit			
2011/12		27,000,000	1,000,000
2012/13		12,077,000	475,000
Total to Date		39,077,000	1,475,000

OPERATING CONTRACT FOR THE NORTH EAST UNIT

CONSOLIDATED FINANCIAL REPORT – PAYMENT

Month being reported – 30 April 2013

Date of Issue – 14 May 2013

OPERATING COMPANY

Statement Number	Statement Date	Cumulative Amount of Statement (1)	Omitted Amount Part B (2)	CPF (3)	Part A Amount (4) = (1)+(3)-(2)	Manual Adjustments (5)	Total Value (net of VAT) (6)=(4)+(5)
		£	£	£		£	£
Total 2011/12	–	15,750,000	(269,254)	1,075,000	16,555,746	72,354	16,628,100
2008/09							
NE113	10/05/2007	1,000,000	75,340	100,000	1,175,340	84	1,175,424
NE114	08/06/2007	2,500,000	(71,804)	250,000	2,678,196		2,678,196
NE115	07/07/2007	1,500,000	52,814	125,000	1,677,814	400	1,678,214
NE116	11/08/2007	1,300,000	(128,114)	115,000	1,286,886		1,286,886
NE117	06/09/2007	1,355,000	66,100	120,000	1,541,100		1,541,100
NE118	04/10/2007	1,265,000	45,333	117,000	1,427,333		1,427,333
NE119	10/11/2007	1,854,000	(66,200)	175,000	1,962,800	69,350	2,032,150
NE120	09/12/2007	1,236,000	69,958	116,000	1,421,958		1,421,958
NE121	06/01/2008	1,584,000	50,250	130,000	1,764,250		1,764,250
NE122	05/02/2008	1,477,000	44,160	126,000	1,647,160		1,647,160
NE123	12/03/2008	1,799,000	(49,350)	200,000	1,949,650	(11,000)	1,938,650
NE124	08/04/2008	2,150,000	29,120	210,000	2,389,120		2,389,120
Accruals 2011/12		(750,000)	-	(75,000)	(825,000)	-	(825,000)
Accruals 2012/13		1,000,000	-	125,000	1,125,000	-	1,125,000
Total 2012/13		19,270,000	117,607	1,834,000	21,221,607	58,834	21,280,441
2013/14							
NE125	10/05/2008	2,000,000	-	200,000	2,200,000	-	2,200,000
Accruals 2012/13		(1,000,000)	-	(125,000)	(1,125,000)	-	(1,125,000)
Accruals 2013/14		-	-	-	-	-	-
Total 2013/14		1,000,000	-	75,000	1,075,000	-	1,075,000
Cumulative Operating Company		36,020,000	(151,647)	2,984,000	38,852,353	131,188	38,983,541

CPF is calculated on the Part A Amount (column 4) i.e. the Cumulative Amount of the Statement less Part B.

WORKS CONTRACTORS

Payment Application Number	Date Submitted	Application for Payment Value	Amounts Omitted/Released (including Claims)		Payment Value (net of VAT)
		£	£		
Total 2011/12		12,500,000	(500,000)		12,000,000
April		1,956,000			1,956,000
May		2,536,000			2,536,000
June		2,585,000			2,585,000
July		1,652,000			1,652,000
August		1,470,000			1,470,000
September		102,000			102,000
October		1,070,000			1,070,000
November		658,000			658,000
December		423,000			423,000
January		105,000			105,000
February		305,000	500,000		805,000
March		690,000			690,000
Accruals 2011/12		(500,000)	-	-	(500,000)
Accruals 2012/13		650,000	-	-	650,000
Total 2012/13		13,702,000	500,000		14,200,000

2013/14							
April							
NECOR010	15/04/2013	650,000		-	-	-	650,000
NEMDS006	25/04/2013	300,000		-	-	-	300,000
			950,000	-	-	-	950,000
Accruals 2012/13			(650,000)	-	-	-	(650,000)
Accruals 2013/14			-	-	-	-	
Total 2013/14			300,000	-	-	-	300,000
Cumulative Works Contractors			26,502,000		0		26,502,000
Cumulative Expenditure for Unit			Application	CPF	Omitted	Manual Adjust's	Payment
2011/12			28,250,000	1,075,000	(769,254)	72,354	28,628,100
2012/13			32,972,000	1,834,000	617,607	58,834	35,482,441
2013/14			1,300,000	75,000	-	-	1,375,000
Total to Date			62,522,000	2,984,000	(151,647)	131,188	65,485,541

Note – the following are definitions of terms used in these tables:

Accruals – these represent any sums which were claimed in one Financial Year but accounted for in a previous Financial Year. This information may require to be entered manually by the Operating Company but shall be compiled from information held within the contract control and management function of the Integrated Roads Information System.

Manual Adjustments – this is when an amount is paid or deducted outwith the contract control and management function of the Integrated Roads Information System. Such amounts shall be advised in writing by the Director and shall require to be entered manually by the Operating Company.

This is Annex 4.1/F to Schedule 4 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

ANNEX 4.1/F – Works Contractor Series and Item Numbers

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

ANNEX 4.1/F – Works Contractor Series and Item Numbers

Items Related to Work Codes to be Used When Coding Works Contracts

Work Code	Item Number	Description	Measurement Unit
Structural Pavement Maintenance			
0101	0700	01-9000 Reconstruction	sq m
0102	0700	02-9000 Overlay	sq m
0103	0700	02-9100 Resurfacing	sq m
0104	0700	04-9000 Surface Dressing	sq m
0105	0700	04-9100 Anti skid treatment	sq m
General Repair and Maintenance			
0301	0700	11-9000 Patching flexible roads	sq m
0302	0700	11-9100 Patching concrete roads	sq m
0303	1100	05-9000 Resurfacing footways & cycle tracks	sq m
0305	0400	10-9000 Replacement of wire rope safety fence	M
0305	0400	01-9000 Replacement of other safety fence	M
0305	0400	10-9100 New wire rope safety fence	M
0305	0400	01-9100 New other safety fence	M
0311	1200	03-9000 Replacement of road markings	M
0315	1300	01-9000 Replacement of lighting columns	No
0316	1100	05-9100 New footways and cycle tracks	sq m
Strategic Road Safety			
0801	0800	01-9000 Strategic Road Safety	No
Minor Improvement Schemes			
0901	0900	01-9000 Minor Improvement Scheme	No

Work Code	Item Number	Description	Measurement Unit
Bridges General Maintenance			
1201	1700	01-9000 Bridge or Structure maintenance	No
1202	1700	01-9100 Bridge strengthening	No
1203	1700	01-9200 Major bridges maintenance	No
1204	2000	01-9000 Silane treatment	No
1205	1900	02-9000 Protective coatings	No

This is Annex 4.1/G to Schedule 4 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

ANNEX 4.1/G – Detailed Functions and Functionality of the Contract Control and Management Function of the Integrated Roads Information System

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

ANNEX 4.1/G – Detailed Functions and Functionality of the Contract Control and Management Function of the Integrated Roads Information System

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>1. One Year Programme and Financial Profiles</p> <p>Each one year programme and financial profile shall be given a unique consecutive number by the contract control and management function of the Integrated Roads Information System. Each Operations, Core Operation and Works Contracts Scheme within a one year programme shall contain the following fields for completion by the Operating Company:</p> <ul style="list-style-type: none"> (i) Work Code, (ii) Route number on all Routes, (iii) Scheme Identifier, (iv) the Scheme manager reference from the Integrated Roads Information System where one exists, (v) Total Order Value of Scheme within the Financial Year, (vi) Total Works Contract Instruction Value for the Scheme within the Financial Year, (vii) estimated value of Scheme in Financial Year, (viii) start and end dates or each category of Operations or Works, (ix) percentage Design complete, (x) tender documents to the Performance Audit Group date, (xi) tender issue date, (xii) tender award date, and (xiii) final Statement or invoice date. <p>Group programmes as follows:</p> <ul style="list-style-type: none"> (i) roads, (ii) bridges, (iii) minor improvements, and 	<p>The Operating Company can generate, revise and read draft programmes. The Operating Company can read, but not produce or revise consented-to versions. The Operating Company can create a copy of a consented to version.</p> <p>The Director and the Performance Audit Group can revise draft programmes, generate consented to programmes and read all programmes.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>(iv) accident investigation and prevention.</p> <p>Each Scheme within a one year financial profile shall contain the following fields:</p> <ul style="list-style-type: none"> (i) Work Code, (ii) category of Operations or Works, (iii) Route, (iv) Scheme Identifier, (v) description of Scheme, and (vi) profiled estimate of Total Order and Works Contract Instruction value for each Scheme for each month and with total for Financial Year. 	
<p>2. Annual Budgets</p> <p>Annual budgets shall be given for each of the following:</p> <ul style="list-style-type: none"> (i) structural maintenance (roads), (ii) Core Operations (not requiring a Bid), (iii) strategic road safety, (iv) minor improvement Schemes, (v) Structures (bridges). <p>Each annual budget shall be divided between Operations subject to an Order, Core Operations and Works Contracts, each of which shall be given a unique consecutive number by the contract control and management function of the Integrated Roads Information System.</p> <p>The contract control and management function of the Integrated Roads Information System will link each budget for Operations to Orders such that Orders against a budget cannot be issued in excess of that budget.</p> <p>The Operating Company shall generate and store annual budgets for all Operations and Works including a tag with date and time of issue and receipt and status, (draft number or consented to version).</p>	<p>The Director and the Performance Audit Group can generate, revise and read draft and indicative budgets.</p> <p>The Operating Company can read draft budgets at the discretion of the Director or the Performance Audit Group but can read all indicative budgets. The Operating Company cannot generate or revise any budgets.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>3. Work Codes</p> <p>The contract control and management function of the Integrated Roads Information System will hold all Work Codes as shown at Annex 4.1/C of this Part or subsequently re-issued by the Director in a format which shall allow their use in the generation of other elements within the system such as Statements Bids Orders and Operations Instructions.</p>	<p>The Director and the Performance Audit Group can generate revise and read Work Codes and linked Scottish Executive accounting system (SEAS) codes.</p> <p>The Operating Company can read Work Codes and linked SEAS codes.</p>
<p>4. Bids</p> <p>Each Bid shall be given a unique consecutive number by the contract control and management function of the Integrated Roads Information System.</p> <p>The contract control and management function of the Integrated Roads Information System will allocate automatically a unique Scheme Identifier to each Scheme within a Bid which shall identify the Unit The Scheme Identifier numbering convention shall be as follows:</p> <p>11/NE/0301/001</p> <p>11 – start year (in this case 2012)</p> <p>NE – Unit – NW, NE, SE, SW</p> <p>0301 – Work Code</p> <p>001 – Unique sequential number – three digits (XXX) range 001 to 999</p> <p>Each Scheme within a Bid shall contain the following fields for completion by the Operating Company:</p> <ul style="list-style-type: none"> (i) the Scheme manager reference from the Integrated Roads Information System where one exists, (ii) Scheme Identifier, (iii) Scheme Identifier from previous contract (for pre-existing Schemes handed over by the Director during the Mobilisation Period), (iv) Scheme Identifier under Work Code 9901 where this Scheme Identifier replaces a Scheme Identifier created under Work Code 9901, (v) Route number or All Routes, (vi) Work Code, 	<p>The Operating Company can generate, revise and read Bids.</p> <p>The Director and the Performance Audit Group can generate, revise and read Bids.</p> <p>The Director will generate a Bids for Core Operations annually.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>(vii) Structure reference number (if the Scheme relates to a Structure) from structures management function of the Integrated Roads Information System,</p> <p>(viii) locations – start and end of each link section and chainage,</p> <p>(ix) locations – the Ordnance Survey grid reference or latitude/longitude of the start and the end of the Scheme,</p> <p>(x) description of location,</p> <p>(xi) description of proposed Operations or Works,</p> <p>(xii) details of any restrictions,</p> <p>(xiii) use of Professional Services and time works schedule rates where more than 50% of Estimated Bid Value,</p> <p>(xiv) possible inclusion of Scheme in carbon emission monitoring based upon work code classification including recording of Principal Distance,</p> <p>(xv) proposed start and finish dates for each category of Operations or Works, and</p> <p>(xvi) Estimated Bid Value.</p> <p>The Operating Company shall populate the contract control and management function of the Integrated Roads Information System with detailed information justifying a Scheme within a module and reference using the Scheme Identifier.</p>	
<p>5. Estimated Bid Value</p> <p>A Bid for a Scheme shall separately identify all of the potential costs of the Scheme including:</p> <p>(i) investigation,</p> <p>(ii) land acquisition,</p> <p>(iii) preparation of road orders,</p> <p>(iv) Design,</p> <p>(v) Site Operations,</p> <p>(vi) supervision, and</p> <p>(vii) any other associated costs.</p> <p>It shall not include Value Added Tax or the costs of Contract Price Fluctuation.</p> <p>Each calculation of Estimated Bid Value within a Bid shall contain the following fields:</p>	<p>The Operating Company can generate, revise and read estimate of costs within Bids.</p> <p>The Director and the Performance Audit Group can revise and read estimate of costs Bids.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>(i) estimated value of Operations in each Financial Year,</p> <p>(ii) estimated value of Works costs in each Financial Year,</p> <p>(iii) estimated value of Scheme in each Financial Year, and</p> <p>(iv) estimated cumulative value of Scheme for all Financial Years.</p> <p>Estimated Bid Value shall be determined by the Operating Company as follows:</p> <p>(i) for Operations, the relevant rates and prices held within the contract control and management function of the Integrated Roads Information System shall be used with estimated quantities <u>to develop</u> the Estimated Bid Value, and</p> <p>(ii) for Works, rates and prices from recent similar Works Contracts shall be used with estimated quantities <u>to develop</u> the Estimated Bid Value.</p> <p>This total breakdown shall be included within each Estimated Bid Value.</p> <p>Annex 4.1/G (12) – Schedule of Rates and Prices - states that during the Mobilisation Period, the Director shall identify certain rates and prices to which shall be attached an H or L tag. These tags shall activate a flag called "High/Low Rate" when included as part of an Estimated Bid Value.</p>	
<p>6. Orders</p> <p>Each Operation shall be given an Order Number by the contract control and management function of the Integrated Roads Information System. This is a unique consecutive numbering system for the Unit. The Order numbering convention shall be in the format set by the contract control and management function of the Integrated Roads Information System and shall include:</p> <p>(i) start year (in this case 2012),</p> <p>(ii) Unit – NW, NE, SE, SW,</p> <p>(iii) consecutive Order number.</p> <p>The contract control and management function of the Integrated Roads Information System will be used by the Director to generate Scheme Identifiers and issue standalone Orders based on Bids submitted by the Operating Company.</p>	<p>The Director can generate and read Orders.</p> <p>The Operating Company and the Performance Audit Group can read Orders.</p> <p>The Director will generate Orders for Core Operations annually.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>It will also be used by the Director to generate free standing Orders not based on Bids.</p> <p>Each Scheme within an Order shall contain the following fields:</p> <ul style="list-style-type: none"> (i) Scheme Identifier, (ii) Scheme identifier from previous contract (for existing Schemes), (iii) the Scheme manager reference from the Integrated Roads Information System where one exists, (iv) Route number or All Routes, (v) Work Code, (vi) Structure reference number (if the Scheme relates to a Structure), (vii) locations – start and end of each link section and chainage, (viii) locations – the Ordinance Survey grid reference or latitude/longitude of the start and the end of the Scheme, (ix) description of location, (x) description of proposed Operations, (xi) details of any restrictions, (xii) required start and finish dates for each Category of Operations or Works, (xiii) Total Order Value of Scheme (can be a negative number), (xiv) Total Order Value of Scheme within the Financial Year, (xv) Cumulative Total Order Value of Scheme to Date, (xvi) Scheme Completion Date, and (xvii) Scheme Closure Date. <p>An issued Order shall not be capable of being altered. Any changes shall require the issue of a further Order by the Director.</p> <p>The Director may vary the work content, the extent or the value of a Scheme which is the subject of an Order by issuing a further Order.</p>	

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>7. Works Contract Instructions</p> <p>Each Works Contract Instruction shall be given a unique Works Contract Instruction Number by the contract control and management function of the Integrated Roads Information System. This is a unique consecutive numbering system for the Unit. The Works Contract Instruction numbering convention shall be as set by the contract control and management function of the Integrated Roads Information System and shall include:</p> <ul style="list-style-type: none"> (i) start year (in this case 2012), (ii) Unit – NW, NE, SE, SW, (iii) consecutive Works Contract Instruction number. <p>The contract control and management function of the Integrated Roads Information System will be used by the Director to generate Scheme Identifiers and issue standalone Works Contract instructions based on Bids submitted by the Operating Company.</p> <p>It will also be used by the Director to generate free standing Works Contract instructions not based on Bids.</p> <p>Each Scheme within an Works Contract instructions shall contain the following fields:</p> <ul style="list-style-type: none"> (i) Scheme Identifier, (ii) Scheme identifier from previous contract (for existing Schemes), (iii) the Scheme manager reference from the Integrated Roads Information System where one exists, (iv) Route number or all Routes, (v) Work Code, (vi) Structure reference number (if the Scheme relates to a Structure), (vii) locations – start and end of each link section and chainage, (viii) locations – the Ordinance Survey grid reference or latitude/longitude of the start and the end of the Scheme, (ix) description of location, (x) description of proposed Operations, (xi) details of any restrictions, 	<p>The Director can generate and read Works Contract Instructions.</p> <p>The Operating Company and the Performance Audit Group can read Works Contract Instructions.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>(xii) required start and finish dates for each Category of Operations or Works,</p> <p>(xiii) total Works Contract Instruction value for the Scheme (can be a negative number),</p> <p>(xiv) total Works Contract Instruction value for the Scheme within the Financial Year,</p> <p>(xv) cumulative total Works Contract Instruction value for the Scheme to Date,</p> <p>(xvi) Scheme Completion Date, and</p> <p>(xvii) Scheme Closure Date.</p> <p>An issued Works Contract instruction shall not be capable of being altered. Any changes shall require the issue of a further Works Contract Instruction by the Director.</p> <p>The Director may vary the work content, the extent or the value of a Scheme which is the subject of a Works Contract instruction by issuing a further Works Contract instruction.</p>	
<p>8. Confirmation of Oral Orders</p> <p>Each Confirmation of Oral Order shall contain the following fields:</p> <p>(i) unique Confirmation of Oral Order reference number,</p> <p>(ii) RNMMMD contact who issued Oral Order,</p> <p>(iii) date and time when Oral Order was issued,</p> <p>(iv) Bid identifier associated with the Confirmation of Oral Order,</p> <p>(v) Scheme Identifier(s) included in supporting Bid,</p> <p>(vi) comments, and</p> <p>(vii) Operating Company contact name.</p> <p>The contract control and management function of the Integrated Roads Information System will allocate automatically a unique Confirmation of Oral Order reference number to each Confirmation of Oral Order.</p>	<p>The Operating Company can generate and read Confirmation of Oral Orders.</p> <p>The Director and the Performance Audit Group can read Confirmation of Oral Orders.</p>
<p>9. Scheme Completion or Closure</p> <p>The contract control and management function of the Integrated Roads Information System will enable the Operating Company to date tag a Scheme within an Order with the "Scheme Completion Date" as referred to at paragraph 4.8.23 of this Part.</p>	<p>The Operating Company can generate and read Scheme Completion Dates and Scheme Closure Dates.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>The contract control and management function of the Integrated Roads Information System will enable the Operating Company to date tag a Scheme within an Order with the "Scheme Closure Date" as defined at paragraph 4.8.25 of this Part.</p> <p>Should a Scheme Closure Date not be input within 56 days of a Scheme Completion Date being input, the contract control and management function of the Integrated Roads Information System shall on such 56th day automatically enter that date as the Scheme Closure Date and shall bar the Operating Company from entering any further costs against the Scheme. There shall be a facility to allow the Director to lift this bar at his discretion.</p> <p>Where a Scheme relates to a monthly lump sum activity, if the Operating Company has not logged the Scheme Closure Date within 14 days of the end of the Financial Year, the contract control and management function of the Integrated Roads Information System will on such 14th day automatically enter that date as the Scheme Closure Date.</p> <p>The contract control and management function of the Integrated Roads Information System will allow the Director to record an objection to the final and conclusive amount claimed for any Scheme which has been tagged with a "Scheme Closure Date".</p> <p>The Director will subsequently amend the contract control and management function of the Integrated Roads Information System to show that he does not have an objection to the final and conclusive amount claimed by the Operating Company.</p>	<p>The Director and the Performance Audit Group can read Scheme Completion Dates and Scheme Closure Dates.</p>
<p>10. Further Detailed Enquiries</p> <p>The contract control and management function of the Integrated Roads Information System will automatically allocate to each Further Detailed Enquiry a unique Further Detailed Enquiry reference number.</p> <p>Each Further Detailed Enquiry shall contain the following fields for Operating Company completion:</p> <ul style="list-style-type: none"> (i) unique Further Detailed Enquiry reference number, (ii) subject heading, (iii) enquiry details, (iv) solutions or options being proposed, (v) requested date for response, 	<p>The Operating Company can generate and read Further Detailed Enquiries.</p> <p>The Director and the Performance Audit Group can read Further Detailed Enquiries.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>(vi) Scheme Identifier to which the Further Detailed Enquiry refers,</p> <p>(vii) original Order or Works Contract Instruction number on which the Scheme was originally issued,</p> <p>(vii) Operating Company contact name, and</p> <p>(viii) Further Detailed Direction reference number of response.</p> <p>The issue of a Further Detailed Direction with a Further Detailed Enquiry number lodged in it shall tag the Further Detailed Enquiry as completed.</p> <p>It shall be impossible to issue a Further Detailed Enquiry without a valid Scheme Identifier and valid Order or Works Contract Instruction.</p>	
<p>11. Further Detailed Directions</p> <p>The Director shall issue a Further Detailed Direction which shall contain the following fields:</p> <p>(i) unique Further Detailed Direction reference number,</p> <p>(ii) Further Detailed Enquiry or Confirmation of Oral Order reference number if Further Detailed Direction is in response to an Further Detailed Enquiry or Confirmation of Oral Order,</p> <p>(iii) direction details,</p> <p>(iv) date for completion,</p> <p>(v) Scheme Identifier to which the Further Detailed Direction refers,</p> <p>(vi) original Order or Works Contract Instruction number on which the Scheme was originally issued,</p> <p>(v) Director contact name,</p> <p>(vi) actual Completion Date to be completed by the Operating Company on completion of the directions in the Further Detailed Direction, and</p> <p>(vii) the Director objects. This field defaults to Y when an actual Completion Date is entered.</p> <p>The contract control and management function of the Integrated Roads Information System will store all Further Detailed Directions generated and tag with date/time of issue and receipt.</p>	<p>The Director can generate and read Further Detailed Directions.</p> <p>The Operating Company and the Performance Audit Group can read Further Detailed Directions.</p> <p>The Operating Company can enter only the Actual Completion Date.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>12. Schedule of Rates and Prices</p> <p>The contract control and management function of the Integrated Roads Information System will hold all rates and prices contained in Schedule 2 Part 2 together with any subsequently inserted fixed or determined rates and prices in a format which shall allow their use in the generation of other elements function such as Statements Bids and Operations Instructions.</p> <p>Each rate and price shall be capable of having a tag attached which shall indicate the rate or price as being either High (H) or Low (L).</p> <p>At award of this Contract the Director shall identify certain rates and prices to which shall be attached an H or L tag which shall activate a flag when shown within an estimate of costs within a Bid. This will allow the Scottish Ministers to consider value for money issues as set out at paragraphs 7.2.11 and 7.2.12 of Schedule 1.</p> <p>All rates and prices contained in Schedule 2 Part 2 shall be tagged as determined rates and prices. Where a determined rate and price shall be entered to replace a fixed rate the Contract Price Fluctuation shall be automatically recalculated.</p> <p>When a determined rate and price for an item shall be inserted into the Schedule of Rates and Prices to supersede a fixed rate and price then only the determined rate shall be available thereafter for insertion into Operations instructions and Statements. However the fixed rate shall continue to be held as a historical record.</p> <p>When a determined rate for an item is inserted into the contract control and management function of the Integrated Roads Information System to supersede a fixed rate and price, then the function will automatically generate an Operations Instruction showing the cumulative quantity to date for that item as a positive number against the determined rate and price and the cumulative quantity to date for that series/item as a negative number against the fixed rate and price.</p>	<p>The Operating Company shall enter the Contract rates and prices contained in Schedule 2 Part 2 together with the linkages to the Contract Price Fluctuation categories. These shall be validated by the Director. In all cases descriptions shall be full and not linked to descriptions on other rates for example "as above".</p> <p>Once validated, only the Director and the Performance Audit Group shall have access to revise add or delete rates and prices.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>13. Operations Instructions</p> <p>For Core Operations and Operations, the contract control and management function of the Integrated Roads Information System will generate Operations Instructions to each of which shall be allocated a unique identifier. No Operations Instruction shall be capable of being generated unless a Scheme Identifier Work Code and Order Number or 9901 Activation shall be identified and logged on the Operations Instruction.</p> <p>The contract control and management function of the Integrated Roads Information System will prevent Operations Instruction from being issued without an itemised rate or price as held within the function as referred to in paragraph 12 of this Annex being inserted.</p> <p>The Operating Company shall place an estimated quantity against each itemised rate. The contract control and management function of the Integrated Roads Information System will then multiply the quantity with the rate to produce sub-totals for each item which shall then be totalled to generate the estimated cost of the Operations Instruction. This shall be in a format such that on completion actual measured quantities can be entered and downloaded to the active Statement for that month.</p> <p>Each Operations Instruction within a Scheme shall contain the following fields for Operating Company completion:</p> <ul style="list-style-type: none"> (i) unique Operations Instruction identifier, (ii) Scheme Identifier, (iii) original Order Number, (iv) Work Code, (v) road management and maintenance function of the Integrated Roads Information System Defect identifier, (vi) Damage to Crown Property identifier if appropriate, (vii) the items within the Schedule of Rates and Prices specified at paragraph 12 of this Annex to be used for the Operations. Changes to Series or items shall only be made prior to commencement of Operations and normally as a consequence of design requirements, 	<p>The Operating Company can generate and read Operations Instructions.</p> <p>The Director and the Performance Audit Group can read Operations Instructions.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>(viii) the estimated quantities related to each item. Changes to estimated quantities shall only be made prior to commencement of Operations and normally as a consequence of design requirements,</p> <p>(ix) for those Work Codes detailed in paragraph 12 of this Annex, insertion of a Principal Distance sum for carbon monitoring purposes for the main material utilised within the Scheme,</p> <p>(x) the estimated value of the Operations generated from the two foregoing,</p> <p>(xi) Route number,</p> <p>(xii) location (link section and chainage plus a written description),</p> <p>(xiii) description of proposed Operations, and</p> <p>(xiv) proposed start and finish dates.</p> <p>Each Scheme within an Operations instruction shall also be capable of holding data additional data as yet unspecified by the Director.</p> <p>The contract control and management function of the Integrated Road Information System will provide facilities for recording Site data associated with each Operations Instruction and shall contain, as a minimum, the following fields:</p> <p>(i) reasons for changes made on Site (written description).</p> <p>Changes to estimated quantities made on site:</p> <p>(a) actual measured quantities related to each item,</p> <p>(b) date Site Operations commenced,</p> <p>(c) date Site Operations completed,</p> <p>(d) name of authorised Site sign off,</p> <p>(e) name of countersigning manage, and</p> <p>(f) principal distance of main material used within the Scheme.</p>	

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>The contract control and management function of the Integrated Roads Information System will be directly linked to the routine maintenance management function of the Integrated Roads Information System to allow Category 1 Defects to be imported to generate Operations Instructions. The contract control and management function of the Integrated Roads Information System will be set up in such a manner as to also allow Category 2 Defects identified from inspections to be grouped and imported, as well as allowing the export back of data to the routine maintenance management function of the Integrated Roads Information System. The contract control and management function of the Integrated Roads Information System will indicate completion of both Category 1 and 2 Defects to the routine maintenance management function of the Integrated Roads Information System. The information which shall be transferred from the routine maintenance and management function of the Integrated Roads Information System will contain the following fields:</p> <ul style="list-style-type: none"> (i) routine maintenance and management function of the Integrated Roads Information System Defect Identifier (which shall include the Defect category), (ii) Route number, (iii) location – link section chainage plus a written description, (iv) locations – the Ordinance Survey grid reference or latitude and longitude of the start and the end of the Scheme, (v) description of proposed Operations, and (vi) proposed start and finish dates. <p>The information that will be transferred back to the routine maintenance and management function of the Integrated Roads Information System will include:</p> <ul style="list-style-type: none"> (i) routine maintenance and management function of the Integrated Roads Information System Identifier, (ii) Scheme Identifier, (iii) Operations Instruction reference, (iv) Operations Instruction start date, and (v) Operations Instruction closure date. 	

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>The contract control and management function of the Integrated Roads Information System will prevent any further Operations Instructions from being generated if this shall exceed the value of the Order. The only exception shall be Operations Instructions related to Emergencies.</p> <p>Operations Instructions which contain a Damage to Crown Property identifier which shall be tagged as estimated to cost less than £10,000 shall not send the costs to the Statement. These costs shall only be sent to data fields (a) (b) (c) (d) (e) (f) and (g) (see paragraph 18 of this Annex).</p> <p>An Operations Instruction shall not be able to contain more than one Damage to Crown Property identifier.</p> <p>The contract control and management function of the Integrated Roads Information System can generate Consolidated Operations Instructions containing more than one Operations Instruction. Each Consolidated Operations Instruction will be issued with a unique consecutive identifier number.</p>	
<p>14. Statement</p> <p>Each Statement shall be given a unique consecutive number by the contract control and management function of the Integrated Roads Information System.</p> <p>The Operating Company shall provide the following two reports to be lodged in the contract control and management function of the Integrated Roads Information System which shall form part of the Statement each month:</p> <ul style="list-style-type: none"> (i) a simplified Statement report as specified in Annex 4.1/D of this Part, (ii) a Scottish Executive accounting system Statement report allocating all costs within the Statement to Scottish Executive accounting system codes. <p>The Operating Company shall retain all supporting documentation related to Operations on which Statements have been prepared. Such documentation shall be referenced to the Scheme Identifier.</p> <p>As soon as actual measurement data is inserted into an Operations Instructions then this shall be transferred to a live running Statement for that month.</p> <p>The Contract Price Fluctuation item categories for each individual Statement shall be capable of being amended to allow for changing from provisional index figures to Final Index Figures. On occasion the Final Index Figures can also be updated. The cumulative calculation for the value of the Contract Price Fluctuation shall be based upon the</p>	<p>Operating Company can generate and read all Statements.</p> <p>Director and the Performance Audit Group can read all Statements.</p> <p>The Operating Company shall enter new indices for the Contract Price Fluctuation factors on a monthly basis.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>summation of each individual Statement submitted. Each individual Statement shall be tagged as either provisional or final based on the Contract Price Fluctuation which has been applied.</p>	
<p>15. Payment Notified Record</p> <p>Each Payment Notified Record shall be given a unique consecutive number by the contract control and management function of the Integrated Roads Information System.</p> <p>Where Statements are submitted to the Director, the Director will use the contract control and management function of the Integrated Roads Information System to create a Payment Notified Record for that month as follows:</p> <ul style="list-style-type: none"> (i) transfer elements from part A to part B of the Statement where such elements shall be identified by the Director in Statements as disputed elements, (ii) manipulate the quantities (including setting negative quantities) in Statements to show the changes which the Director wishes to make, (iii) automatic recalculation of all values following (i) and (ii) above including Contract Price Fluctuation value and Scottish Executive accounting system report, (iv) create an interim payment notified record to facilitate a check on adjustments prior to the Payment Notified Record being finalised and submitted by the Director, (v) hold the Payment Notified Records showing the total for the year to date and the totals for completed years, and (vi) store all Payment Notified Records generated and tag each with date and time of issue and receipt. 	<p>The Director and the Performance Audit Group can generate and read Payment Notified Records.</p> <p>The Operating Company can read all Payment Notified Records.</p>
<p>16. Payment Received Record</p> <p>The contract control and management function of the Integrated Roads Information System will record the date and value of the payment received from the Director for the month. This shall be known as the Payment Received Record.</p> <p>Each Payment Received Record shall be given a unique consecutive number by the contract control and management function of the Integrated Roads Information System.</p>	<p>The Operating Company can generate and read Payment Received Records.</p> <p>The Director and the Performance Audit Group can read all payment received records.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>17. Works Contracts</p> <p>Each Scheme for which there is a Works Contract Instruction issued shall contain the following fields for Operating Company completion:</p> <ul style="list-style-type: none"> (i) Scheme Identifier, (ii) Work Code, (iii) appropriate series/item number related to Work Code as described in Annex 4.1/F of this Part, (iv) unique Works Contract Instruction number, (v) total Works Contract Instruction value for the Scheme within the Financial Year, (vi) cumulative total Works Contract Instruction value for the Scheme to date, (vii) tender value, (viii) date of Director award letter to Works Contractor, (ix) name of Works Contractor, (x) monthly payment certified, (xi) payment application, (xii) period covered, (xiii) total payments certified to date, (xiv) retention value, (xv) CC payment certification and monitoring forms as described in Schedule 6 Part 1, Annex 6.1/B, (xvi) actual Site Works start date (or estimated prior to Site Works commencing), (xvii) actual Site Works end date (or estimated prior to Site Works finishing), and (xviii) on completion the quantity related to the appropriate item number as above. <p>The contract control and management function of the Integrated Roads Information System will tag each monthly payment certified with date and time of issue and receipt.</p>	<p>The Operating Company can generate and read Works Contract Records.</p> <p>The Director and the Performance Audit Group can read all Works Contract records.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>18. Damage to Crown Property Cost Recovery</p> <p>The contract control and management function of the Integrated Roads Information System will contain the following fields for each incident which causes Damage to Crown Property for Operating Company completion:</p> <ul style="list-style-type: none"> (i) unique Damage to Crown Property identifier automatically generated which can tag as either less than or equal to £10,000 or more than £10,000 estimated cost. Ability to re-tag if required, (ii) Route number, (iii) date and time of incident, (iv) source of this information, (v) date that the Operating Company first became aware of the Damage to Crown Property, (vi) date damage logged, (vii) location of damage Site – link, section and chainage and Ordnance Survey grid reference, (viii) location of damage Site – written description, (ix) description of property, (x) type and extent of damage, (xi) cause of damage, (xii) name of culprit(s), (xiii) are proceedings being taken by police? (xiv) date emergency work was carried out (if any), (xv) who carried out emergency work (if any)? (xvi) road condition e.g. good, rutted, (xvii) weather conditions, (xviii) was road wet, dry or icy? (xix) was Winter Service Plant called out? (xx) details of de-icing Operations, (xxi) was precautionary treatment carried out at the locus prior to the incident? (xxii) estimated final cost (measured in accordance with paragraph 3.1.3 of Schedule 4 Part 4), (xxiii) estimated date for final repair, (xxiv) names and addresses of witnesses (if any), 	<p>The Operating Company can generate and read Trunk Road Damages Claims.</p> <p>The Director and the Performance Audit Group can read all Trunk Road damages claims.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>(xxv) all other relevant information,</p> <p>(xxvi) brief account of incident causing damage,</p> <p>(xxvii) date of repair replacement and clearance,</p> <p>(xxviii) details of repair,</p> <p>(xxix) status with regard to recovery,</p> <p>(xxx) date the Director notified where cost of repair replace and clearing exceeds £10,000,</p> <p>(xxxi) cost of repair replacement and clearance together with tag for estimated or final cost (see damage to crown property 'Notification of the Final Cost of Repair of an Incidence of Damage to Crown Property' shown in Annex 4.4/H of Schedule 4 Part 4),</p> <p>(xxxii) amount recovered from culprit,</p> <p>(xxxiii) final Statement number (if appropriate) (which shall be the Statement submitted by the Operating Company in accordance with Clause 10.3.1 of Schedule 1 to this Contract that contains the final claim for payment in respect of the incident to which the Unique damage identifier applies), and</p> <p>(xxxiv) outstanding balance (difference between costs to be recovered and amount recovered).</p> <p>The costs to be recovered at (xxxi) shall be held within the following fields:</p> <p>(i) cost of repair replacement and clearance (section A of 'Notification of the Final Cost of Repair of an Incidence of Damage to Crown Property shown in Annex 4.4/H of Schedule 4 Part 4),</p> <p>(ii) all other costs (section B of 'Notification of the Final Cost of Repair of an Incidence of Damage to Crown Property shown in Annex 4.4/H of Schedule 4 Part 4).</p> <p>The costs at (i) and (ii) above, shall be obtained from the following fields:</p> <p>(a) cost sub series,</p> <p>(b) description,</p> <p>(c) quantity,</p> <p>(d) Unit,</p> <p>(e) rate,</p> <p>(f) amount of costs, and</p> <p>(g) subtotal.</p>	

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>When the cost field at (xxxi) above shall be tagged as final the system shall automatically generate a 'Notification of the Final Cost of Repair of an Incidence of Damage to Crown Property as described in Annex 4.4/H of Schedule 4 Part 4. These shall be issued to the Director in accordance with the requirements of paragraph 3.3.2 of Schedule 4 Part 4.</p>	
<p>19. Responsible Persons</p> <p>The contract control and management function of the Integrated Roads Information System will hold a list of responsible persons nominated by the Operating Company and the Director and the Performance Audit Group who shall have authority to undertake transactions and to whom messages shall be passed when specific transactions shall be undertaken. As a minimum this list will disclose:</p> <p>Name;</p> <p>Organisation;</p> <p>E- Mail Address;</p> <p>Grade;</p> <p>Telephone Contact details;</p> <p>Alternative point of contact – name;</p> <p>Alternative point of contact – telephone contact details.</p>	<p>The Operating Company can enter and revise its own staff designated as responsible persons.</p> <p>The Director can enter and revise his own staff or the Performance Audit Group's staff designated as responsible persons.</p>
<p>20. Time Work Schedule Supporting Documents</p> <p>Time Work Schedule supporting documents shall be logged onto the contract control and management function of the Integrated Roads Information System by the Operating Company under individual Operations Instructions and shall contain the following fields and sub-fields:</p> <ul style="list-style-type: none"> (i) Operations Instruction identifier, (ii) Scheme Identifier: <ul style="list-style-type: none"> (a) labour, (iii) each item number, (iv) quantity for each item, (v) rate for each item, (vi) cost for each item, (vii) total cost for all items listed: <ul style="list-style-type: none"> (a) plant listed, (viii) each item number, (ix) quantity for each item, 	

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<ul style="list-style-type: none"> (x) rate for each item, (xi) cost for each item, (xii) total cost for all each items listed: <ul style="list-style-type: none"> (a) plant from Schedule of Daywork plant rates, (xiii) quantity for plant type, (xiv) plant type cost from Schedule of Daywork plant rates, (xv) percentage adjustment rate for series/item, (xvi) cost for plant type, (xvii) total cost for all plant types: <ul style="list-style-type: none"> (a) supplementary charges, (xviii) statement/invoice cost of each item, (xix) percentage adjustment rates and prices for each item, (xx) cost for Statement/invoice, (xxi) total cost for all Statements/invoices: <ul style="list-style-type: none"> (a) materials, (xxii) quantity for each material, (xxiii) rate for each material, (xxiv) cost for each material, (xxv) total cost for each material listed. 	
<p>21. 9901 Activation</p> <p>Each 9901 Activation will be given a 9901 Activation number by the contract control and management function of the Integrated Roads Information System. This is a unique consecutive numbering system for the Unit. The Order numbering convention shall be as set in the Integrated Roads Information System and shall include:</p> <ul style="list-style-type: none"> (i) start year (in this case 2007), (ii) Unit – NW, NE, SE, SW, (iii) consecutive Order number. 	<p>The Operating Company can generate and read 9901 Activations.</p> <p>The Director and the Performance Audit Group can read 9901 Activations.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>Generate Scheme Identifiers and issue standalone 9901 Activations based on Bids submitted by the Operating Company.</p> <p>Each Scheme within a 9901 Activation shall contain the following fields:</p> <ul style="list-style-type: none"> (i) Scheme Identifier, (ii) Scheme identifier from previous contract (for existing Schemes), (iii) the Scheme manager reference from the Integrated Roads Information System where one exists, (iv) Route number or All Routes, (v) Work Code, (vi) Structure reference number (if the Scheme relates to a Structure), (vii) locations – start and end of each link section and chainage, (viii) locations – the Ordnance Survey grid reference or latitude and longitude of the start and the end of the Scheme, (ix) description of location, (x) description of Operations and reasons for claim for payment, (xi) details of any restrictions, (xii) required start and finish dates for each Category of Operations or Works, (xiii) 9901 Activation Total Order Value of Scheme Identifier (can be a negative number but not zero value), (xiv) 9901 Activation Total Order Value of Scheme within Financial Year, (xv) cumulative Total Order Value of Scheme to Date, (xvi) Scheme completion date, and (xvii) Scheme closure date. <p>An issued 9901 Activation shall not be capable of being altered. Any changes shall require the issue of a further 9901 Activation by the Director.</p>	
<p>The functionality of a 9901 Activation mirrors the functionality of an Order but shall not be deemed to an Order.</p>	

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<p>22. Professional Services Register</p> <p>In accordance with the requirements of 2.2.4 of this Part and Schedule 9 Part 1 of the Contract, the Operating Company shall maintain a Professional Services Register of staff within the contract control and management function of the Integrated Roads Information System containing the following information:</p> <ul style="list-style-type: none"> (i) 6200 Item No, (ii) full Name, (iii) role within Operating Company function, (iv) location, (v) 6200 description, (vi) date approved by Transport Scotland, (vii) approval category-full or provisional, (viii) basis of approval – contract compliant or equivalence, and (ix) date of removal from register. 	<p>The Operating Company can enter and revise its employee details within the Register.</p> <p>The Operating Company shall flag new additions or application for new gradings to the Director for approval.</p> <p>The Director will be able to approve the application either in full or provisionally.</p>
<p>23. Carbon reporting</p> <p>The contract control and management function of the Integrated Roads Information System will produce a carbon report based upon the actual quantities of materials utilised in Operations as part of a Scheme. The report will contain the following figures:</p> <ul style="list-style-type: none"> • total material carbon, • total transport carbon, • total carbon (sum of the two figures above). <p>The Director will use the contract control and management function of the Integrated Roads Information System to:</p> <ul style="list-style-type: none"> • store a mass conversion factor against each relevant Schedule of Rate item to allow conversion of appropriate item quantities in Operations Instructions to a mass measured in tonnes, • store emissions factor histories for groups of like items in the Schedule of Rates to be used to derive a carbon figure for rate items in each Operations Instruction (aggregated up for each Scheme), 	<p>Only the Director will enter mass conversion factor as required onto the contract control and management function of the Integrated Roads Information System for each Schedule of Rate item.</p> <p>Only the Director will supply guidance on "grouping" of Schedule of Rate Items for emissions factor Rates.</p> <p>The Operating Company shall record Principal Distance for each relevant Scheme.</p> <p>Only the Director will supply the emissions factor rate history values and any amendments during the course of this Contract shall be under his direct control.</p>

FUNCTIONS AND FUNCTIONALITY	ROLES OF PARTIES
<ul style="list-style-type: none"> • store emissions factor histories used to calculate the transport carbon using the current fuel carbon factor and the principal distance figures for all appropriate Schemes, • provide carbon report selection criteria and output specification. <p>Procedures will be supplied to the Operating Company by the Director for recording principal distances within the Scheme.</p> <p>Appendix 1 to this Annex details the term descriptions, Operating Company and Director roles and contract control management function outputs required for Carbon reporting.</p>	<p>The Operating Company shall generate reports as required for the Director.</p>
<p>Requirement for Carbon Report content</p> <p>The output requirements for Carbon reporting are provided at Annex 4.1/H (xiii) of this Part.</p>	

Annex 4.1/G Appendix 1

Calculations Required for Carbon Reporting through the Contract Control and Management Function of the Integrated Roads Information System (ref. Annex 4.1/G (23))

Item	Description	User Input	Contract Control and Management Functionality Calculation Required	Contract Control and Management Functionality Calculation Output
Principal Distance (PD)	The distance, in kilometres, to the works site from the primary material source (quarry supplier), as identified in the relevant Maintenance Scheme Detail (MSD) data sheet.	At scheme closure, record the Principal Distance (in km) in the appropriate field.	PD = user entered value	n/a
Mass Conversion Factor (MCF)	Factor provided by The Director to convert the contract control and management function of the Integrated Roads Information System Schedule of Rates item quantity unit (eg. m ² , m, m ³ , litres, etc.) to a mass, in tonnes, for carbon emission calculations. This will be derived for a range of items where published carbon factors are available, and will be updated periodically in line with updates to published figures.	None. The contract control and management function of the Integrated Roads Information System will apply the MCF to each Schedule of Rates item recorded under the scheme.	Schedule of Rate item (unit) * quantity * MCF	Item tonnage T1, T2, T3, etc.
Emissions Factor (EF) rate	Each Schedule of Rate material item type with an available published embodied carbon factor will be assigned an Emissions Factor, provided by the Director. This will be multiplied by the item tonnage to provide an embodied carbon value for each item recorded under the scheme.	None. Following application of the MCF, the contract control and management function of the Integrated Roads Information System will apply the EF to each Schedule of Rates item tonnage.	Item tonnage T1, T2, T3, etc. * EF for each item	Item embodied carbon tonnage C1, C2, C3, etc. (Measured in tCO ₂ e)

Item	Description	User Input	Contract Control and Management Functionality Calculation Required	Contract Control and Management Functionality Calculation Output
Total Embodied Carbon in materials	The contract control and management function of the Integrated Roads Information System will calculate the total embodied carbon across all materials, with published EF, recorded under the scheme.	None. The contract control and management function of the Integrated Roads Information System will sum the item embodied carbon values.	Sum of item embodied carbon tonnages C1 + C2 + C3, etc.	Total embodied carbon in scheme materials C(SUM) (Measured in tCO ₂ e)
Material Tonnes	To calculate transportation emissions, the contract control and management function of the Integrated Roads Information System requires a total material tonnage for each scheme. This will be calculated by multiplying each relevant Schedule of Rates item by the Mass Conversion Factor for each item, and then summing the total mass across all items within the scheme.	None. The contract control and management function of the Integrated Roads Information System will sum the total mass across all items recorded under the scheme.	Sum of item tonnages T1 + T2 + T3	Total material tonnage T(SUM)
Tonne-Kilometres	To calculate transportation emissions, the contract control and management function of the Integrated Roads Information System needs to multiply the total material tonnage by the Principal Distance	PD in kilometres at scheme closure only.	T(SUM) * PD	Total tonne-kilometres t-km
Fuel Carbon Factor (FCF)	To calculate transportation emissions, the contract control and management function of the Integrated Roads Information System needs a carbon emissions factor for fuel consumption per tonne-kilometre. This factor will be supplied by Transport Scotland and will be based on published Defra figures for a 17 tonne rigid HGV.	None. The contract control and management function of the Integrated Roads Information System will apply the fuel carbon factor to calculate transportation emissions.	FCF = figure provided by Transport Scotland and applied across all schemes	n/a

Item	Description	User Input	Contract Control and Management Functionality Calculation Required	Contract Control and Management Functionality Calculation Output
Transport Carbon Emissions (TrC)	To calculate transportation emissions, the contract control and management function of the Integrated Roads Information System needs to multiply the FCF by the total number of tonne-kilometres.	None. The contract control and management function of the Integrated Roads Information System will multiply the tonne-kilometres by the FCF.	t-km * FCF	Total transport carbon emissions TrC (measured in tCO ₂ e)
Total scheme carbon (SC)	To calculate the total carbon associated with a scheme, the contract control and management function of the Integrated Roads Information System needs to add the total embodied carbon in materials to the total transportation carbon emissions.	None. The contract control and management function of the Integrated Roads Information System will add C(SUM) to TrC for each scheme.	C(SUM) + TrC	Total scheme carbon SC (Measured in tCO ₂ e)

This is Annex 4.1/H to Schedule 4 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

**ANNEX 4.1/H – Standard Reports from the Contract Control and Management Function
of the Integrated Roads Information System**

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

ANNEX 4.1/H – Standard Reports from the Contract Control and Management Function of the Integrated Roads Information System

Standard Reports

The contract control and management function of the Integrated Roads Information System shall produce reports with 'fixed' fields as referred to in this Annex. These reports shall be menu driven to respond to requests for specific periods and in all cases show the periods covered. The contract control and management function of the Integrated Roads Information System will also produce ad-hoc reports using fields specified in (xiii and xiv) in the table below and which shall be sorted in an order and for whatever period requested by the user. It shall also save the format of frequently requested ad-hoc reports if required.

	Description	'Fixed' Fields
(i)	Order versus spend by Scheme year	(a) Scheme Identifier
		(b) Amounts Ordered (£)
		(c) Spend (Part A) (£) and
		(d) Difference between (b) (£), and (c) (£)
		(e) Part B (£)
(ii)	Analysis of costs by item series	(a) All item series
		(b) Applied value for month (£)
		(c) Applied value for Financial Year to date (£)
		(d) Applied value for month as a percentage of total applied value for month (£) and
		(e) Applied value for Financial Year as a percentage of total applied value for year to date (£)
(iii)	Statement by Operations Instructions for current month	(a) All fields as per Annex 4.1/D/4 of this Part but only showing current month's transactions and the corresponding totals for the Schemes involved.
(iv)	Scheme Completion or Closure	(a) Scheme Identifier
		(b) Scheme description
		(c) Associated Further Detailed Directions reference number
		(d) Further Detailed Direction status

	Description	'Fixed' Fields
		(e) Scheme Completion Date (showing date entered into contract control and management function of the Integrated Roads Information System)
		(f) Scheme Closure Date
		(g) Amounts omitted from payment (£)
		(h) Date for acceptance by Director and
		(i) Objected to by Director (Y/N)
(v)	Payment Notified Record checking facility (Manual Input by Performance Audit Group required)	(a) Operations Instruction
		(b) Order number
		(c) Scheme Identifier
		(d) Series/item number
		(e) Unit of measurement
		(f) Applied quantity for month
		(g) Certified quantity for month after Payment Notified Record
		(h) Applied value (£) for month
		(i) Certified value (£) for month after Payment Notification Record and
		(j) Amount to omit/release (including net total) (£) (h)–(i)
(vi)	Works Contractors Register Tender or outturn costs (Manual input by Operating Company required)	(a) Scheme Identifier
		(b) Scheme description
		(c) Route
		(d) Work Code
		(e) Series/item number
		(f) Name and address of Works Contractor
		(g) Tender value (£) and award date
		(h) Dates of payment application
		(i) Period covered by statement/invoice
		(j) Actual and proposed site Works start date
		(k) Actual and proposed Works period length (days)
		(l) Extensions of time granted by the Engineer
		(m) Actual and proposed site Works end date

	Description	'Fixed' Fields
		(n) Amount (£) and date of interim payments certified
		(o) Total payments (£) certified to date
		(p) Payment (£) outstanding including retention value
		(q) Retention value (£)
		(r) Bonus/charge (£) for occupancy
		(s) Total estimated and actual cost including bonus/charge (£)
		(t) Difference between total estimated and actual cost including bonus/charge (r) and tendered value (g) (£)
		(u) Explanation for any differences +/- 10%
		(v) On completion the quantity related to (e) above
		The register should also contain the following information
		(i) every 26 weeks and in any event within 14 days of the issue of the Certificate of Completion and the Maintenance Certificate on a scale of 1 to 10 in the opinion of the Engineer the overall performance of the Works Contractor
		(ii) a written appraisal by the Engineer on the performance of the Works Contractor in three parts
		(a) quality of the Works
		(b) quality of the Works Contractor's resources and
		(c) approach and attitude of the Works Contractor including approach to measurement and claims
		(iii) separate details of all Scheme files including but not limited to
		(a) health and safety files
		(b) Certification
		(c) Design
		(d) Supervision
		(e) measurement and payment records and

	Description	'Fixed' Fields
		(f) As-built drawings/records
(vii)	Order Register showing related Further Detailed Enquiry and Further Detailed Direction and Confirmation of Oral Order	(a) Order number
		(b) Date Order created
		(c) Scheme Identifier
		(d) Description of Operations
		(e) Reference number of any associated Further Detailed Direction/Further Detailed Enquiry /Confirmation of Oral Order and
		(f) Description of any associated Further Detailed Direction/Further Detailed Enquiry/ Confirmation of Oral Order
(viii)	Further Detailed Enquiries and Further Detailed Directions	Further Detailed Enquiry
		(a) Reference number
		Enquiry details
		Date issued
		Requested date for response
		Status (resolved /unresolved)
		Operating Company contact name
		Reference number of Further Detailed Direction response
		(b) Further Detailed Direction
		Reference number
		Further Detailed Enquiry Confirmation of Oral Order reference number
		Details of direction
		Target date for completion
		Actual completion date
		Director contact name
		Status (open/completed)
(ix)	Bids highlighting those not the subject of an Order	(a) Bid number
		(b) Description
		(c) Date of bid
		(d) Bid value (£)
		(e) Associated Order number
		(f) Date of Order

	Description	'Fixed' Fields
		(g) Order value (£)
		(h) Bid numbers not ordered
(x)	Schemes the subject of an Order but not commenced	(a) Scheme Identifier
		(b) Scheme description
		(c) Route
		(d) Order number
		(e) Orders not commenced
(xi)	Rates and Prices for new items (Manual input by Operating Company and Director required)	(a) Description of new rate
		(b) Description of items within new rate and price
		(c) Date of submission of application for rate and price for new item
		(d) Status (submitted/determined/agreed)
		(e) Details of progress
		(f) Item number allocated by Performance Audit Group
		(g) Date determined/agreed by the Director
		(h) Date determined/agreed entered into the contract control and management function of the Integrated Roads Information System
		(i) Amount of determined/agreed rates and prices (£)
		(j) Action (Director / Operating Contract / Performance Audit Group)
(xii)	Contract Price Fluctuation indices by month showing provisional and final	(a) Statement number
		(b) Month applicable to indices used
		(c) Index for category A – provisional
		(d) Index for category B – provisional
		(e) Index for category C – provisional
		(f) Index for category A – final
		(g) Index for category B – final
		(h) Index for category C – final
(xiii)	Carbon Emission reporting for materials usage and materials transport	Appendix 1 to Annex 4.1/G details the contract control management function outputs required for Carbon reporting.

	Description	'Fixed' Fields
(xiv)	Fields for ad-hoc reports	(a) Period covered
		(b) Operations Instruction number
		(c) Order number
		(d) Budget year
		(e) Route
		(f) Scheme Identifier
		(g) Scheme description
		(h) Work Code
		(i) Series number e.g. 0400 (where full item number shall be 040003231)
		(j) Series/sub-series e.g. 040003 (where full item number shall be 040003231)
		(k) Series/sub-series/item number (where full item number shall be 040003231)
		(l) Item description
		(m) M/D/S
		(n) Chainage and linkage
		(o) Unit of Measurement
		(p) Current month quantity
		(q) Rate and Price (£)
(r) Contract Price Fluctuation for Current month by category (£)		

This is Annex 4.1/I to Schedule 4 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 1

FINANCIAL AND CONTRACT MANAGEMENT

ANNEX 4.1/I – Disability Discrimination Act Requirements

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 2

INTEGRATED ROADS INFORMATION SYSTEM

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 2

INTEGRATED ROADS INFORMATION SYSTEM

1. INTEGRATED ROADS INFORMATION SYSTEM

1.1 General

1.1.1 The Integrated Roads Information System shall be provided by the Director to the Operating Company via a hosted solution. The features and functionality of the Integrated Roads Information System are available through the internet.

1.1.2 The Director shall supply the Operating Company with 50 named licences to access the website.

1.1.3 The Integrated Roads Information System is a functionally rich system which includes:

- (i) Pavement management function of the Integrated Roads Information System including data for:
 - (a) condition,
 - (b) accidents, and
 - (c) network.
- (ii) Scheme manager function of the Integrated Roads Information System including data for:
 - (a) all Schemes included in draft and approved one and three year programmes and all other identifiable Schemes for future consideration,
 - (b) all Statement of Intents, results of further investigations and other information supporting the scheme justification,
 - (c) current Scheme costs, programme and status information, and
 - (d) Scheme Design and construction information.
- (iii) Routine maintenance and management function of the Integrated Roads Information System including data for:
 - (a) network,
 - (b) inventory,
 - (c) defect,
 - (d) Inspection,
 - (e) maintenance, and
 - (f) street lighting.

The routine maintenance and management function of the Integrated Roads Information System includes all data associated with the Trunk Road network, including electrical, environmental and landscape assets.

- (iv) Structures management function of the Integrated Roads Information System:
 - (a) inventory,
 - (b) defect,
 - (c) inspection, and
 - (d) maintenance.
 - (v) Development management function of the Integrated Roads Information System:
 - (a) pre application,
 - (b) application, and
 - (c) response.
- 1.1.4 The Operating Company shall not bulk upload data from its own systems into the Integrated Roads Information System unless this has been expressly consented to in advance by the Director and where such an upload can be fully audited by the Director or the Performance Audit Group.
- The Operating Company may bulk download data from the Integrated Roads Information System to its own systems only when the Director has previously audited and consented to the download methodology and the verified the validity of the data to be downloaded in advance.
- The Integrated Roads Information System allows for uploads and downloads of data to and from permitted sources in a variety of manners including standard Microsoft Office output files, comma separated variable files and XML Schema. The Operating Company may submit requests to the Director for the use of alternative input and output methodologies. Consent for such usage shall be at the sole discretion of the Director.
- 1.1.5 The Operating Company shall provide the following to enable its licensed users to access the Integrated Roads Information System:
- (i) computer terminals running an acceptable version of Microsoft Internet Explorer or acceptable alternative browser software,
 - (ii) broadband (with a minimum connection speed of one megabit per second for up to five users), corporate network or similar internet access, and
 - (iii) security and firewall setup enabling the following protocols:
 - (a) HyperText Transfer Protocol ("http"),
 - (b) HyperText Transmission Protocol-Secure ("https"),
 - (c) Citrix Internet Connection Sharing ("ICS"), and
 - (d) Remote Desktop Protocol ("RDP") or equivalent.
- 1.1.6 The Director shall supply software for Data Capture Devices for use during inspections as required by Schedule 7 Part 1.

- 1.1.7 The Operating Company shall supply all Data Capture Device hardware that shall meet the following minimum specifications:
- (i) laptop, tablet personal computer or similar device running a suitable Windows operating system (not Linux or similar), or any other software as notified by the Director,
 - (ii) compliance with the specification in paragraph 1.1.5 of this Part excepting item (ii),
 - (iii) minimum 40 gigabyte data storage memory, and
 - (iv) global positioning system capabilities.
- 1.1.8 The Operating Company shall accommodate all future developments of the system at any time during the Contract Period.
- 1.1.9 The Operating Company shall appoint an Integrated Roads Information System Coordinator who is responsible for the implementation and management of all modules of the Integrated Roads Information System by the Operating Company.
- 1.1.10 The Integrated Roads Information System Coordinator shall provide to the Director the names and email addresses of staff authorised by the Operating Company to use the Integrated Roads Information System. The Operating Company shall notify the Director within five Working Days of any changes of authorised users. The Operating Company shall notify the Director within one Working Day of any authorised user that ceases to be employed by the Operating Company.
- All usernames and passwords supplied by the Director to the Operating Company, or passwords generated by the Operating Company's staff, shall be treated as confidential information and the Operating Company shall ensure staff do not divulge this information to unauthorised people.
- 1.1.11 An Integrated Roads Information System user group meeting shall be held from time to time to inform the Operating Company of future changes to the Integrated Roads Information System and discuss potential developments to the Integrated Roads Information System. Any developments to the Integrated Roads Information System shall be at the sole discretion of the Director.
- The Integrated Roads Information System Coordinator shall attend the Integrated Roads Information System user group at the dates and times notified in writing by the Director.
- 1.1.12 During the Mobilisation Period and from time to time during the Contract Period, the Director shall provide training to staff nominated by the Operating Company on the use of the Integrated Roads Information System. These nominated staff shall then be responsible for training other members of the Operating Company's staff as necessary in its use. The Operating Company shall ensure that all nominated staff attend such training at the dates and times notified in writing by the Director.
- 1.1.13 The Operating Company is responsible for providing any additional training and ensuring that the Integrated Roads Information System is used in accordance with its own Management System procedures.

1.2 Pavement Management Functionality of the Integrated Roads Information System Features

1.2.1 The Director shall populate the pavement management function of the Integrated Roads System module with the following:

- (i) road condition data including:
 - (a) SCANNER survey data,
 - (b) Sideways Co-efficient Routine Investigation Machine ("SCRIM") survey data, and
 - (c) deflectograph survey data,
- (ii) derived traffic flow data from the Scottish Roads Traffic Database,
- (iii) accident data, and
- (iv) road construction data.

1.2.2 Survey contractors employed by the Director shall undertake road condition surveys.

The Director shall notify the Operating Company in writing of the programme of routes and types of survey to be undertaken on the Unit each year during the Contract Period. Notification shall be provided at least one month before the start of the annual survey cycle.

1.2.3 The Director's survey contractors will liaise directly with the Operating Company informing it of dates and types of survey to be, or being, undertaken on the Trunk Road network. The Operating Company shall liaise with such survey contractors when necessary for traffic management and other safety purposes.

1.2.4 The Operating Company shall analyse and interpret the pavement management function of the Integrated Roads System data to identify structural pavement maintenance Schemes.

1.2.5 The Operating Company shall update the Scheme manager function of the Integrated Roads System module of the Integrated Roads Information System with details of all structural pavement maintenance schemes in its draft maintenance programmes as referred to in Schedule 4 Part 1.

The progress of each Scheme, as referred to in Schedule 4 Part 1, shall be updated by the Operating Company in the Scheme manager function of the Integrated Roads System within five Working Days throughout the Contract Period.

1.2.6 A Statement of Intent and value for money assessment as referred to in Schedule 4 Part 1 shall be attached to each Scheme record by the Operating Company.

The category of the Scheme shall be entered by the Director.

1.2.7 As part of the requirements for completion of a Scheme which includes repair, replacement or change of an area of carriageway greater than 30 metres in length and of width not less than half of the lane width, the Operating Company shall produce a maintenance Scheme data sheet for that area.

If more than one specification for repair, replacement or change is adopted within the area, the Operating Company shall produce a structural pavement maintenance Scheme data sheet for each specification that is adopted. Submission shall be made on the basis of one submission per Scheme with separate sheets identified by

chainage for each specification. The following filenaming convention shall be used "MSD_YYYY_XXXX_ZZZZ", where:

- (i) YYYY = year e.g. 0910 for financial year 2009/2010.
- (ii) XXXX = Route e.g. A1.
- (iii) ZZZZ = Scheme name/location e.g. Cockburnspath.
- (iv) example filename = "MSD_0910_A1_Cockburnspath".

1.2.8 Maintenance Scheme data sheets shall be prepared in the form referred to in Annex 4.2/A of this Part. Such maintenance Scheme data sheets shall contain sufficient data to identify uniquely the location and extent of the area of repair, replacement or change with respect to the linear network referencing system. Following Scheme approval, there may be a requirement to adjust a Scheme on Site. On such occasions an explanation for change form, provided in Annex 4.2/D of this Part, shall be submitted with the maintenance Scheme data sheet.

Maintenance Scheme data sheets shall be submitted where pavement investigations indicate there is a substantial difference between the existing construction layers and those recorded in the Integrated Roads Information System and where the difference is likely to influence the interpretation of deflectograph data.

Maintenance Scheme data sheets shall be submitted to the Director within 25 Working Days of substantial completion of the related repair, replacement, change or Site investigation.

2. TRUNK ROAD NETWORK REFERENCING AND UPDATING

2.1 Network Reference Requirements

2.1.1 The Trunk Road network is defined by way of a linear network referencing system using a series of links and sections dividing each Route into identifiable lengths for management purposes. Each link and section has attributes defining its location, road characteristics and shape and is marked by sets of studs installed on the road. All Trunk Road data including Defects, treatments, inventory, condition data, accidents and any other relevant data are fitted to this network referencing system. These data are referenced by their link, section and chainage from the network node point and by Ordnance Survey grid reference co-ordinates.

2.1.2 The Director is responsible for:

- (i) defining the Trunk Road network and its attributes in the Integrated Roads Information System,
- (ii) assigning link and section numbers and node points to the Trunk Road network, and
- (iii) updating the Integrated Roads Information System,

when changes occur to the Trunk Road network, attributes and data.

The Trunk Road network referencing system is held by the Director and supplied to the Operating Company on the Integrated Roads Information System. The Operating Company shall ensure that the network referencing system is used in all of its systems which reference data to the Trunk Road network.

2.2 Schemes Requiring Network Updates

2.2.1 Updates to the Trunk Road network referencing system are necessary when the geometric alignment of a road changes.

Changes include major realignments such as new motorways or bypasses of communities and also less extensive changes such as:

- (i) on-line dualling,
- (ii) new junction layouts,
- (iii) roundabouts,
- (iv) bend straightening, and
- (v) any other change where the new alignment deviates by 300 millimetres from that currently recorded in the Trunk Road network referencing system.

Other changes to the Trunk Road may affect the characteristic of a road although the geometric alignment may remain unaltered. Changes to the characteristics of a road include:

- (vi) addition of a climbing lane,
- (vii) carriageway or Lane widening,
- (viii) changes in Lane allocation or junction layouts,
- (ix) bridge or culvert extensions, and
- (x) other features affecting the use and maintenance of the Trunk Road.

2.2.2 The Operating Company shall implement processes to ensure that any change to the geometric alignment or characteristic of a Trunk Road is identified.

Sources of potential change may include:

- (i) Schemes promoted by the Operating Company such as minor improvement Schemes,
- (ii) improvement Schemes promoted by the Scottish Government such as bypasses and major improvement projects,
- (iii) Schemes promoted by third parties as referred to in Schedule 8 Part 2, and
- (iv) errors and discrepancies in the current network referencing.

2.3 Information Required for Network Reference System Changes

2.3.1 Where, as a result of Operations by the Operating Company or any other works by third parties, changes of geometric alignment or characteristics necessitate updates to the Trunk Road network referencing system, the Operating Company shall, referring to the update process and using the forms provided in Annex 4.2/C of this Part, instigate the update process by submitting a network change sheet to the Director. Where an error is identified, the Operating Company shall submit a network error sheet to the Director.

Complete data shall be provided by the Operating Company at least four weeks before commencement of construction work to allow the changes to be implemented.

2.3.2 The following information shall be provided by the Operating Company to the Director for each Scheme identified, during the update process, to ensure that the changes required can be assessed, node markers installed and the Trunk Road network referencing system updated:

- (i) Scheme layout plans at 1:2500 scale which shall include the Scheme chainages for each carriageway in the Scheme at the tie-in points to the existing road,
- (ii) proposed new or revised network node locations (if applicable),
- (iii) Scheme construction, commencement and completion dates. The date when traffic first starts using the road in a temporary traffic management contra-flow or other temporary traffic management situation before Scheme construction has been completed shall also be provided,
- (iv) carriageway specification and the number of Lanes for each new section,
- (v) once the revised (Scheme) network has been notified to the Operating Company by the Director, the Operating Company shall within 25 Working Days provide to the Director:
 - (a) a completed maintenance Scheme data sheet, to the format shown in Annex 4.2/A of this Part, and
 - (b) Sideways Co-efficient Routine Investigation Machine ("SCRIM") Site categories to the format shown in Annex 4.2/B of this Part, for the Scheme, based relative to the new network referencing, and
- (vi) once the network node locations have been advised in writing by the Director and node markers installed, details for each Scheme as follows:
 - (a) measured lengths for each new network section including those comprising existing or new road,
 - (b) measured chainage of the start and end of the new Scheme related to the existing network referencing,
 - (c) Ordnance Survey grid references for each installed network node point which shall be provided as 12 figure references and shall be accurate to plus or minus one metre, and
 - (d) node marker reference replacement documents to the format shown in Annex 4.2/E of this Part.

2.3.3 The Operating Company shall:

- (i) notify the Director of any Scheme, change in characteristic or potentially required changes to the Trunk Road network and provide data as referred to in paragraphs 2.2.1 and 2.2.2 of this Part,
- (ii) ensure that all Operating Company systems use the most up-to-date network referencing system,
- (iii) maintain all road studs as referred to in Schedule 7 Part 1, and
- (iv) notify the Director of:
 - (a) any error, inaccuracy or discrepancy in the Integrated Roads Information System,

- (b) the reason for such error, and
- (c) the proposed correction for consideration by the Director.

2.4 Inventory Requirements

2.4.1 The Director is responsible for:

- (i) supplying the Operating Company with the existing known inventory in the Integrated Roads Information System during the Mobilisation Period, and
- (ii) defining the inventory items and attributes to be collected by the Operating Company within the Integrated Roads Information System.

2.4.2 The Operating Company shall:

- (i) maintain the accuracy and integrity of the inventory data as defined in the Transport Scotland "*Inventory Collection Manual*",
- (ii) add new inventory items and end-date old items as the inventory changes, and
- (iii) add missing inventory records for current inventory items.

2.5 Inspection and Maintenance Requirements

2.5.1 The Director is responsible for defining the types of inspections and maintenance to be recorded by the Operating Company in the Integrated Roads Information System.

2.5.2 The Operating Company shall:

- (i) design its inspection and maintenance routes,
- (ii) create and maintain its routes in the routine maintenance and management function of the Integrated Roads Information System,
- (iii) enter details of all inspections, Defect rectification and maintenance activities undertaken, and
- (iv) record all required data and attributes in the routine maintenance and management function of the Integrated Roads Information System.

2.5.3 The Operating Company shall ensure that the routine maintenance and management function of the Integrated Roads Information System data supports the evidence required for fatal accident inquiries and the consideration of damages claims by third parties. The Operating Company shall maintain and ensure the accuracy and integrity of the routine maintenance and management function of the Integrated Roads Information System data at all times including all inventory, Category 1 and Category 2 Defects and all inspections and maintenance carried out on the Trunk Roads within the Unit.

2.5.4 The Operating Company shall include procedures in its Management System for the validation of all data for correctness and completeness before entering the data into the routine maintenance and management function of the Integrated Roads Information System. Any error or omission in the routine maintenance and management function of the Integrated Roads Information System data found by the Operating Company shall be corrected within four Working Days of its discovery.

2.6 Routine Maintenance and Management Function of the Integrated Roads Information System Features

2.6.1 The routine maintenance and management function of the Integrated Roads Information System data can be accessed, interrogated and retrieved using one or more of the following methods:

- (i) map based presentation of data,
- (ii) fixed reports, and
- (iii) user defined reports.

2.6.2 The fixed reports are intended to include but not be limited to the following:

- (i) Category 1 and Category 2 Defects and other Defects,
- (ii) Category 1 Defect repair performance,
- (iii) Safety Inspection performance,
- (iv) Safety Patrol performance,
- (v) Detailed Inspection performance, and
- (vi) maintenance performance.

2.6.3 The user defined reports enable users to create queries concerning the Integrated Roads Information System data and to save the data in a text format.

The Operating Company shall use the routine maintenance and management function of the Integrated Roads Information System to record details and evidence of its activities, including:

- (i) completed inspection checklists and certificates,
- (ii) evidence of activities being carried out with before and after photographs,
- (iii) photographic evidence of all Category 1 and appropriate Category 2 Defects,
- (iv) photographic evidence of Defect repairs for all Category 1 Defects and appropriate Category 2 Defects,
- (v) inventory design information, and
- (vi) photographs of inventory items for all items required by the "*Inventory Collection Manual*" and where appropriate for other items.

This is Annex 4.2/A to Schedule 4 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 2

INTEGRATED ROADS INFORMATION SYSTEM

ANNEX 4.2/A – Maintenance Scheme Data Sheet

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 2

INTEGRATED ROADS INFORMATION SYSTEM

ANNEX 4.2/A – Maintenance Scheme Data Sheet

MAINTENANCE SCHEME DATA FORM				
General Information				
Route	- Pick from List -	Change Sheet Required	- Pick from List -	
Work code	- Pick from List -	Scheme number		
Scheme Name				
Key Dates				
Date Works completed		Issue Days	0	
Date MSD Issued to TS				
Additional Comments				
Please add any additional comment below including details of any treatments not available in drop down lists or where 'Other' has been chosen in the construction data. Please add new lines if required.				
Checking and Approvals				
For Operating Company				
MSD Completed by				
MSD Checked by				
For Transport Scotland				
MSD Checked by				
IRIS Updated by				

This is Annex 4.2/B to Schedule 4 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 2

INTEGRATED ROADS INFORMATION SYSTEM

ANNEX 4.2/B – Notification of SCRIM Category for Network Update Document

This is Annex 4.2/C to Schedule 4 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 2

INTEGRATED ROADS INFORMATION SYSTEM

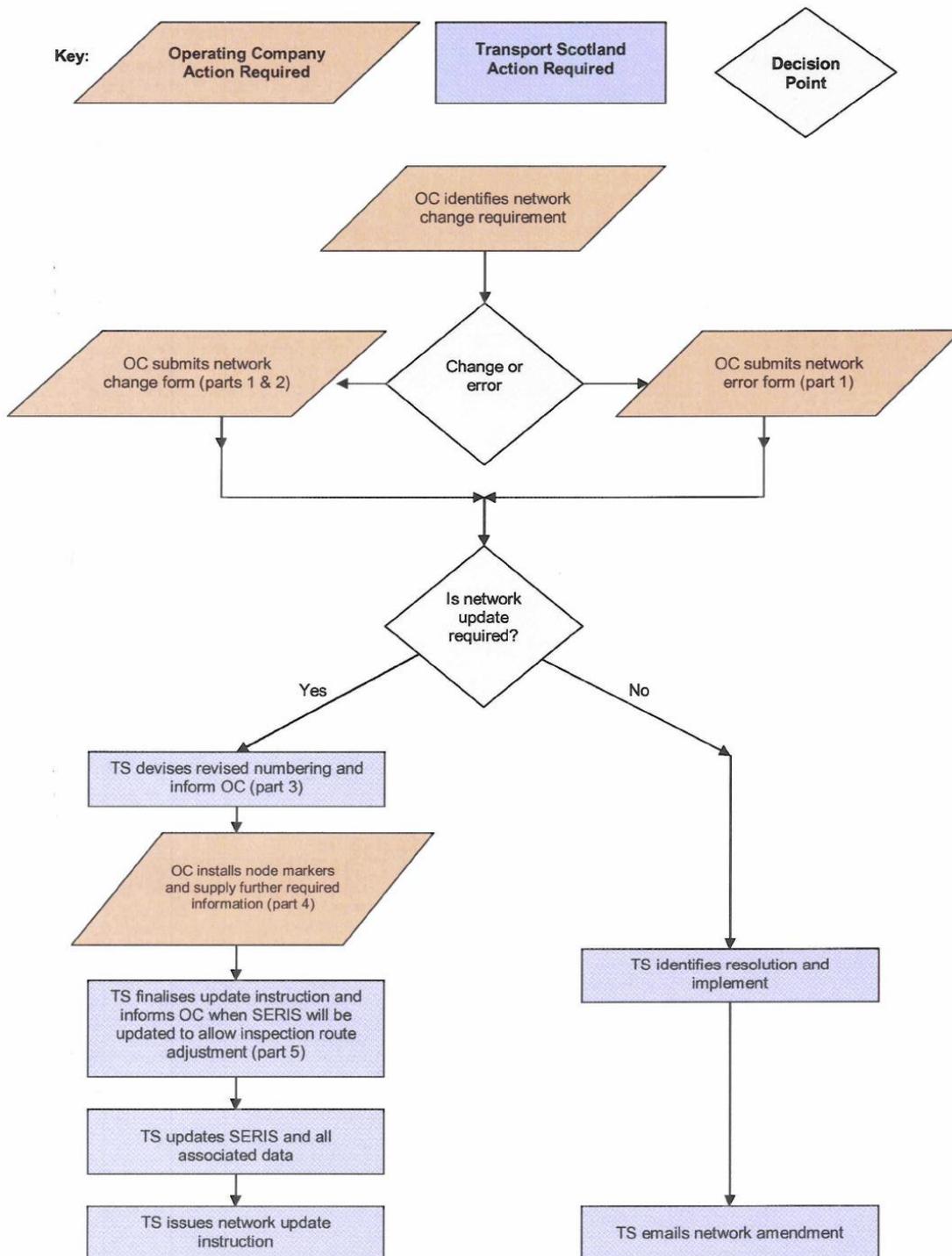
ANNEX 4.2/C – Network Update Process, Network Change Form and Network Error Form

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 2

INTEGRATED ROADS INFORMATION SYSTEM

ANNEX 4.2/C – Network Update Process, Network Change Form and Network Error Form



NETWORK CHANGE FORM



1 GENERAL

Submitted by Date

Unit Route Sections

Location

Reason for change

Details of proposed correction

2 INFORMATION SUPPLIED BY OPERATING COMPANY

	Check	Date
Scheme layout plans at 1:2500 as detailed in Schedule 4 Part 3 Section 2.2.1(i)	<input type="checkbox"/>	<input type="text"/>
Estimated opening date of scheme	<input type="checkbox"/>	<input type="text"/>

3 TRANSPORT SCOTLAND FEEDBACK

New referencing sections and node locations devised / agreed	<input type="checkbox"/>	<input type="text"/>
Operating Company informed of section numbers and node locations	<input type="checkbox"/>	<input type="text"/>

4 OPERATING COMPANY FURTHER INFORMATION SUPPLIED

Node markers installed	<input type="checkbox"/>	<input type="text"/>
Measured lengths for each new network section	<input type="checkbox"/>	<input type="text"/>
Measured chainages of existing sections at the start & end of the new scheme	<input type="checkbox"/>	<input type="text"/>
12 figure OSGR for each installed network node accurate to 1 metre	<input type="checkbox"/>	<input type="text"/>
Pavement construction data (NCSD)	<input type="checkbox"/>	<input type="text"/>
Scrim site category data	<input type="checkbox"/>	<input type="text"/>
Node marker location document	<input type="checkbox"/>	<input type="text"/>

5 TRANSPORT SCOTLAND NETWORK UPDATE

Network update instruction finalised	<input type="checkbox"/>	<input type="text"/>
SERIS updated	by <input type="text"/>	<input type="text"/>
Network update instruction issued	to <input type="text"/>	<input type="text"/>

NETWORK ERROR FORM



1 GENERAL

Submitted by

Date

Unit

Route

Sections

Location

Reason for change / error

Details of proposed correction

2 TRANSPORT SCOTLAND ACTION

Check

Date

Network update instruction required

Proposed TS resolution

TS action taken

3 TRANSPORT SCOTLAND NETWORK UPDATE / AMENDMENT

Network update instruction or amendment finalised

SERIS updated

by

Network update instruction issued

to

or

Network amendment emailed

to

NETWORK CHANGE / ERROR FORM NOTES

Network Change

1 GENERAL

The OC submits part 1 identifying the location on the network which may require a numbering change due to a change in characteristic. The reason for change and proposed correction are included.

2 INFORMATION SUPPLIED BY OC

The OC supplies scheme plans to enable TS to identify node locations and revise the referencing where necessary. Parts 1 and 2 are supplied together.

3 TRANSPORT SCOTLAND FEEDBACK

TS devise / agree revised referencing and inform the OC of section numbers and node locations to be used.

4 OPERATING COMPANY FURTHER INFORMATION SUPPLIED

The OC installs node markers, provides measured section lengths, the scheme start and end point chainages on existing sections, 12 digit OSGRs of node positions accurate to 1 metre, pavement construction data on the NCSD form, new SCRIM categories on the SCRIM category notification form and the node marker location document.

5 TRANSPORT SCOTLAND NETWORK UPDATE

TS finalise the network instruction, advise the OC when the update to SERIS with all the relevant data will be done and issue the instruction when this is complete.

Network Error

1 GENERAL

As per Network Change

2 TRANSPORT SCOTLAND ACTION

TS decide if a network update instruction is required and formulate the resolution to the error then record what action was taken.

3 TRANSPORT SCOTLAND NETWORK UPDATE

TS finalise the network instruction (if necessary), advise the OC when the update to SERIS will be done and issue the instruction or email the amendment when this has been done.

Version 1.0, June 2010

Willie Grant,

Asset Management, Technical and Finance Branch

Transport Scotland

willie.grant@transportscotland.gsi.gov.uk

This is Annex 4.2/D to Schedule 4 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 2

INTEGRATED ROADS INFORMATION SYSTEM

ANNEX 4.2/D – Explanation for Change Form

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 2

INTEGRATED ROADS INFORMATION SYSTEM

ANNEX 4.2/D – Explanation for Change Form



EXPLANATION FOR CHANGE SOI - MSD

Date supplied to SE

Unit

Route

Work code

Scheme number

Scheme Name



Details of change from approved SOI

Explanation

This is Annex 4.2/E to Schedule 4 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 2

INTEGRATED ROADS INFORMATION SYSTEM

ANNEX 4.2/E – Design for Node Marker Reference Replacement

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 2

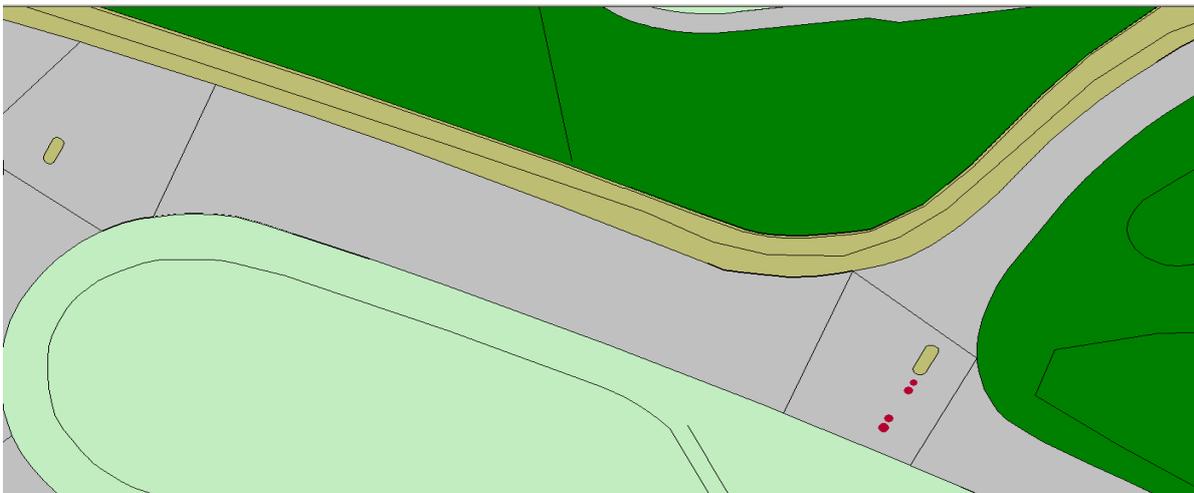
INTEGRATED ROADS INFORMATION SYSTEM

ANNEX 4.2/E – Design for Node Marker Reference Replacement

Route	Section
Section Description	
Section Length	
Section Type	
Design	



Site Plan



ADVISORY UPDATE TO DATA (changes to section)		Length	
OSGR	Easting	Northing	
Location Description			
Other:			
Location submitted by: <i>Signature</i>		Date	
Location agreed by TS: <i>Signature</i>		Date	
Data update complete: <i>Signature</i>		Date	

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 3

ROADSIDE ELECTRICAL APPARATUS AND POWER SUPPLIES

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 3

ROADSIDE ELECTRICAL APPARATUS AND POWER SUPPLIES

1. ROADSIDE ELECTRICAL APPARATUS AND POWER SUPPLIES

1.1 Introduction

1.1.1 This Part gives information relating to the roadside electrical apparatus which includes electrical equipment, lighting, luminaires and associated control apparatus, power supplies, associated infrastructure, Structures and other supporting arrangements to be managed and maintained by the Operating Company, either as a whole or in joint responsibility with others. Paragraph 1.1.3 of this Part together with LDS8023 09 *Electrical Maintenance Guidelines* provide the scope of the roadside electrical apparatus to be managed and maintained.

1.1.2 Associated infrastructure includes power supply cabinets, distribution enclosures, protection devices, cabling, associated ducting and chambers.

1.1.3 The roadside electrical apparatus to be managed and maintained by the Operating Company comprises:

- (i) road lighting, flood lighting, underpass lighting, architectural lighting, power supply arrangements for festive lighting, road side services lighting, bus shelter lighting and maintenance lighting within Structures,
- (ii) illuminated traffic signs,
- (iii) illuminated bollards,
- (iv) power supply and downstream distribution network cabinets for roadside electrical apparatus,
- (v) power, communication and signal cabling,
- (vi) electrically operated apparatus for maintenance access to structures,
- (vii) electrical ancillary drainage items,
- (viii) swing bridge, raising bridge and other moveable bridge equipment,
- (ix) electrically operated traffic control barriers,
- (x) inclement weather signs and snow gates,
- (xi) public conveniences and other roadside services,
- (xii) school crossing signs,
- (xiii) marine and air navigation lights,
- (xiv) marine navigational aids,
- (xv) wildlife counters,
- (xvi) cathodic protection equipment,
- (xvii) power supply arrangements to roadside electrical apparatus for third party use that is accessible from the Unit,
- (xviii) remotely controlled 20mph zone warning signs,

- (xix) weather stations (road sensors) and other apparatus for weather monitoring,
 - (xx) vehicle activated signs,
 - (xxi) gantry mounted illuminated signs without Traffic Scotland equipment, and
 - (xxii) traffic signals.
- 1.1.4 The Operating Companies' role will not include the installation and maintenance of Transport Scotland's electronic systems. These are maintained under a separate Traffic Scotland maintenance contract, which includes:
- (i) gantry mounted illuminated signs with Traffic Scotland Equipment,
 - (ii) hazard warning signals,
 - (iii) variable message signs,
 - (iv) closed circuit television,
 - (v) automatic number plate recognition cameras,
 - (vi) emergency telephones,
 - (vii) matrix signals,
 - (viii) detector loops and road sensors for vehicle detection, and
 - (ix) communications cabinets.
- 1.1.5 Roadside electrical apparatus associated with items in paragraph 1.1.3 of this Part shall be managed and maintained in accordance with Schedule 7 Part 1.

2. ROADSIDE ELECTRICAL APPARATUS INVENTORY

2.1 The Inventory, Energy Inventory and Lighting Management Function of the Integrated Roads Information System

- 2.1.1 The Integrated Roads Information System made available for the Operating Company will include a facility to access the following:
- (i) an inventory of the Roadside Electrical Apparatus listed in paragraph 1.1.3. using attributes as described in the *Transport Scotland Trunk Road Inventory Manual*,
 - (ii) an energy inventory which is a sub-set of the inventory as described in paragraph 2.1.1 (i) of this Part. This subset has attributes that relate to the energy consumption aspects of the inventory – these attributes are listed in paragraph 2.3.2 of this Part,
 - (iii) a lighting management function which forms an integral part of the routine maintenance and management function of the Integrated Roads Information System.
- 2.1.2 The Operating Company shall comply with requirements of the *Transport Scotland Trunk Road Inventory Manual*.
- 2.1.3 Subject to an Order, the Operating Company shall provide such assistance as required by the Director in order to develop integrated routine maintenance and management and lighting management functions of the Integrated Roads Information System.

2.2 Updating and Maintenance of Inventory and Lighting Management Function of the Integrated Roads Information System

- 2.2.1 The Operating Company shall maintain an accurate inventory of roadside electrical apparatus. This shall include the energy consumption aspects of the inventory and information relating to the lighting management function of the Integrated Roads Information System.
- 2.2.2 The Operating Company shall provide its collected information in a format agreed with the Director.
- 2.2.3 During the 26 weeks after the Commencement of Service Date, the Operating Company shall review the inventory provided and update as necessary to meet the requirements of the Integrated Roads Information System and the Director.
- 2.2.4 Following the review and update referred to in paragraph 2.2.3 of this Part, the Operating Company shall continuously appraise and produce an updated inventory and lighting management system. An energy inventory shall be submitted to the Director on a monthly basis. The Operating Company shall notify the Director of any differences found during these updates.
- 2.2.5 The Operating Company shall ensure that the inventory of roadside electrical apparatus is updated with all newly installed additional, decommissioned, modified and replaced roadside electrical apparatus on the Unit and any changes to the Unit. Any such updates shall be introduced into the inventory within seven Working Days after the introduction of the change.
- 2.2.6 The Operating Company shall, within seven Working Days of notification, amend the existing inventory or supply an updated inventory in the event of any anomalies, inaccuracies or recommendations identified by the Director or meter administrator.

2.3 Attributes for Energy Inventory

- 2.3.1 The Operating Company shall maintain the inventory of un-metered roadside electrical supply equipment to comply with the requirements of the *Balancing and Settlement Code of Practice (BSCP) 520* issued by ELEXON.
- 2.3.2 For Trunk Road un-metered roadside electrical apparatus, the Operating Company shall populate the inventory with the following minimum attributes:
- (i) National Street Gazetteer road reference, Trunk Road number or other agreed unique road reference,
 - (ii) name of town or the district,
 - (iii) name of the road,
 - (iv) Ordnance Survey grid reference,
 - (v) unit type,
 - (vi) identity code shown on unit,
 - (vii) *BSCP520* charge code,
 - (viii) rated wattage,
 - (ix) circuit wattage,
 - (x) burning hours per annum,

- (xi) number of items of this charge code at this location,
- (xii) switching regime with appropriate *BSCP520* code,
- (xiii) number of photo electric control units or time switches on the item,
- (xiv) control charge code with appropriate *BSCP520* code for the control device,
- (xv) Ordnance Survey Grid reference 'Easting' or longitude,
- (xvi) Ordnance Survey Grid reference 'Northing' or latitude,
- (xvii) exit point – Y if yes, N if no, U if unknown, and
- (xviii) annual energy usage (kWhr).

2.3.3 Traffic Scotland Equipment is maintained and operated by others on behalf of the Scottish Ministers. The Operating Company shall collect the necessary information and update the Integrated Roads Information System inventory as outlined in paragraph 2.1.1 (i) of this Part. This information is not required for the energy inventory or lighting management function of the Integrated Roads Information System.

2.4 Arrangement and Reporting of the Energy Inventory

2.4.1 The Operating Company shall prepare and submit the energy inventory report as required by the Director.

2.4.2 The items of roadside electrical apparatus in the report shall be grouped by Route and shall be listed by starting at the beginning of a Route and moving sequentially to the end. Any significant groups of items such as lighting through a built up area shall be sub-groups of the Route.

2.4.3 The report shall include the information itemised in paragraph 2.3 of this Part within which shall be identified clearly and separately the energy consumption per annum for un-metered supplies, in accordance with the requirements of *Balancing and Settlement Code of Practice (BSCP) 520* issued by ELEXON, for each sub-group within a Route, each Route within the Unit, the whole Unit, each item code within each Route and each item code for the whole Unit.

3. ELECTRICAL SUPPLIES TO ROADSIDE ELECTRICAL APPARATUS

3.1 Requirements

3.1.1 Subject to an Order, the Operating Company shall procure new electrical supplies from the appropriate distribution network operator to provide electrical supply to roadside electrical apparatus. Such supplies shall be provided in accordance with the Transport Scotland's guidance document LDS8006_09 – *Requirements for Electricity Supply to Roadside Electrical Apparatus and Lighting*.

3.1.2 The Operating Company shall manage all electrical supplies to roadside electrical apparatus. This shall include the following:

- (i) reporting to the appropriate distribution network operator any loss of supply, managing any consequences arising and ensuring restoration of supply,
- (ii) undertaking any defect repair of the downstream distribution network,
- (iii) the detailed inspection and maintenance of downstream distribution network in accordance with Schedule 7 Part 1, and

- (iv) notifying any third party of loss of supply to its apparatus supplied from the Trunk Road distribution network.

4. PAYMENT FOR ELECTRICAL ENERGY

4.1 Un-metered Supplies

- 4.1.1 The Operating Company shall provide such assistance as the Director may require in resolving any matter relating to the roadside electrical apparatus inventory necessary to enable the Director to obtain the un-metered supply certificate.
- 4.1.2 The Director will make arrangements for the direct payment of un-metered roadside electrical energy used within the Unit.

4.2 Metered Supplies

- 4.2.1 The Operating Company shall obtain electricity meter readings for supplies to roadside electrical apparatus within the Unit on a monthly basis and shall provide the information to the Director in the format and detail agreed.
- 4.2.2 The Director will make arrangements for the direct payment of any metered roadside electrical energy used within the Unit.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 4

DAMAGE TO CROWN PROPERTY AND THIRD PARTY CLAIMS

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 4

DAMAGE TO CROWN PROPERTY AND THIRD PARTY CLAIMS

1. INTRODUCTION

1.1 General Requirements

1.1.1 The Operating Company shall undertake the activities specified in this Part in respect of:

- (i) all claims for damages associated with the Unit made by third parties against the Scottish Ministers, and
- (ii) Damage to Crown Property, including claims by the Scottish Ministers against third parties.

1.1.2 If a claimant submits a claim to Transport Scotland, the Director will acknowledge receipt in writing to the claimant and forward a copy of the claim to the Operating Company for action.

1.1.3 Where a third party claim arises from work undertaken on the Unit by any other organisation appointed by the Scottish Ministers, the Operating Company shall forward the claim to the organisation within two Working Days and shall advise the claimant in writing within five Working Days of receipt of the claim that it has been passed to the organisation.

1.2 Records

1.2.1 The Operating Company shall maintain Electronic Copy records containing details of the actions carried out by the Operating Company in dealing with third party claims and related matters. These records shall include the following documents:

- (i) third party claims notice forms,
- (ii) third party claims Operating Company report forms,
- (iii) associated spreadsheets,
- (iv) letters,
- (v) explanatory notes, and
- (vi) completed Department for Work and Pensions *Notification of Claim for Compensation (CRU1)* forms.

1.2.2 The Operating Company shall maintain Electronic Copy registers and records relating to third party claims and Damage to Crown Property.

1.2.3 The Operating Company shall provide, within five Working Days of the date of the request, any information relating to claims that the Director may request.

1.2.4 The Operating Company shall provide to the Director and the Performance Audit Group secure remote access at all times to these Electronic Copy records, using the contract control and management function of the Integrated Roads Information System.

2. CLAIMS AGAINST THE SCOTTISH MINISTERS

2.1 Third Party Claims Notification

2.1.1 Within two Working Days after receipt of notification of a claim made against the Scottish Ministers, the Operating Company shall issue an acknowledgement to the claimant or the claimant's agent, enclosing the third party claims notice form shown at Annex 4.4/B of this Part with a letter according with the proforma letter shown in Annex 4.4/A of this Part, advising them to complete the form and return it to the Operating Company. No other documentation shall be issued by the Operating Company to the claimant or the claimant's agent.

2.1.2 When dealing directly with the claimant or the claimant's agent, the Operating Company shall ensure that all letters and other correspondence sent at the time of the initial intimation of claim or preliminary information gathering process are in accordance with the proforma letter. No indication shall be given in any correspondence relating to the claim that it is subject to any jurisdiction other than that of the Scottish courts, unless it is the subject of legal proceedings raised in a court outwith the jurisdiction of the Scottish courts.

2.2 Third Party Claims where the Scottish Ministers are Indemnified

2.2.1 In respect of third party claims, the Scottish Ministers are indemnified by the Operating Company in accordance with the other provisions of this Contract, including the provisions of Schedule 1 Part 4.

2.2.2 The Operating Company shall deal directly with the claimant where the Scottish Ministers are indemnified.

2.2.3 The Operating Company shall process all third party claims in a courteous, fair and timely manner.

2.2.4 The Operating Company shall put in place a process for dealing with appeals by a claimant.

2.3 Third Party Claims where the Scottish Ministers are not Indemnified

2.3.1 Should the Operating Company consider that the Scottish Ministers are not indemnified in respect of any claim, within five Working Days of the receipt of a completed third party claims notice form from a claimant, the Operating Company shall provide a summary of the reasons why the Scottish Ministers are not indemnified and state which exceptions apply in accordance with the provisions of Schedule 1 Part 4.

2.3.2 Should the Director decide that the Scottish Ministers are indemnified in respect of any claim, the Director will notify the Operating Company in writing of his decision and such claim shall be dealt with by the Operating Company in accordance with the provisions of paragraph 2.2 of this Part.

2.3.3 Should the Director decide that the Scottish Ministers are not indemnified in respect of any claim, the Director will notify the Operating Company in writing of his decision. Within five Working Days of receipt of such notification, the Operating Company shall supply the Director with all information related to each Incident giving rise to a claim where the Scottish Ministers are not indemnified, including:

- (i) the completed third party claims notice form, and

- (ii) a completed third party claims Operating Company report form in the format shown in Annex 4.4/C of this Part.

2.3.4 The Director will deduct from any of the Operating Company's accounts, invoices and Statements any losses and expenses suffered by it as a result of any inadequacy or inaccuracy in the information provided by the Operating Company which it is required to hold and provide to the Director in accordance with the provisions of this Contract.

2.3.5 The Operating Company shall not make any admission of liability on its own behalf, or on behalf of the Scottish Ministers, in respect of any matters pertaining to third party claims where the Scottish Ministers are not indemnified.

2.4 Third Party Claims in respect of Personal Injury

2.4.1 In the event of a third party claim for personal injury, the Operating Company shall notify the Department for Work and Pensions Compensation Recovery Unit within 14 days of receipt of the claim, using the Department's form CRU1 which is available on the Department for Work and Pensions website.

2.5 Responsibility for Third Party Claims Arising from Incidents Prior to Contract Expiry Date

2.5.1 In accordance with the requirements of this Part, the Operating Company shall deal with all third party claims arising from Incidents that occur before the Contract Expiry Date. Such claims continue to be the responsibility of the Operating Company after the Contract Expiry Date.

3. DAMAGE TO CROWN PROPERTY

3.1 General

3.1.1 Damage to Crown Property includes:

- (i) damage caused by third parties,
- (ii) theft,
- (iii) damage caused by theft and attempted theft,
- (iv) vandalism,
- (v) spillages,
- (vi) shed loads, and
- (vii) debris from road traffic accidents or from other causes.

3.1.2 Repair of Damage to Crown Property means repair and any associated clearing, cleaning, Design, renewal and replacement to make good Damage to Crown Property.

3.1.3 When the Operating Company becomes aware of any incidence of Damage to Crown Property, it shall immediately:

- (i) arrange for the damage to be assessed and repaired,
- (ii) enter details of the Incident into the contract control and management function of the Integrated Roads Information System and thereafter update the contract control and management function of the Integrated Roads

Information System with further relevant information as soon as it becomes known, and

- (iii) include the unique damage reference number generated by the contract control and management function of the Integrated Roads Information System in any related Operations Instruction.

3.1.4 The Operating Company shall maintain a "Damage to Crown Property Consolidated Report" in the format shown in Annex 4.4/D of this Part, and shall submit it in electronic form to the Director every three months.

3.2 Damage to Crown Property of Value not more than £10,000

3.2.1 The Operating Company shall undertake all repairs of Damage to Crown Property where the valuation of repair of individual incidents is not more than £10,000, unless the damage was a result of the exceptions referred to in paragraph 3.4 of this Part.

3.2.2 The Scottish Ministers and the Operating Company shall execute an assignment of rights agreement (in the form shown in Annex 4.4/E of this Part) prior to the Commencement of Service Date.

3.2.3 After the Operating Company has undertaken repair of Damage to Crown Property, the following provisions shall apply:

- (i) the Operating Company is entitled to send to the person or organisation causing the Damage to Crown Property a notice of assignment of rights (in the form shown in Annex 4.4/E of this Part) which has been addressed to that person or organisation and which describes the relevant Damage to Crown Property,
- (ii) such notice of assignment of rights shall at the same time be notified to the Scottish Ministers in accordance with this Contract,
- (iii) the Operating Company may pursue a claim in its own right against the person or organisation causing the Damage to Crown Property to recover the costs incurred in the repair of Damage to Crown Property that it has undertaken as Core Operations and may keep the proceeds of any successful claim, and
- (iv) the Operating Company shall indemnify and keep indemnified the Scottish Ministers against all losses, actions, claims, costs, damages, demands and expenses (including but not limited to all legal costs and disbursements) arising in connection with any claim which the Operating Company makes against a person or organisation pursuant to the assignment of rights agreement and any notice of assignment of rights.

3.2.4 The Operating Company shall not make or commence any claims, actions or proceedings whatsoever in the name of the Scottish Ministers in connection with repair of Damage to Crown Property pursuant to any rights of subrogation. The Operating Company undertakes to the Scottish Ministers:

- (i) not to exercise any rights of subrogation that the Operating Company may have in connection with repair of Damage to Crown Property, and
- (ii) not to assign or otherwise transfer to a third party, or permit a third party to exercise, any rights of subrogation that the Operating Company may have in connection with repair of Damage to Crown Property.

3.3 Damage to Crown Property of Value more than £10,000

- 3.3.1 Subject to an Order, the Operating Company shall undertake all repair of Damage to Crown Property where the valuation of repair of individual Incidents is more than £10,000.
- 3.3.2 Where the estimated valuation of repair of Damage to Crown Property for an individual incident is more than £10,000, the Operating Company shall immediately after discovery of the Damage to Crown Property notify the Director in writing and within five Working Days of notification submit to him a "report of an incidence of Damage to Crown Property" in the format shown in Annex 4.4/F of this Part.
- 3.3.3 The Director will pursue recovery of Transport Scotland's costs of repair and associated costs of police reports and of establishing, maintaining and removing traffic management prior to repair Operations.
- 3.3.4 Within 20 Working Days of completing a repair of Damage to Crown Property of individual value more than £10,000, the Operating Company shall provide the Director with a "notification of the final valuation of repair of an incidence of Damage to Crown Property" report in the format shown in Annex 4.4/G of this Part, including invoices, sub-contractor costs and all other relevant information. The valuation listed and totalled within this report shall be deemed to be whole and final in respect of such an incidence of Damage to Crown Property.

3.4 Exceptions

- 3.4.1 When an Incident causing Damage to Crown Property has resulted in a fatality, or has been solely caused by a vehicle operated by a United Kingdom national government department or national government agency, the Director will deal with the pursuit of claims. The Operating Company shall operate as if the repair valuation is greater than £10,000 and repair of Damage to Crown Property shall be subject to an Order.

3.5 Damage to Structures

- 3.5.1 Where any damage to a Structure occurs, the Operating Company shall notify the Director by telephone as soon as possible and within one Working Day confirm the details in writing to the Director.

The Director may require repairs to damage to a Structure to be undertaken by specialist contractors nominated by the Director. Such requirement will be subject to an Order.

In all cases of Damage to Crown Property where there is damage to a Structure, the Operating Company shall not carry out permanent repairs without the prior written consent of the Director.

3.6 Damage to Crown Property which Occurred Prior to the Commencement of Service Date

- 3.6.1 During the 20 Working Days prior to the Commencement of Service Date, the Operating Company shall liaise with the previous operating company and compile a detailed list of Damage to Crown Property within the Unit that will not be repaired prior to the Commencement of Service Date.
- 3.6.2 The previous operating company will remain responsible for Repair of Damage to Crown Property where the estimated valuation of repair of individual Incidents is not

more than £10,000 and is not as a result of one the exceptions listed in paragraph 3.4 of this Part.

- 3.6.3 If the previous operating company does not fulfil its obligations in respect of paragraph 3.6.2 of this Part, the Scottish Ministers may issue an Order to complete the work under the provisions of this Contract.
- 3.6.4 On the Commencement of Service Date, the Operating Company shall become responsible for the repair of Damage to Crown Property where the previous operating company has estimated valuation of repair of individual incidents to be more than £10,000, or where Incidents are as a result of the exceptions listed in paragraph 3.4 of this Part. Such repair of Damage to Crown Property shall be dealt with in accordance with the provisions of paragraphs 3.3.1 to 3.3.4 of this Part.
- 3.6.5 Unless it is necessary for safety reasons to carry out repairs immediately, the Operating Company shall give not less than 48 hours' notice to the Director and the previous operating company of commencement of repairs of Damage to Crown Property that are to be carried out in accordance with paragraph 3.6.3 of this Part, in order that the previous operating company may witness such repairs.
- 3.6.6 Within five Working Days of completing a repair of Damage to Crown Property as described in paragraph 3.6.3 of this Part, the Operating Company shall provide the Director with a "notification of the final valuation of repair of an incidence of Damage to Crown Property" report in the format shown in Annex 4.4/G of this Part, including invoices, sub-contractor costs and all other relevant information. The valuation listed and totalled within this report shall be deemed to be whole and final in respect of such an incidence of Damage to Crown Property.
- 3.6.7 When required in writing by the Director, the Operating Company shall provide assistance to the Director with any claims against persons causing Damage to Crown Property in Incidents occurring prior to the Commencement of Service Date. Such assistance shall be the subject of an Order.

3.7 Damage to Crown Property not Repaired Prior to the Contract Expiry Date

- 3.7.1 During the 20 Working Days prior to the Contract Expiry Date, the Operating Company shall liaise with the incoming operating company and provide it and the Director with a detailed list of existing Damage to Crown Property that will not be repaired prior to the Contract Expiry Date.
- 3.7.2 Damage to Crown Property that has occurred but not been repaired prior to the Contract Expiry Date remains the responsibility of the Operating Company where the valuation of repair of individual Incidents is not more than £10,000. Any repairs to such Damage to Crown Property not undertaken within 14 days after the Contract Expiry Date or by the due date for a repair, whichever comes later, may be undertaken by another organisation. In such a case the Scottish Ministers shall be entitled to:
- (i) recover from the Operating Company the costs incurred by the Scottish Ministers in connection with repair of Damage to Crown Property, or
 - (ii) deduct the amount of these costs from any amounts due, or that become due, to the Operating Company from the Scottish Ministers.

4. MISCELLANEOUS CLAIMS BY THE SCOTTISH MINISTERS

4.1 Other Repairs and Notification

- 4.1.1 It may be necessary under certain circumstances for the Operating Company to undertake work that is normally the responsibility of others. The Operating Company shall notify the Director by e-mail when it considers such work to be necessary.
- 4.1.2 The Director shall issue an Order to the Operating Company if he considers such work necessary.
- 4.1.3 The Operating Company shall submit to the Director details of any costs incurred in undertaking such work. The Operating Company shall take steps to recover from the appropriate organisation all costs incurred on behalf of the Scottish Ministers and shall reimburse the Scottish Ministers accordingly.
- 4.1.4 The Scottish Ministers will not be responsible for the repair or replacement of damaged:
- (i) tourist signs,
 - (ii) boundary signs,
 - (iii) roadside services signs,
 - (iv) motoring organisation signs,
 - (v) Ministry of Defence signs, or
 - (vi) authorised signs erected by any party other than on behalf of the Scottish Ministers.

When any damage occurs to such signs or associated vehicle restraint systems, the Operating Company shall make the location safe immediately and shall report the damage in writing within two Working Days to the party responsible for such signs and inform it of the culprits, if known.

This is Annex 4.4/A to Schedule 4 Part 4 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 4

DAMAGE TO CROWN PROPERTY AND THIRD PARTY CLAIMS

ANNEX 4.4/A – Letter Accompanying Third Party Claims Notice Form

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 4

DAMAGE TO CROWN PROPERTY AND THIRD PARTY CLAIMS

ANNEX 4.4/A – Letter Accompanying Third Party Claims Notice Form

Example letter to claimant to accompany the Third Party Claims Notice Form:

Operating Company name and address
Date

Dear Sir or Madam

Your letter dated ----- / telephone call of ----- * implied a claim arising from an incident on a trunk road or motorway. Please complete the attached form and return it to the address below.

Your attention is drawn to the need to complete medical mandates and the CRU Section where physical injury has been suffered.

Please note that failure to include all relevant information and sketches may delay the processing of your claim.

Yours faithfully

[Signed]
Name
Designation

*delete as appropriate.

This is Annex 4.4/B to Schedule 4 Part 4 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 4

DAMAGE TO CROWN PROPERTY AND THIRD PARTY CLAIMS

ANNEX 4.4/B – Third Party Claims Notice Form

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 4

DAMAGE TO CROWN PROPERTY AND THIRD PARTY CLAIMS

ANNEX 4.4/B – Third Party Claims Notice Form

Claim Reference Number

The information provided in this form will be handled in accordance with the Data Protection legislation. In addition to the person who issued this form, the information may be shared with the Scottish Ministers, their contractors, insurers and professional advisors. For more information about Data Protection, visit www.ico.gov.uk

Part 1 – About yourself

1. Name
2. Address
.....
.....
.....
.....
3. Daytime Telephone Number (including STD code)

Part 2 – About your vehicle (if damaged)

1. Class (e.g. car, lorry, motorcycle, moped, bicycle)
2. Make and model
3. Registration number (if motor vehicle)
4. Name and address of insurers
.....
.....
.....
5. Policyholder's name (if not claimant)
6. Have you claimed from your insurers in respect of this incident? Yes ___ No ___
7. If YES, policy number

5 In order to prevent and detect fraud, additional investigations may be carried out as appropriate.

If you are making a claim in respect of personal injuries, please complete the mandates attached. These documents authorise the hospitals, your general practitioner or other health or medical institutions that treated you to provide us with a medical report, disclose your medical history and your medical records only as regards the injuries you sustained arising from the circumstances of this claim. Complete the mandate in BLOCK CAPITALS and do not detach it. We require you to complete more than one mandate if you received treatment at more than one health or medical institution in respect of this incident, as these institutions may not accept photocopies of signed mandates.

Your attention is also drawn to the need to complete the enclosed CRU Section form.

Mandate

(Enter below the full name and address of the hospital, general practitioner or other health or medical institution where you received treatment and to which this mandate relates)

To:

.....
.....
.....
.....
.....

I, (enter your full name)

of (enter your address)

born on (enter your date of birth)

hereby authorise you to provide to the Operating Company and/or to the Scottish Ministers a full medical report, full statement of my medical history and all books, medical records, charts, X-rays, notes and other documents held by you relating to me showing or tending to show the nature, extent and cause of all injuries sustained by me on [enter date of accident], the treatment received by me since this date and my certificate of discharge, if any.

Signature Date

Mandate

(Enter below the full name and address of the hospital, general practitioner or other health or medical institution where you received treatment and to which this mandate relates)

To:

.....
.....
.....
.....
.....

I, (enter your full name)

of (enter your address)

born on (enter your date of birth)

hereby authorise you to provide to the Operating Company and/or to the Scottish Ministers a full medical report, full statement of my medical history and all books, medical records, charts, X-rays, notes and other documents held by you relating to me showing or tending to show the nature, extent and cause of all injuries sustained by me on [enter date of accident], the treatment received by me since this date and my certificate of discharge, if any.

Signature Date

Mandate

(Enter below the full name and address of the hospital, general practitioner or other health or medical institution where you received treatment and to which this mandate relates)

To:

.....
.....
.....
.....
.....

I, (enter your full name)

of (enter your address)

born on (enter your date of birth)

hereby authorise you to provide to the Operating Company and/or to the Scottish Ministers a full medical report, full statement of my medical history and all books, medical records, charts, X-rays, notes and other documents held by you relating to me showing or tending to show the nature, extent and cause of all injuries sustained by me on [enter date of accident], the treatment received by me since this date and my certificate of discharge, if any.

Signature Date

Part 6 – Other information and signature

1. Please use this space to supply any other information that you think is relevant to the claim or to make any other comments

.....
.....
.....
.....
.....
.....

2. Please sign and date the form

Signature Date

NAME IN BLOCK CAPITALS

CRU SECTION

ONLY TO BE COMPLETED IF
YOU SUFFERED PHYSICAL INJURY

THE SOCIAL SECURITY (RECOVERY OF BENEFITS) REGULATIONS 1997

Please provide the following which must by law be passed to the Department for Work and Pensions by the party being claimed against. (Do not detach this form)

Full Name

National Insurance No

Date of Birth

Details of your solicitor or representative (if appropriate)

Name

Address
.....
.....

Post Code

Reference

Details of your employment at the time of the accident (if appropriate)

Name of Employer

.....

.....

Post Code

Department

Clock or Works Number

I declare that the above information is correct to the best of my knowledge.

Signed Date

* Claimant/claimant's representative

Block Capitals

* Delete as appropriate

This is Annex 4.4/C to Schedule 4 Part 4 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 4

DAMAGE TO CROWN PROPERTY AND THIRD PARTY CLAIMS

ANNEX 4.4/C – Third Party Claims Operating Company Report Form

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 4

DAMAGE TO CROWN PROPERTY AND THIRD PARTY CLAIMS

ANNEX 4.4/C – Third Party Claims Operating Company Report Form

SECTION A: SUMMARY INFORMATION

Claim Reference Number:

Date of Notification of Claim.....

Date of transmission of Third Party Claims Notice form to claimant

Date of receipt of completed Third Party Claims Notice form

Date of completion of Third Party Claims Operating Company Report form

Decision on claim by Operating Company

SECTION B: DETAILED REPORT

1. Operating Company
2. Trunk Road and exact location of incident (sketch, OS extract, photograph etc. shall be attached)
3. Date and time of Incident
4. State source of information provided at question 2 and 3 above
- Particulars of witnesses (other than those provided by claimant) to the incident. If Operating Company employees, this shall be stated and precognitions attached.
Name Address
-
- Name Address
-
5. Were the police involved? Yes..... No.....
If YES, a police report shall be obtained and sent out as soon as possible.
6. Does the claim refer to an incident alleged to be due to roadworks? Yes..... No
- If YES, by whom were the works being carried out? Operating Company.....
Contractor..... Undertaker.....
7. Contractor, Undertaker name and address if appropriate
-

8. Nature of Roadworks

9. What were the weather and road conditions at the time of the incident?
.....

10. Was Winter Constructional Plant called out? Yes..... No.....
If YES, provide full details.....
.....

11. Was precautionary treatment carried out at the locus prior to the incident?
Yes..... No.....

If YES, give time, date, spread rates and any other relevant information
.....
.....

NB In the event that the claimant or a police report alleges that the road surface was icy or had poor skid resistance etc, full details countering or agreeing with this allegation should be given. Pertinent Precautionary Treatment Operations records and carriageway condition survey results shall be included.

12. Is the incident alleged to have been caused through a Defect or obstruction in the road?
Yes..... No.....

If NO, go to question 13.

If YES:

12.1 Had the Operating Company received notice or was it otherwise aware of the Defect or obstruction prior to the incident?
.....
.....
.....

12.2 If unaware, please comment on why regular inspections failed to identify the Defect?
.....
.....
.....
.....

12.3 What is the inspection regime for this Trunk Road? (e.g. safety inspection, safety patrol, Winter Patrol)
.....
.....
.....
.....

This is Annex 4.4/D to Schedule 4 Part 4 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 4

DAMAGE TO CROWN PROPERTY AND THIRD PARTY CLAIMS

ANNEX 4.4/D – Damage to Crown Property Consolidated Report

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 4

DAMAGE TO CROWN PROPERTY AND THIRD PARTY CLAIMS

ANNEX 4.4/D – Damage to Crown Property Consolidated Report

Title:

Damage to Crown Property Consolidated Report

Operating Company Name

Unit

Provide data, where the information is known by the Operating Company, from the following fields from the contract control and management function of the Integrated Roads Information System and reference such data to the field name to form a consolidated report listing all Incidents of Damage to Crown Property (also refer to Schedule 4 Part 1):

- (i) unique damage identifier,
- (ii) Scheme reference,
- (iii) date damage logged,
- (iv) date of repair,
- (v) location of damage,
- (vi) type and extent of damage,
- (vii) Structure reference number if applicable,
- (viii) names of culprits,
- (ix) details of repair,
- (x) status with regard to recovery,
- (xi) date Director notified, where estimated valuation of repair exceeds £10,000,
- (xii) estimated valuation of repair, excluding associated costs,
- (xiii) actual valuation of repair excluding associated costs (valued in accordance with Section 10 of Schedule 1),
- (xiv) actual valuation of associated costs (valued in accordance with Section 10 of Schedule 1),
- (xv) total valuation of repair (the sum of (xiii) and (xiv)),
- (xvi) amount recovered from culprit,
- (xvii) final Statement number (if appropriate) (which shall be the Statement submitted by the Operating Company in accordance with Section 10 of Schedule 1 that contains the final claim for payment in respect of the Incident to which the unique damage identifier applies), and
- (xviii) difference between Total valuation of repair (xv) and Amount recovered from culprit (xvi).

This is Annex 4.4/E to Schedule 4 Part 4 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 4

DAMAGE TO CROWN PROPERTY AND THIRD PARTY CLAIMS

ANNEX 4.4/E – Form of Assignment of Rights Agreement and Notice of Assignment of Rights

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 4

DAMAGE TO CROWN PROPERTY AND THIRD PARTY CLAIMS

ANNEX 4.4/E – Form of Assignment of Rights Agreement and Notice of Assignment of Rights

AGREEMENT

between

THE SCOTTISH MINISTERS

and

BEAR SCOTLAND LIMITED

re: DAMAGE TO CROWN PROPERTY

AGREEMENT

between

(1) THE SCOTTISH MINISTERS (the "Scottish Ministers")

and

(2) **BEAR SCOTLAND LIMITED**, being a company consisting of Jacobs UK Limited, having its principal office at 95 Bothwell Street, Glasgow G2 7HX; Breedon Aggregates Scotland Limited, having its principal office at Ethiebeaton Quarry, Kingennie, Monifieth, Angus DD5 3RB; and EUROVIA Group Limited, having its principal office at Albion House, Springfield Road, Horsham, West Sussex RH12 2RW (the "Operating Company")

WHEREAS:

- (A) The Scottish Ministers and the Operating Company have entered into a contract for management and maintenance of the Scottish trunk road network ("the Contract");
- (B) Under paragraph 3.2.1 of Schedule 4 Part 4 of the Contract the Operating Company shall undertake repairs of Damage to Crown Property (as defined in the Contract) in respect of Damage to Crown Property (as defined in the Contract) which has been caused by third parties; and
- (C) In order that the Operating Company can obtain title and interest to sue the third parties responsible for the Damage to Crown Property referred to in recital (B), the Scottish Ministers and the Operating Company have agreed and hereby agree that the Scottish Ministers will assign to the Operating Company its rights against third parties in respect of Damage to Crown Property.

IT IS HEREBY AGREED BETWEEN THE PARTIES AS FOLLOWS:

- 1. The Scottish Ministers hereby assign to and in favour of the Operating Company, to the extent that the Scottish Ministers may competently do so, the benefit of the Scottish Ministers' current and future rights against third parties in respect of Damage to Crown Property, including such powers, rights and remedies as may be vested in the Scottish Ministers.
- 2. The Operating Company may complete and send notices of assignment of rights (in the form set out in the schedule annexed and identified as relative to this Agreement ("the Schedule")) in accordance with paragraph 3.2.3 of Schedule 4 Part 4 of the Contract.

3. This Agreement is governed by Scots law and the Scottish Courts have exclusive jurisdiction to settle any dispute arising out of or in connection with this Agreement: IN WITNESS WHEREOF these presents typewritten on this and the preceding page, together with the Schedule of one page annexed hereto, are executed as follows:

They are signed for and on behalf of The Scottish Ministers

by
on2012
at
before the witness
Name.....
Address.....
.....
.....

.....
Authorised Signatory
Witness

They are signed for and on behalf of BEAR Scotland Limited

by
on2012
at
before the witness
Name.....
Address.....
.....
.....

.....
Director/Company Secretary/Authorised Signatory*
Witness

This is the Schedule referred to in the foregoing Agreement between the Scottish Ministers and BEAR Scotland Limited

Notice of Assignment of Rights: to be typed on the headed notepaper of the Operating Company

To: [Insert name and address of the relevant third party]

Date: []

Dear Sirs

Notice of Assignment of Rights

We hereby give you notice that, by an Agreement dated [], a copy of which is annexed hereto, the Scottish Ministers assigned to us the benefit of their rights against you in respect of [insert a full description of the damage caused by the third party] including such powers, rights and remedies as may be vested in the Scottish Ministers.

Yours faithfully

Authorised Signatory

cc: The Director, Trunk Road and Bus Operations, Transport Scotland, Buchanan House, 8th floor, 58 Port Dundas Road, Glasgow, G4 0HF

This is Annex 4.4/F to Schedule 4 Part 4 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 4

DAMAGE TO CROWN PROPERTY AND THIRD PARTY CLAIMS

ANNEX 4.4/F – Report of an Incidence of Damage to Crown Property

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 4

DAMAGE TO CROWN PROPERTY AND THIRD PARTY CLAIMS

ANNEX 4.4/F – Report of an Incidence of Damage to Crown Property

Title:

Report of an incidence of Damage to Crown Property

Operating Company Name

Unit

Provide data from the following fields from the contract control and management function of the Integrated Roads Information System and reference such data to the field name (also refer to Schedule 4 Part 1):

- (i) unique damage identifier,
- (ii) Route number,
- (iii) date and time of incident,
- (iv) source of this information,
- (v) date that the Operating Company first became aware of the Damage to Crown Property,
- (vi) location - link, section and chainage and Ordnance Survey Grid Reference,
- (vii) Structural reference number, if appropriate,
- (viii) description of property,
- (ix) type and extent of damage,
- (x) cause of damage, including name of culprits,
- (xi) are proceeding being taken by police?
- (xii) date emergency work was carried out (if any),
- (xiii) who carried out emergency work (if any)?
- (xiv) road condition e.g. good, rutted,
- (xv) weather conditions,
- (xvi) was road wet, dry or icy?
- (xvii) was Winter Constructional Plant called out?
- (xviii) details of de-icing Operations,
- (xix) was precautionary treatment carried out at the locus prior to incident?
- (xx) estimated final value,
- (xxi) estimated date for final repair,
- (xxii) names and addresses of witnesses (if any),
- (xxiii) all other relevant information, and
- (xxiv) brief account of Incident causing damage.

This is Annex 4.4/G to Schedule 4 Part 4 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 4

DAMAGE TO CROWN PROPERTY AND THIRD PARTY CLAIMS

ANNEX 4.4/G – Notification of the Final Valuation of Repair of an Incidence of Damage to Crown Property

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 4 PART 4

DAMAGE TO CROWN PROPERTY AND THIRD PARTY CLAIMS

ANNEX 4.4/G – Notification of the Final Valuation of Repair of an Incidence of Damage to Crown Property

The information required by this Annex shall be presented in the form of a report listing against each field name the information relating to such field. The report shall be signed on each page by the Operating Company's Representative or, in his absence, the Scheme Manager responsible for Damage to Crown Property and the signatory's name shall be printed or written in block capitals adjacent to each signature.

Fields listed in this Annex shall be those within the contract control and management function of the Integrated Roads Information System and details shall be held for all estimated and final values in the contract control and management function of the Integrated Roads Information System.

Title:

Notification of the Final Valuation of Repair of an Incidence of Damage to Crown Property

The report shall contain information from the following fields and field names to form a header to the report:

- (i) unique damage identifier,
- (ii) date of repair,
- (iii) location of damage, and
- (iv) name of culprit.

Each value relating to the Incident measured in accordance with Schedule 2 Part 1, excluding the following associated costs:

- (vii) police reports, and
- (viii) establishing, maintaining and removing traffic management prior to repair Operations,

shall be listed using the following fields to form a section in the report entitled "Section A":

- (i) cost sub series,
- (ii) description (which shall include the name of and the service provided by each supplier where that supplier is not the Operating Company),
- (iii) quantity,
- (iv) unit,
- (v) rate,
- (vi) amount (which shall be the product of fields "unit" and "rate"), and
- (vii) subtotal A (which shall be the sum of all fields "amount" in this Section A).

Every associated cost relating to the incident in respect of:

- (i) police reports, and
- (ii) establishing, maintaining and removing traffic management prior to repair Operations,

shall be listed using the following fields to form a section in the report entitled "Section B":

- (i) cost sub series,
- (ii) description (which shall include the name of and the service provided by each supplier where that supplier is not the Operating Company),
- (iii) quantity,
- (iv) unit,
- (v) rate,
- (vi) amount (which shall be the product of fields "unit" and "rate"), and
- (vii) subtotal B (which shall be the sum of all fields "amount" in this Section B).

There shall be a footer containing the following fields:

- (i) total (which shall be the sum of the fields "subtotal A" and "subtotal B"),
- (ii) final Statement number (which shall be the Statement submitted by the Operating Company in accordance with Section 10 of Schedule 1 and that contains the final claim for payment in respect of the incident to which the unique damage identifier applies),

The Operating Company shall provide full supporting documentation for every value or cost listed in this Annex.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 1

MANAGEMENT SYSTEM

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 1

MANAGEMENT SYSTEM

1. GENERAL REQUIREMENTS

1.1 Requirements

- 1.1.1 The Operating Company's Management System shall be established, documented, implemented and maintained to continually improve its effectiveness in compliance with the requirements of this Contract.
- 1.1.2 No later than one year after the Commencement of Service Date, the Operating Company shall receive certification of the Management System by a recognised accreditation body to British Standard EN ISO 9001, British Standard EN ISO 14001 and British Standard OHSAS 18001. The scope of certification shall include all Operations performed at all locations required by this Contract. The Operating Company's Management System shall also comply with the requirements of British Standard EN ISO 27001 and take account of the following publications:
- (i) HMG1A Standard Number 1, Technical Risk Assessment, and
 - (ii) Communications-Electronics Security Group Good Practice Guide Number 6 – Outsourcing and Offshoring: Managing the Security Risks.
- 1.1.3 The Management System documentation shall include:
- (i) documented statements addressing quality, the environment, health and safety and security of information and communications technology,
 - (ii) documented objectives addressing quality, the environment, health and safety and security of information and communications technology,
 - (iii) quality, environment and health and safety manuals including:
 - (a) the scope of the quality, environmental and health and safety aspects of the Management System,
 - (b) a description of the interaction between the processes for the Management System,
 - (iv) a Quality Plan meeting the requirements of British Standard ISO 10005 or equivalent and this Part,
 - (v) documented procedures required by British Standard EN ISO 9001, British Standard EN ISO 14001 and British Standard OHSAS 18001,
 - (vi) documented procedures required by this Part or other Parts of this Contract,
 - (vii) documentation required by the Operating Company to ensure the effective planning, operation, measurement and control of its processes for the implementation of this Contract, and
 - (viii) all records required by the Management System and the Quality Plan and this Contract.

1.2 Consortium Partnership or Joint Venture

1.2.1 If the Operating Company is a consortium, partnership or joint venture, a single Management System and Quality Plan shall be established for this Contract. All elements of the single Management System shall be presented and headed under the banner of the Operating Company, not as extracts from the Management Systems of any of the individual members of the consortium, partnership or joint venture. All provisions of this Contract shall apply to the Management System and the Quality Plan.

1.3 Management System Manager

1.3.1 The Operating Company shall appoint a Management System Manager in accordance with the requirements of Schedule 5 Part 4.

1.3.2 The Management System Manager shall have the day to day responsibility for all matters related to the Management System. The Management System Manager shall be the Operating Company's point of contact for all day to day issues related to the Management System.

2. REQUIREMENTS OF THE QUALITY PLAN

2.1 Requirements

2.1.1 The Operating Company shall prepare and submit its Quality Plan to the Director in accordance with the requirements stated in Schedule 1 Part 5.

2.1.2 The Quality Plan shall describe the Operating Company's arrangements for the management of quality for all Operations. Arrangements shall include all processes and procedures required by this Contract to fulfil the contractual obligations and meet the requirements and objectives of the Scottish Ministers.

2.1.3 Such arrangements and records shall identify all changes to products and specifications and enable the verification and traceability of all processes and products used in connection with Operations and Works.

2.2 Content

2.2.1 The Operating Company's Quality Plan shall identify the sequence and interaction of the Operating Company's processes necessary to fulfil the requirements of the Management System and this Contract.

2.2.2 The Operating Company's Quality Plan shall include details of all hold points identified in or required by this Contract, including Operating Company's Hold Points and the Director's Hold Points.

2.2.3 The Quality Plan shall set out the details of the Operating Company's personnel, including:

- (i) the names, roles, responsibilities and authority of the Core Management Team and Key Staff as stated in Schedule 5 Part 4, that are to be employed in Operations. This shall include the line of command and communication links between all parties involved in the delivery of Operations by the Operating Company under this Contract in the form of annotated charts,
- (ii) a description of the arrangements for the interfaces with and between the:
 - (a) Operating Company,

- (b) sub-contractors,
 - (c) sub-consultants,
 - (d) Works Contractor personnel, and
 - (e) any other necessary interfaces,
- (iii) a description of the arrangements for the interface with the Director and the Director's staff, including any proposals for a partnering leadership board or similar arrangement, and
- (iv) a description of the arrangements for the interface with the Performance Audit Group.
- 2.2.4 The Quality Plan shall stipulate the Operating Company's arrangements for liaison and meetings between the Operating Company and sub-contractors, sub-consultants, Works Contractors, the Director and any third parties or interested parties.
- 2.2.5 The Quality Plan shall stipulate the Operating Company's arrangements for managing information required by and used in connection with this Contract including:
- (i) procedures for receiving, recording, storing, managing and transferring information,
 - (ii) procedures for ensuring the security of all information at all times,
 - (iii) procedures for ensuring the integrity and availability of all information at all times,
 - (iv) procedures for preventing the access to information by unauthorised persons, and
 - (v) procedures to prevent the misuse of the information by authorised and unauthorised persons.
- 2.2.6 The Quality Plan shall stipulate the Operating Company's documented procedures, including method statements, to:
- (i) secure the effective implementation of Operations and Works,
 - (ii) enable the procurement of all activities required for Operations and Works, and
 - (iii) ensure the provision by the Operating Company to the Director of all information and Records in respect of Operations and Works, including the procurement of such information from others by the Operating Company,
- as required by this Contract.
- 2.2.7 The Quality Plan shall stipulate the Operating Company's documented procedures for the management and control of sub-contracts (including sub-contractors and sub-consultants), including its procedures for assessing all sub-contractors and sub-consultants for quality, environmental compliance, health and safety and quality control capabilities.
- 2.2.8 The Quality Plan shall stipulate the Operating Company's arrangements for Statement and invoice preparation and the provision of documented evidence that it has discharged its obligations under this Contract for everything for which payment

under this Contract shall be claimed. This shall include, but not be limited to, documented procedures for complying with the requirements of Clause 10 of Schedule 1 Part 3.

2.2.9 The Quality Plan shall stipulate regular documented and recorded reviews by the Operating Company of its own performance in fulfilling its obligations under this Contract. These reviews shall encompass:

- (i) management reviews and audits to monitor and demonstrate control over the implementation of the Management System, Quality Plan, Operations and Works,
- (ii) the control of all documentation, including showing the identification and traceability of documents, document issues and status,
- (iii) the control of documentation recording the verification, review, comments, approval, consent to and releases in respect of Operations and Works,
- (iv) all documentation and information that the Contract requires the Operating Company to provide to the Director or to keep available at the Operating Company's offices or depots for inspection or audit by, or on behalf of, the Director and the Performance Audit Group,
- (v) compliance by the Operating Company with this Part, and
- (vi) recording and monitoring of Non-Conformances and the introduction and implementation of any remedial and preventive action.

2.2.10 The Quality Plan shall set out a schedule for each Annual Period for internal audits by the Operating Company of the Operating Company's own activities, sub-contractor activities and sub-consultant activities and the Operating Company's Management System. This schedule shall include the timing and scope of each audit.

2.2.11 The Quality Plan shall identify the persons responsible for the initiation, maintenance and upgrading of the Management System during the Contract Period including:

- (i) the identification of the persons responsible for monitoring compliance with the Management System in respect of the Operations,
- (ii) the identification of the persons responsible for the adequacy of the Management System and Quality Plan records produced, and
- (iii) the identification of the persons responsible for document control.

2.2.12 The Quality Plan shall document the Operating Company's methods for monitoring and measuring the Management System processes to be able to demonstrate to the Director and Performance Audit Group the ability of its processes to achieve the planned results.

2.2.13 The Quality Plan shall document the Operating Company's arrangements for the measurement and monitoring of the competence and resilience of the staff deployed to deliver the service. This shall include collation of Operating Company data for staff turnover, staff absence, hours worked per employee and training required by Schedule 5 Part 6.

2.2.14 The Quality Plan shall set out procedures to allow:

- (i) the implementation of the Integrated Roads Information System,

- (ii) the implementation of the Transport Scotland Carbon Management System,
- (iii) the provision and use of the contract control and management function of the Integrated Roads Information System,
- (iv) the collection, recording and updating of data needed to provide a full and accurate inventory of the Trunk Road, and
- (v) the updating of all Contract documentation to conform to current legislation.

2.2.15 The Quality Plan shall make provision for any other matter which may be brought to the attention of the Operating Company by the Director or the Performance Audit Group and which as a result shall be incorporated into the Management System and the Quality Plan.

3. REQUIREMENTS FOR ENVIRONMENTAL MANAGEMENT

3.1 Requirements

3.1.1 The Management System shall stipulate the Operating Company's arrangements for the effective environmental management of Operations and Works by the Operating Company in accordance with the other provisions of this Contract, statutory requirements and British Standard EN ISO 14001, including:

- (i) the development of an environmental policy,
- (ii) the identification by the Operating Company of environmental aspects, objectives, targets, programmes, training and communication requirements,
- (iii) the inclusion by the Operating Company of environmental aspects in method statements and procedures, including those for operational control and emergency response,
- (iv) the development of procedures by the Operating Company relating to environmental implementation, control, Records and corrective and preventive action,
- (v) the establishment by the Operating Company of a register of relevant legal requirements, and
- (vi) procedures to address any other requirements of British Standard EN ISO 14001 that have not been addressed by the Operating Company in other parts of the Management System.

4. REQUIREMENTS FOR HEALTH AND SAFETY MANAGEMENT

4.1 Requirements

4.1.1 The Management System shall stipulate the Operating Company's arrangements for the effective health and safety management of Operations and Works in accordance with the other provisions of this Contract, statutory requirements and British Standard OHSAS 18001 or equivalent, including:

- (i) the development of a health and safety policy,
- (ii) the identification of health and safety aspects, objectives, targets, programmes, training and communication requirements,

- (iii) the inclusion of health and safety aspects in method statements and procedures,
- (iv) the development of procedures relating to health and safety implementation, control, Records, corrective action and preventive action, and
- (v) procedures to address any other requirements of British Standard OHSAS 18001 or equivalent that have not been addressed by the Operating Company in other parts of the Management System.

5. DIRECTOR'S MONITORING OF THE OPERATING COMPANY'S MANAGEMENT SYSTEM AND QUALITY PLAN

5.1 Requirements

5.1.1 The Director will have in place procedures for monitoring the Operating Company's Management System and the Quality Plan. These procedures shall result in:

- (i) reports, including reports on hazards identified in Hazard Notices and Observations Resulting from Inspection,
- (ii) matters subject to Notices of Non-Conformance, and
- (iii) matters subject to Remedial Notices and Defaults, Non-Conformances and Defects including, where appropriate, Notices of Non-Conformance and Remedial Notices,

that will be provided by written notice to the Operating Company.

5.1.2 The Operating Company shall, within a period of eight weeks or other timescale acceptable to and agreed by the Director in writing, take due cognisance of such reports, correct the Non-Conformances, prevent continuance of the Non-Conformances, investigate the root causes of the Non-Conformances and initiate all necessary actions including, where appropriate, procedural change required to prevent recurrence of any such events.

5.1.3 From time to time it may be considered appropriate by the Director to raise a Notice of Non-Conformance outwith the formal audit process. Should such a situation arise, the Operating Company shall take all necessary corrective actions and initiate all necessary actions required to prevent recurrence of any such events.

5.1.4 The Operating Company shall integrate these corrective and other actions into the Management System and, in particular, into the documented control management and working procedures, including method statements.

6. INTERNAL AUDITS BY THE OPERATING COMPANY

6.1 Requirements

6.1.1 The Operating Company shall meet the requirements of British Standard ISO 9001 for the planning and undertaking of internal audits. During the first Annual Period, the Operating Company shall, as a minimum, undertake auditing of its relevant activities, and the activities of its sub-contractors and sub-consultants as described in Annex 5.1/A of this Part.

Notwithstanding the minimum requirements in Annex 5.1/A of this Part, the Operating Company shall plan and undertake internal audits according to the status and importance of the processes.

6.1.2 During the second and subsequent Annual Periods, the Operating Company may propose to the Director amendments to the audit programme. Any proposals that seek to omit audits shall be supported by evidence of performance from audits already undertaken under this Contract or by other means. Replacement audits shall be selected on the basis of the status and importance of the processes and the performance of the Operating Company. Changes to the audit programme shall only be implemented with the consent of the Director.

6.1.3 Proposals to omit or replace audits within the second or subsequent Annual Period shall be submitted to the Director for consent no later than 25 Working Days before the commencement of each Annual Period. Should no such proposals for change to the audit programme be made or if the Director does not give consent to the proposals, then auditing shall be undertaken as described in Annex 5.1/A of this Part.

6.2 First Internal Audit

6.2.1 The Operating Company shall undertake the first internal audit of any element of the Management System no later than 13 weeks after the commencement date of the relevant activity.

7. AUDITS BY THE PERFORMANCE AUDIT GROUP

7.1 Requirements

7.1.1 This Contract provides for the performance of the Operating Company to be audited by the Performance Audit Group. The requirements relating to this are set out in Schedule 5 Part 5.

This is Annex 5.1/A to Schedule 5 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 1

MANAGEMENT SYSTEM

ANNEX 5.1/A – Operating Company Internal Audit Schedule

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 1

MANAGEMENT SYSTEM

ANNEX 5.1/A – Operating Company Internal Audit Schedule

Operating Company Internal Audit Schedule Annex 5.1/A				
Sch No.	Part No	Schedule Title	Part Title	Minimum Audit Frequency
3	1	Administration Procedures for the Operations	Overall Requirements	Once per year
3	2	Administration Procedures for the Operations	Extent of the Unit	Once per year
3	3	Administration Procedures for the Operations	Reference Documents	Once per year
3	4	Administration Procedures for the Operations	Other Contracts Within the Unit	Once per year
3	5	Administration Procedures for the Operations	Communications Strategy, Correspondence, Enquiries and Complaints	Twice per year
3	6	Administration Procedures for the Operations	Customer Contact Services	Once per year
3	7	Administration Procedures for the Operations	Network Operation Services	Once per year
3	8	Administration Procedures for the Operations	Statutory Functions	Once per year
3	9	Administration Procedures for the Operations	Collaboration Requirements	Once per year
3	10	Administration Procedures for the Operations	Partnering	None
4	1	Contract Management, Third Party Claims and Damage to Crown Property	Financial and Contract Management	Twice per year
4	2	Contract Management, Third Party Claims and Damage to Crown Property	Integrated Roads Information System	Once per year
4	3	Contract Management, Third Party Claims and Damage to Crown Property	Roadside Electrical Apparatus and Power Supplies	Once per year
4	4	Contract Management, Third Party Claims and Damage to Crown Property	Damage to Crown Property and Third Party Claims	Once per year
5	1	Management System, Offices and Depots, Sustainability	Management System	Twice per year
5	2	Management System, Offices and Depots, Sustainability	Records Information and Communication Technology	Once per year
5	3	Management System, Offices and Depots, Sustainability	Reporting and Submission Requirements and Progress Meetings	Once per year
5	4	Management System, Offices and Depots, Sustainability	The Operating Company's Representative, Core Management Team and Key Staff	Once per year
5	5	Management System, Offices and Depots, Sustainability	Audits by the Performance Audit Group	Once per year
5	6	Management System, Offices and Depots, Sustainability	Performance Measurement	Once per year
5	7	Management System, Offices and Depots, Sustainability	Operating Company's Offices and Depots	Once per year
5	8	Management System, Offices and Depots, Sustainability	Environmental Sustainability and Waste	Once per year
6	1	Design, Procurement and Certification for the Operations and Works	Procurement and Management of Schemes	Twice per year

Operating Company Internal Audit Schedule Annex 5.1/A				
Sch No.	Part No	Schedule Title	Part Title	Minimum Audit Frequency
6	2	Design, Procurement and Certification for the Operations and Works	Construction (Design and Management) Regulations 2007	Twice per year
6	3	Design, Procurement and Certification for the Operations and Works	Road Safety Audits	Once per year
6	4	Design, Procurement and Certification for the Operations and Works	Design and Certification of Operations and Works	Twice per year
7	1	Management of Operations, Inspections and Maintenance	Management, Inspection and Maintenance	Twice per year
7	2	Management of Operations, Inspections and Maintenance	Winter Service – Pre-Winter	Once per year
7	2	Management of Operations, Inspections and Maintenance	Winter Service – During Winter	Once per year
7	3	Management of Operations, Inspections and Maintenance	Incident Response	Twice per year
7	4	Management of Operations, Inspections and Maintenance	Landscape Development Process and Deliverables	Once per year
7	5	Management of Operations, Inspections and Maintenance	New Roads and Street Works Act 1991	Once per year
7	6	Management of Operations, Inspections and Maintenance	Management and Maintenance of Structures	Once per year
7	7	Management of Operations, Inspections and Maintenance	Structures with Particular Requirements	Once per year
7	8	Management of Operations, Inspections and Maintenance	Severe Weather Services	Once per year
8	1	Technical Studies and Advice in Connection With the Operations	Abnormal Indivisible Load Routeing	Once per year
8	2	Technical Studies and Advice in Connection With the Operations	Development Management	Once per year
8	3	Technical Studies and Advice in Connection With the Operations	Road Safety and Accident Investigation and Prevention	Once per year
8	4	Technical Studies and Advice in Connection With the Operations	Signs Requiring Authorisation	Once per year

Note: References to year in the above table means the Annual Period.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 2

RECORDS, INFORMATION AND COMMUNICATION TECHNOLOGY

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 2

RECORDS, INFORMATION AND COMMUNICATION TECHNOLOGY

1. GENERAL

1.1 Records Register

1.1.1 The Operating Company shall prepare and maintain a detailed Records Register in electronic format identifying all Records retained at the Central Office, the Records Retention Periods and the expiry date of the Records Retention Period for each Record.

1.2 Record Referencing

1.2.1 Not later than 30 days prior to the Commencement of Service Date, the Operating Company shall submit its proposals for the Records referencing system for the Records contained within the Records Register for the written consent of the Director.

1.2.2 The referencing system for the Records shall allow the identification of Records with different Records Retention Periods.

1.3 Management System Requirements

1.3.1 The Operating Company shall include documented procedures to control the processes required by this Part in its Management System.

1.4 Freedom of Information

1.4.1 Not later than 30 days prior to the Commencement of Service Date, the Operating Company shall submit to the Director for written consent details of its policy and documented procedures to meet the requirements of:

- (i) the Freedom of Information Act (Scotland) 2002,
- (ii) the *Scottish Public Sector Procurement and Freedom of Information Guidance* issued in December 2004 by the Scottish Procurement Directorate, and
- (iii) the Environmental Information (Scotland) Regulations 2004, as amended.

1.5 Storage

1.5.1 During the Contract Period, the Operating Company shall provide and maintain storage facilities for all Records. Records required in accordance with Annex 5.2/B of this Part shall be stored in electronic format with a minimum resolution of 300 dots per inch for scans and have a defined file structure using the headings given in Annex 5.2/B of this Part. Newly created Records which do not form part of the Annex 5.2/B requirements shall also be stored in electronic format using the defined file structure, where appropriate. If newly created Records do not fit the Annex 5.2/B headings then extra headings shall be added to the file structure by the Operating Company.

1.5.2 Not later than 30 days prior to the Commencement of Service Date, the Operating Company shall submit details of its proposed storage facilities for electronic and hard copy Records for the written consent of the Director. The storage facilities

holding electronic and hard copy Records relating to the Unit shall be located at the Central Office.

The storage facilities shall allow ready retrieval of the Records and both the storage facilities and the Records shall be maintained in good condition and without degradation.

- 1.5.3 Where Records are created or maintained on a computer or other electronic storage device, the Operating Company shall provide backup and storage for the Records and the Records register in a secure facility which is separate from the Central Office and which shall be subject to the written consent of the Director.

1.6 Records Retention Period

- 1.6.1 The Operating Company shall retain Records for the Records Retention Period referred to in Annex 5.2/A of this Part.

- 1.6.2 Where the Records Retention Periods for certain Records are not specified in Annex 5.2/A of this Part, the retention period shall be six years unless instructed otherwise by the Director.

1.7 Access and Availability

- 1.7.1 The Operating Company shall provide an Electronic Copy of the Records Register, or any of the Records, to the Director or the Performance Audit Group within five Working Days of receiving a written request from either the Director or the Performance Audit Group.

- 1.7.2 Contemporary Records shall be provided by the Operating Company in the native electronic file format or an alternative format as agreed with or required by the Director or the Performance Audit Group.

1.8 Destruction of Records

- 1.8.1 At the end of the appropriate Records Retention Period for any particular Record, the Operating Company shall destroy the Record in a manner which ensures they can no longer be read, copied, duplicated or reproduced.

- 1.8.2 When any particular Record has been destroyed in accordance with paragraph 1.8.1 of this Part, the Records Register shall be updated to show details of its destruction. The Director will use the Records Register to check from time to time that Records are being destroyed in accordance with these requirements.

2. HISTORICAL RECORDS

2.1 General

- 2.1.1 During the Mobilisation Period, the Operating Company shall initiate and, by no later than 90 days after the end of the Mobilisation Period, shall obtain a handover of the Historical Records and associated Records Register from the previous operating company. Within 15 Working Days of receiving the Historical Records and the previous operating company's Records Register, the Operating Company shall include all such documents in its Records Register at the Central Office, including the date(s) of delivery to the Central Office.

- 2.1.2 The Operating Company shall check the adequacy of all Historical Records against the details recorded in the Records Register transferred by the previous operating company. Within one year of the Commencement of Service Date, the Operating

Company shall provide a report to the Director in a format that accords with the requirements in Annex 5.2/C of this Part.

- 2.1.3 The Operating Company shall file, store and maintain all electronic and hard copy Historical Records in the Central Office.

3. CONTEMPORARY RECORDS

3.1 General

- 3.1.1 During each Annual Period the Operating Company shall receive, register, file, store and maintain all Contemporary Records in the Central Office.
- 3.1.2 For Contemporary Records, the Records Register shall be fully searchable, with hyperlinks included to the actual Records.

4. SUBMISSION OF RECORDS AND RECORDS REGISTER

4.1 All Annual Periods

- 4.1.1 Within five Working Days after the commencement of each Annual Period and of the end of the Final Annual Period, the Operating Company shall provide an Electronic Copy of the Records Register referred to in this Part to the Director.
- 4.1.2 Throughout each Annual Period, the Operating Company shall update the Records Register to reflect changes to the data required to be produced, registered, filed, stored and maintained in the Central Office.

4.2 Penultimate Annual Period

- 4.2.1 At any time after 31 December in the penultimate Annual Period, the Director may request the Operating Company to provide an Electronic Copy of the Records referred to in Annex 5.2/B of this Part. The Operating Company shall provide these within 25 Working Days of the Director's written request.

4.3 Final Annual Period

- 4.3.1 During the Final Annual Period, the Director shall provide the Operating Company with details of the successor organisation. At any time during the Final Annual Period the successor organisation will contact the Operating Company to obtain Records. The Operating Company shall provide suitable facilities to enable the successor organisation to carry out its contractual obligations to obtain Records without unreasonable delay. The Operating Company shall hand over the Records Register and all original Records referred to in Annex 5.2/B of this Part to the successor organisation and shall provide any other information required by the Director no later than 10 Working Days prior to the Contract Termination Date.

5. INFORMATION AND COMMUNICATION TECHNOLOGY

5.1 General

- 5.1.1 The Operating Company shall appoint an Information and Communication Technology Manager in accordance with the requirements of Schedule 5 Part 4.

5.2 Information and Communication Technology System Plan

- 5.2.1 Not later than 30 days prior to the Commencement of Service Date, the Operating Company shall submit its proposed Information and Communication Technology System Plan in writing for the written consent of the Director.
- 5.2.2 The Operating Company's Information and Communication Technology System Plan shall contain details of the systems and documented procedures and protocols which the Operating Company shall implement to comply with the requirements of the Contract. The Information and Communication Technology System Plan shall identify, as a minimum:
- (i) all electronic hardware and software used to produce Records,
 - (ii) the backup procedures (including disaster recovery and business continuity) in accordance with the requirements of this Part to ensure availability of systems and equipment and to prevent loss of Records, and
 - (iii) data formats and protocols used to communicate information.
- 5.2.3 The Information and Communication Technology System Plan shall be continuously maintained and updated throughout the Contract Period by the Operating Company.

5.3 Notification of Leavers

- 5.3.1 The Operating Company shall notify the Director and the Performance Audit Group immediately when individuals, who have been granted access to information and communication technology systems managed by the Director or the Performance Audit Group, leave the Operating Company. The Director and the Performance Audit Group shall use this information to disable access permissions to Transport Scotland's information and communication technology systems.

5.4 Computer Systems

- 5.4.1 The Operating Company shall keep its computer systems under continuous review throughout the Contract Period and shall pursue further development and upgrading to ensure that it is able to provide the required services without degradation throughout the duration of this Contract.
- 5.4.2 Transport Scotland currently uses the software shown in Table 5.4.2.A and the Operating Company's software shall be capable of producing output which is fully compatible with this.

Table 5.4.2.A

Requirement	Software Utilised
Operating Systems - Servers	Microsoft Windows
Operating Systems – Desktops & Laptops	Microsoft Windows
Email	Microsoft Office 2003
Word processing	Microsoft Word
Spreadsheets	Microsoft Excel
Computer Aided Design	AutoCAD and AutoCAD LT
Project Management	Microsoft Project

5.4.3 The Operating Company shall prepare, implement and continuously update a contingency and backup plan to deal with any failure of any computer system, regardless of cause.

5.5 Communication Systems

5.5.1 The Operating Company's communication systems shall ensure that communications links between the various parts of the Operating Company within the Unit are maintained throughout the Contract Period.

5.5.2 The communication systems shall provide communications with and between the:

- (i) Central Office, sub offices and depots,
- (ii) Core Management Team,
- (iii) Key Staff,
- (iv) Operating Company's vehicles, including direct contact with the personnel in charge of the vehicle and between:
 - (a) all vehicles involved with establishment and maintenance of traffic management,
 - (b) the Winter Service Manager's vehicle, the Winter Service Duty Officers' vehicles and all Winter Service Plant,
 - (c) Incident Support Unit vehicles,
 - (d) vehicles of supervisory and inspection personnel including those staff nominated to supervise Operations and Works Contracts, and
 - (e) other key personnel involved in the Operations including all persons nominated to be on call for emergency call out.

5.5.3 The Operating Company shall prepare, implement and continuously update a contingency and backup plan to deal with any failure of any communications system, regardless of cause. The contingency and backup plan shall include:

- (i) details of all communication systems, and
- (ii) the temporary communication system to be used in the event of failure of any particular communications system.

The detailed contingency and backup plan shall be included in the Operating Company's Information and Communication Technology System Plan. If the Director does not give his consent to the Operating Company's proposed contingency and backup plan, the Operating Company shall revise it and re-submit it in writing to the Director within 10 Working Days of consent being withheld.

5.5.4 Irrespective of the use of a temporary communications system, where any communication system or any part of it is inoperative for any reason, the Operating Company shall take all reasonable measures to effect a repair or a replacement within 24 hours of the failure.

This is Annex 5.2/A to Schedule 5 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 2

RECORDS, INFORMATION AND COMMUNICATION TECHNOLOGY

ANNEX 5.2/A – Records Retention Periods

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 2

RECORDS, INFORMATION AND COMMUNICATION TECHNOLOGY

ANNEX 5.2/A – Records Retention Periods

Record	Records Retention Period
Land Ownership <ul style="list-style-type: none"> - Interfaces - Boundaries 	In perpetuity In perpetuity
Drainage Outfalls	In perpetuity
Construction Design and Management Regulations Health & Safety File	In perpetuity
As Built Drawings: <ul style="list-style-type: none"> - Roads - Structures (including bar bending schedules) - Electrical - Landscaping Maintenance Manuals 	Until 2 years after deletion from inventory of designed item Until 2 years after deletion from inventory of designed item and then offered back to Transport Scotland Until 2 years after deletion from inventory of designed item Until 2 years after deletion from inventory of item to be maintained
Design Calculations	Until 2 years after deletion from inventory of designed item
Inspection Records <ul style="list-style-type: none"> - Road Maintenance and Management System Safety Inspection - Road Maintenance and Management System Safety Patrols - Road Maintenance and Management System Detailed Inspections - Structures <ul style="list-style-type: none"> - General - Principal - Special - Electrical 	Until 10 years after date of inspection Until 10 years after date of inspection Until 10 years after date of inspection Until 2 years after Structure demolished and then offered back to Transport Scotland Until 2 years after Structure demolished and then offered back to Transport Scotland Until 2 years after Structure demolished and then offered back to Transport Scotland Until 10 years after date of inspection

Record	Records Retention Period
Surveys <ul style="list-style-type: none"> - Ground - Topographical - Environmental - Traffic - CCTV 	Until 10 years after date of survey Until 10 years after date of survey
Statutory Orders <ul style="list-style-type: none"> - Speed Limits - Waiting - Clearway - Traffic Regulations - Compulsory Purchase - Any other Traffic 	Until 10 years after Statutory Order rescinded Until 10 years after Statutory Order rescinded
Development Control	Until 10 years after adoption
Third Party Claims	Until 5 years after settlement with affected third parties
Accident Records/Reports	In perpetuity
New Roads and Streets Works Act 1991 <ul style="list-style-type: none"> - Designation - Apparatus - Notices 	Until 10 years after date of Notice Until 10 years after date of Notice Until 10 years after date of Notice
Safety Audits	Until 10 years after date of audit
Abnormal Load Movement Records	Until 10 years after date of record
Final Statements of Intent for structural maintenance Schemes	Until 6 years after completion of the Scheme
Contract Documentation <ul style="list-style-type: none"> - Conditions of Contract - Bills of Quantities - Specifications 	Until 5 years after financial settlement of each Contract between the Scottish Ministers and Works Contractors
Works activities (Site Records)	Until 5 years after a Works Contract completion
Construction Records <ul style="list-style-type: none"> - Engineer's construction reports - Material Test Results 	Until 2 years after deletion from inventory Until 2 years after deletion from inventory

Record	Records Retention Period
Noise Assessment	Until 10 years after final assessment
Winter Service Records	Until 10 years after date of record
Incident Response Records	Until 10 years after date of record
Reports on Monthly Operations Undertaken by the Operating Company	Until 10 years after date of report
General Correspondence Files	Until 15 years after initiation of file

This is Annex 5.2/B to Schedule 5 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 2

RECORDS, INFORMATION AND COMMUNICATION TECHNOLOGY

ANNEX 5.2/B – Schedule of Records to be Transferred by the Operating Company to a Successor Organisation

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 2

RECORDS, INFORMATION AND COMMUNICATION TECHNOLOGY

ANNEX 5.2/B – Schedule of Records to be Transferred by the Operating Company to a Successor Organisation

- (i) general correspondence files covering general enquires, complaints, requests for information,
- (ii) Design calculations for all major maintenance Schemes,
- (iii) all as-built records including details of drainage outfalls and road inventories,
- (iv) maintenance manuals including all policy standards but not commercial in confidence procedure of process manuals,
- (v) inspection records and certificates for routine maintenance and management function of the Integrated Roads Information System, Structures, electrical,
- (vi) street lighting maintenance records,
- (vii) roads, Structures and ancillary infrastructure inventory,
- (viii) deflectograph, sideways coefficient routine investigation machine and high-speed road monitor reports and analyses,
- (ix) surveys (ground investigation, topographical, environmental, traffic, closed circuit television,
- (x) traffic regulation orders, compulsory purchase orders and other statutory orders,
- (xi) plans,
- (xii) drawings,
- (xiii) development control records and files,
- (xiv) third party claims,
- (xv) land ownership details,
- (xvi) weather records (including records from weather stations),
- (xvii) accident records and reports,
- (xviii) *New Roads and Street Works Act 1991* data,
- (xix) road safety audits,
- (xx) *Construction Design and Management Regulations (2007)* Health & Safety files,
- (xxi) abnormal load movements,
- (xxii) final Statements of Intent for structural maintenance schemes,
- (xxiii) contract documentation used in connection with Operations within the Unit,
- (xxiv) Works (Site) activity records,

- (xxv) construction records including but not limited to:
 - (a) Engineers' reports, and
 - (b) materials test results,
- (xxvi) noise assessments records,
- (xxvii) Winter Service policy, strategy and records,
- (xxviii) Incident response policy, strategy, records,
- (xxix) Records of damage to Crown Property,
- (xxx) reports on monthly operations undertaken by the Operating Company,
- (xxxii) Scheme specific and detailed information on each Scheme identified in the future budget programmes (to facilitate development of programmes and budgets for the first Annual Period),
- (xxxiii) register and Records of tourist, truckstop and special events signing, and
- (xxxiii) any other records identified by the Director and advised to the Operating Company in writing during the Contract Period.

This is Annex 5.2/C to Schedule 5 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 2

RECORDS, INFORMATION AND COMMUNICATION TECHNOLOGY

ANNEX 5.2/C – Historical Records Report

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 2

RECORDS, INFORMATION AND COMMUNICATION TECHNOLOGY

ANNEX 5.2/C – Historical Records Report

Box No Ref	File Heading	Contract Reference	Company	Route	Project Title / Ref	Contents	Year	Retention Period	Owner	Total Page Count	Containment or File Type	Size A0-A6	B&W or Colour	Confidential Y/N	Resolution (DPI)
1	Plans	Annex 5.2/B Item (xi)	OC (Insert Name)	M8	Tender Documents	Report	2002	10 years	TS	200	Lever Arch file - Hard Copy	A4	B&W	Y	300 DPI *
2	Drawings	Annex 5.2/B Item (xii)	Glasgow Council	ALL	Scheme Management	Drawings	1957	In Perpetuity	TS	1	Plastic Pocket - Hard Copy	A1	Colour	Y	200 DPI *
3	Winter Service	Annex 5.2/B Item (xxvii)	OC (Insert Name)	ALL	Winter Service Plan	Report	2010	10 years	TS	400	Electronic PDF	A4	B&W	Y	300 DPI *
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	X

* Sample data.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 3

REPORTING AND SUBMISSION REQUIREMENTS AND PROGRESS MEETINGS

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 3

REPORTING AND SUBMISSION REQUIREMENTS AND PROGRESS MEETINGS

1. INTRODUCTION

1.1 General

- 1.1.1 This Part gives details of the reporting and submission requirements within this Contract and the obligation on the Operating Company to attend progress meetings.
- 1.1.2 The Operating Company shall prepare, submit and distribute the reports and submissions specified in Table 5.3.A.1 in Annex 5.3/A of this Part in accordance with the timescale stated.
- 1.1.3 The Operating Company shall use procedural forms included within the relevant Part of this Contract. Where no procedural form is specified, the Operating Company shall propose a form of report or submission to the Director for his consent. The Operating Company shall use the proposed form when consented to by the Director.
- 1.1.4 The Operating Company shall provide the reports and submission information detailed in the version of Table 5.3.A.1 current at the time the report and submission is required.
- 1.1.5 The Operating Company shall ensure that the reporting and submission information referred to in Table 5.3.B.1 in Annex 5.3/B of this Part is collected and is available to the Director and the Performance Audit Group at all times. The Operating Company shall ensure that the systems in which this information is stored are capable of providing the information in either a report or submission form, separate from the system in which it is held, within three Working Days when requested by the Director or the Performance Audit Group.
- 1.1.6 The Director reserves the right, at his sole discretion, to alter, by the issue of an Order, the contents of Tables 5.3.A.1 and 5.3.B.1 during the Contract Period.
- 1.1.7 Reporting and submission information requirements in the *Manual of Contract Document for Highway Works, Volume 1 - Specification for Highways Works* and Schedule 9 are not listed in Tables 5.3.A.1 and 5.3.A.2 of this Part. The Operating Company shall comply with all such requirements as relevant and in the format indicated in such requirements.

2. OPERATING COMPANY'S ANNUAL REPORT

2.1 Requirements

- 2.1.1 The Operating Company shall produce an annual report describing the overall performance of the Operating Company during the previous Annual Period. This annual report is in addition to any other reports and submissions which are required on an annual basis in accordance with this Contract.

This annual report shall be received by the Director no later than 31 May following the end of the preceding Annual Period.

- 2.1.2 The annual report shall be a summary of the performance of the Operating Company and shall:
- (i) quantify actual performance against the Performance Indicators and Monitoring Indicators stated in Schedule 5 Part 6,
 - (ii) detail the Payment Adjustment Factors applied, and
 - (iii) comment on performance trends throughout the Annual Period including areas of strength and weakness.
- 2.1.3 The Operating Company shall submit its proposals for the format of the annual report to the Director not later than 100 Working Days before the end of the first Annual Period. The Director shall either accept the Operating Company's proposals for the format of the annual report within 30 Working Days of receipt or he will notify the Operating Company, in writing, detailing the aspects of the proposals that are not acceptable.
- 2.1.4 If the Director does not accept the Operating Company's proposals for the format of the annual report, the Operating Company shall submit revised proposals as required by the Director within 30 Working Days of being notified.
- 2.1.5 If the Director neither accepts nor advises the Operating Company that the proposals are unacceptable within 40 Working Days of the date of submission the Operating Company may adopt the proposed format after notifying the Director accordingly.
- 2.1.6 The annual report shall be used to inform the annual meeting between the Operating Company and the Director as referred to in paragraph 3.1.2 of this Part.

3. REPORTING AND PROGRESS MEETINGS

3.1 Requirements

- 3.1.1 The Operating Company shall attend a meeting every month with the Director at the Director's office, or at such other location as the Director may require, to review the monthly reports and submissions for that month. The purpose of this meeting is primarily to discuss contract management issues and any performance issues in relation to the Key Performance Indicators and Monitoring Indicators for that month. The date for such meetings shall be notified to the Operating Company no later than 30 days prior to the Commencement of Service Date by the Director in writing.
- 3.1.2 The Operating Company shall attend an annual meeting with the Director at the Director's office, or at such other location as the Director may require, on a date to be notified in writing by the Director. The annual meeting shall be held no later than the last day of June.

The annual meeting shall be held primarily to review the Operating Company's annual report for the previous Annual Period. The Operating Company shall propose a meeting agenda for the Director's prior consent which shall include proposed changes to improve service delivery and value for money for the following Annual Period and any other matters relating to performance or innovation which are not covered within the annual report. The Operating Company shall:

- (i) prepare draft minutes detailing the discussions held at the monthly and annual meetings,

- (ii) issue these draft minutes for the Director's consent no later than five Working Days after each meeting,
- (iii) amend the draft minutes to reflect any comments relating to the minutes made in writing by the Director, and
- (iv) issue the final minutes to the Director, with a copy to the Performance Audit Group, within five Working Days of receipt of any comments made by the Director.

This is Annex 5.3/A to Schedule 5 Part 3 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 3

REPORTING AND SUBMISSION REQUIREMENTS AND PROGRESS MEETINGS

ANNEX 5.3/A – REPORTING AND SUBMISSION REQUIREMENTS

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 3

REPORTING AND SUBMISSION REQUIREMENTS AND PROGRESS MEETINGS

ANNEX 5.3/A – REPORTING AND SUBMISSION REQUIREMENTS

Table 5.3.A.1

Schedule, Part and Title	Paragraph	Description	Frequency
1, 6, Default, Termination and Frustration	15.3.2	Report of the resolution of the Non-Conformance to the Performance Audit Group for consideration	within any timescale referred to in such Notice of Non-Conformance
1, 6, Default, Termination and Frustration	15.3.4	Copy of register of Non-Conformances and a progress report	weekly intervals
7,1 Management, Inspection and Maintenance	3.1.7	Report on OC performance in relation to Hazard Notices and Observations resulting from Inspections	monthly
7,1 Management, Inspection and Maintenance	4.13.16	Problems with communication and miscellaneous equipment	as necessary
7,1 Management, Inspection and Maintenance	4.14.2	Report on remedial action required and/or landowner's failure in relation to geotechnical assets	as necessary
7, 5 NRSWA	7.1.1	Programme of NRSWA inspections/investigations/coring & testing	Draft programme no later than 15 days prior to Commencement of Service and not later than 25 Working Days prior to the end of each Annual Period thereafter. Final programme not later than 15 Working Days after the start of each Annual Period

This is Annex 5.3/B to Schedule 5 Part 3 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 3

REPORTING AND SUBMISSION REQUIREMENTS AND PROGRESS MEETINGS

**ANNEX 5.3/B – REPORTING AND SUBMISSION INFORMATION TO BE STORED BY
THE OPERATING COMPANY**

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 3

REPORTING AND SUBMISSION REQUIREMENTS AND PROGRESS MEETINGS

ANNEX 5.3/B – REPORTING AND SUBMISSION INFORMATION TO BE STORED BY THE OPERATING COMPANY

Table 5.3.B.1

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
1,1 - Contract Scope	2.6.5	Copy of the agreement or other document that records any permitted assignation, subcontracting, or other transfer arrangements with a third party of any of the Operations under or in terms of this Contract	When requested		Scottish Ministers
	3.3.1	Such information and Drawings concerning the Operating Company's proposals in respect of any Order as are, in the Scottish Ministers' opinion, necessary for the proper execution of the Operations in accordance with this Contract	When requested	As soon as practicable following any request or requirement to do so, and in any case at the time required in an Order	Scottish Ministers
	4.2.1	Register of Professional Services staff		Prior to Commencement of Service Date	Director
	4.2.3	Any amendment to the registers required under 4.2.2 & 4.2.3		Within 5 Working Days of amendment	Director
	4.5.3	Copies of registers and other evidence of registration, Certificates (including associated data), and information (including drawings, calculations and all other associated documents)	When requested		Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	4.5.4	Details of any amendments proposed to be made to Design or Site Operations	When the OC encounters anything which invalidates its Design assumptions or requires amendment to its method of Site Operations in respect of such Design		Director
	4.5.5	Copy of any records	When requested	Within 7 days of such request	Director & PAG
	4.6.1	Validly executed Bond and Undertaking by an insurance company or bank which shall be jointly and severally bound with the Operating Company for the due performance of this Contract under the terms of such Bond and Undertaking		No later than 30 days prior to the Commencement of Service Date	Scottish Ministers
	5.4.1	Written notice whenever any work or foundation is ready to be inspected			Director
	5.8.1(iv)	Copies of records and registers relating to activities carried out under clause 5.8.1	When requested	Within 21 days of such request	Director & PAG
1,2 - Periods & Programmes	6.3.1	Programmes for Operations	In accordance with the requirements of this Contract		Scottish Ministers
	6.5.1	All information pertaining to the proposed methods for execution of the Operations	When required		Scottish Ministers

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
1,3 Orders, Extensions of time, Measurement and Payment Provisions	10.3.1	Statement	First calendar month following commencement of Service Date	Between eighth and twelfth day and thereafter no later than 14 days after the end of each calendar month	Scottish Ministers
	10.8.2(i)	Claim Notification	Where the Operating Company considers that any additional payment should be made	As soon as practicable after becoming aware of the event or circumstance and not later than 28 days after becoming aware, or when the Operating company should have become aware	Scottish Ministers
	10.8.4	Full and detailed claim which includes all supporting information and a justification of the entitlement to the additional payment and the amount considered due		Within 91 days of the Claim Notification	Scottish Ministers
1,4 - Indemnities & Insurance	11.1.3	The name and address of the owner of Plant, a copy of the terms under which such Plant was hired to the Operating Company and, in the case of hired Plant, certification in writing that the agreement for the hire thereof contains a provision in accordance with the requirements of Clause 11.1.3	When requested	Forthwith	Scottish Ministers
	12.4.1	Information given to insurers at any time during the placement, alteration or currency of any insurance policy	When requested	Within 7 days of such request	Scottish Ministers
	12.4.3(i), (ii) and (iii)	All insurance policies, endorsements, attachments, brokers' placing slips and other documents necessary, or reasonably requested by the Scottish Ministers, to demonstrate that the required insurances are in place. and As described in paragraph 12.4.2		Within one day of the commencement of this Contract, prior to the expiry of an existing insurance, and within seven days of receiving a written request	Scottish Ministers

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	12.4.5	Amendments or replacements of insurance documents	When necessary	Within 7 days of issue	Scottish Ministers
	12.4.6	Evidence that insurance is in place and premiums paid in full			Scottish Ministers
1,5 Management System & Change Proposals	13.1.4	Amendments to Management System and Quality Plan	Periodically as necessary		Scottish Ministers
	13.5.1	Non-Conformance Report	Weekly		
1,6 - Default, Termination & Frustration	15.3.2	Report of the resolution of the Non-Conformance	Within the timescale referred to in the Notice of Non-Conformance		PAG
1,10 - TUPE	22.1.4	Contract Personnel Information		Within eight weeks of receipt of any request, or such other reasonable period as agreed by the Scottish Ministers	Scottish Ministers
	22.1.5	TUPE Information as described in Table 22.1.4/A		At least 24 months before the end of the Contract Expiry Period	Scottish Ministers
	22.1.6	Any change to any part of the TUPE Information provided in accordance with clause 22.1.5		Within 14 days of a change or receipt of a request	Scottish Ministers
	22.1.14	Contract Personnel Information and the TUPE Information		Within 21 days of any notice of termination	Scottish Ministers
S1 Annex 5	Table 3.1.1.A	Evidence of insurance	Prior to commencement of any Operations		Scottish Ministers

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
3,5 - Communications Strategy, Correspondence, Enquiries & Complaints	1.2.1	a Unit-specific communications plan for the first Annual Period		No later than 30 days prior to the Commencement of Service Date	Director
	1.2.2	an updated Unit-specific communications plan	Annually	No later than 30 Working Days prior to the commencement of the second Annual Period and all subsequent Annual Periods	Director
	2.8.2	Communications register summarised reports	Monthly	15th day	Director
	2.8.3	Communications register summarised reports	Annually	15th April	Director
3,6 - Customer Contact Services	2.2.4(i)	Reports on usage figures on all pages contained within the Unit-specific website	Monthly		Director
3,7 - Network Operations Services	2.3.5(ii)	Reports on liaison meetings	Monthly	15 th day	Director
	2.3.5(iii)	Report on impact of all Operating Company activities on the journey time reliability of the network	Annually		Director
	2.6.1(ii)	Annex 3.7/B form	When required	At least 15 Working Days prior to commencement of Operations, Works Contract or works	appropriate Network Operations service provider
	2.6.2	Annex 3.7/B form - nil return	When required	At least 15 Working Days prior to commencement of Operations, Works Contract or works	appropriate Network Operations service provider

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	2.6.3	Copy of the Statement of Intent and Value for Money Assessment	Where a Statement of Intent and Value for Money Assessment identifies that Network Operations equipment may be affected		Network Operations service provider and the Director
	2.6.5	Testing Records		Within 10 Working Days of completion of the Operations or Works Contract	Director
	2.7.1	Annex 3.7/C form	When required		Director
	2.8.2	Annex 3.7/D form	When required	Within 24 hours of damage being caused	Appropriate Network Operations service provider
	3.6.6	Delay management report	When required		Director
	3.8.2	Proposals for deployment of automatic traffic delay monitoring equipment	When required		Director
	4.1.1	Annex 3.7/C form	When required		Scottish Roads Traffic Database Operator
3,9 – Collaboration Requirements	1.1.3	Collaborative opportunity identified		Within one month of opportunity having been identified	Director
	1.3.1	Collaborative opportunities identified, pursued, potential benefits, costs, service improvements & efficiency savings delivered	Quarterly		Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
4,1 – Financial and Contract Management	4.1.11	(i) a draft three year programme of Operations, Core Operations and Works Contract Schemes, (ii) a draft one year programme of Operations, Core Operations and Works Contract Schemes, (iii) recommendations for improvements that could be incorporated into Operations and Works Contract Schemes, (iv) recommendations for further investigations required to enable Operations and Works Contract Schemes to be accurately defined, and (v) outline Bids, including preliminary estimates, for Operations and Works Contract Schemes for the one and three year programme.	Annually		Director
	4.1.13	Revised Bids	Within the required timescales of Transport Scotland's <i>The Bidding Guidance</i> and the requirements shown at Figure 4.1.4.A		Director
	4.1.21	Revised Bids	Where changes occur which have an effect on the financial value of Operations or Works Contract Schemes		Director
	Tables 4.1.22/A and 4.1.23/A	Refer to Tables	Refer to Tables	Refer to Tables	Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	4.3.3	Records relating to investigations in the two stages described in the <i>Guidance Document for Implementing a Skid Resistance Policy for Transport Scotland</i>			Director
	4.3.7	Proposals for the erection, maintenance and removal of warning signs in accordance with the <i>Guidance Document for Implementing a Skid Resistance Policy for Transport Scotland</i>	Following completion of the detailed Site investigations		Director
	4.3.8	Skid policy progress report in a form to be agreed with the Director		By 15 th day of each month	Director and PAG
	4.3.9	An annual report which summarises the Operating Company's activities in respect of skid resistance management	Annually	Before 31 August	Director
	4.4.5	Where the analysis referred to in paragraph 4.4.3 indicates conditions that may be responsive to a number of different treatments or solutions, a list of the different treatments or solutions together with a relevant whole life costing analysis as part of providing its recommended option	When necessary		Director
	4.5.1	Statements of Intent and Value for Money Assessments in accordance with the timescales given in Transport Scotland's <i>The Bidding Guidance</i> for proposed roads structural pavement maintenance Schemes within Work Series 0100			Director
	4.5.6	For proposed roads structural pavement maintenance Schemes within Work Series 0100, Statements of Intent and where appropriate Value for Money Assessments in accordance with the timescales and financial thresholds given in Transport Scotland's <i>Annual Process for Roads Structural Maintenance</i>			Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	4.5.7	<p>For proposed bridges general maintenance Schemes within Work Series 1200 and with an Estimated Bid Value of more than £50,000:</p> <p>(i) a Statement of Intent - (Scheme approval) for those Schemes with an Estimated Bid Value of under £350,000 for the Director's consideration using the outline form provided at Annex 4.1/A,</p> <p>(ii) for all Schemes with an Estimated Bid Value of more than £350,000 a Statement of Intent - (Inception), together with a Value for Money</p> <p>(iii) details of any departures from the Design Manual for Roads and Bridges, and Disability Discrimination Act: Good Practice Guide for Roads ,</p> <p>(iv) an approval in principle, where appropriate under the Design Manual for Roads and Bridges,</p> <p>(v) a list of all accessibility barriers recorded in the routine maintenance and management function of the Integrated Roads Information System</p> <p>and any other relevant information in support of the Scheme</p>			Director
	4.5.8	Statement of Intent (Scheme approval) using the outline form provided at Annex 4.1/A	Following review by the Director of Schemes with an Estimated Bid Value of more than £350,000 Assessment.		

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	4.5.10	Report containing the recommendations agreed at the technical workshop		Within 25 Working Days of the technical workshop being held	Director
	4.5.11	For proposed Schemes within Works Series other than 0100 and 1200, to be ordered as Operations or a Works Contract with an Estimated Bid Value of over £10,000, a Statement of Intent - (Scheme approval) using the outline form provided at Annex 4.1/A			Director
	4.5.12	For proposed Schemes within Works Series other than 0100 and 1200, to be ordered as Operations or a Works Contract with an Estimated Bid Value of over £50,000, a Statement of Intent - (inception) using the outline form provided at Annex 4.1/A together with a Value for Money Assessment			Director
	4.5.14	a Statement of Intent (Scheme approval) using the outline form provided at Annex 4.1/A		Following the Director's consideration of the Statement of Intent - (Inception), Value for Money Assessments and any further studies and investigations	Director
	4.5.16	Report containing the recommendations agreed at the technical workshop		Within 25 Working Days of the technical workshop being held	Director
	4.6.2	Draft one and three year programmes in a format in accordance with that shown at Annex 4.1/A			Director
	4.7.2	Bid reports for the next Financial Year, that complement the detailed one year programme.		Within the timescale referred to in the <i>Annual Process for Roads Structural Maintenance</i> & Table 4.1.22A	Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	4.7.6	a further Bid relating to an additional Scheme		At least 25 Working Days before the proposed Scheme commencement date	Director
	4.14.2	(i) a proposed item description, a unit of measurement and a rate or price deduced from applicable rates and prices, or (ii) a rate or price in accordance with fair rates and prices, with a supporting calculation of the build up of such rate or price, or (iii) a quotation supported by calculations showing the build-up of the price. For the purposes of this paragraph 4.15 and the contract control and management function of the Integrated Roads Information System, a quotation shall be considered as a single rate of £1 and with a quantity of the quotation value and a unit of 'sum'.	Where the Operating Company considers that the items within the Schedule of Rates and Prices are not applicable to the Operations to be undertaken		Director
	4.14.8	The requirements of paragraph 4.14.2	Where the Operating Company undertakes Operations which were unforeseen at the time of the issue of the Operations Instruction and it considers that the series or items within the Schedule of Rates and Prices do not cover the scope of the unforeseen Operations	Within five Working Days of the Scheme Completion Date	Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	4.16.3(i) & (ii)	A new Bid and Scheme Identifier to the Director, using the Work Code 9902 and A revised Bid for the original Scheme created under the 9901 Activation	When the Director decides that any Scheme created under a 9901 Activation or any part of any such Scheme is no longer disputed and notifies the Operating Company accordingly		Director
	4.17.4 (i) (ii), (iii) & (iv)	(i) A revised Bid if any Scheme seems likely to exceed the Total Order Value of Scheme within the Financial Year (ii) Accompanied by a revised Bid for other Schemes within same Works Series to produce a matching saving (iii) A revised Bid if any Scheme seems likely to be less than the Total Order Value of Scheme within the Financial Year and (iv) Accompanied by a revised Bid for Operations where the unused budget may be used	Immediately		Director
	4.18	A revised Bid for the Scheme showing the increased Estimated Bid Value accompanied by a revised Bid for other Schemes within the same Work Series to produce a matching saving		Within two Working Days of having issued such authorisation	Director
	4.19.1	Electronic Copy and a paper copy of all original Works Contractor's payment applications and payment certification forms			Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	4.19.2	Supporting certificates			Director
	4..21.1	Carbon emissions report	Monthly and annually		Director
4,2 – Integrated Roads Information System	1.2.8	Maintenance data sheets in form provided at Annex 4.2/A and If appropriate, explanation of change form as per Annex 4.2/D		Within 28 Working Days of substantial completion of the related repair, replacement, change or Site investigation	Director
	2.3.1	Network change sheet	When necessitated by works by third parties, changes of geometric alignment or characteristics	At least 25 Working Days before the commencement of construction	Director
	2.3.1	Network error sheet	Where an error is identified		Director
	2.3.2	Scheme information to enable network referencing to be updated	During the update process		Director
4,3 Roadside Electrical Apparatus and Power Supplies	2.4.1	Energy inventory report	When requested		Director
4,4 Damage to Crown Property and Third Party Claims	2.3.3(i)	Completed third party claims notice form		Within five Working Days of being notified by the Director that Scottish Ministers are not indemnified	Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	2.3.3(ii)	Completed third party claims Operating Company report Form in the format shown in Annex 4.4/C		Within five Working days of being notified by the Director that Scottish Ministers are not indemnified	Director
	3.1.4	"Damage to Crown Property consolidated report" in format shown in Annex 5.4/D	Quarterly		Director
	3.3.2	Report of an "incidence of Damage to Crown Property" in the format shown in Annex 4.4/F		Within five Working Days of notification to Director that estimated cost of repair exceeds £10,000	Director
	3.6.6	"notification of the final valuation of repair of an incidence of Damage to Crown Property report" in the format shown in Annex 4.4/G		Within five Working Days of completing a Repair of Damage to Crown Property	Director
5,1 - Management System	6.1.3	Proposals to omit or replace audits	Annually	No later than 28 Working Days prior to commencement of Annual Period	Director
5,2 – Records Information and Communication Technology	1.2.1	Proposals for the Records referencing system for the Records contained within the Records Register		Not later than 30 days prior to the Commencement of Service Date	Director
	1.4.1(i), (ii) & (iii)	Details of policy and documented procedures to meet the requirements of the Freedom of Information Act (Scotland) 2002, the Scottish Public Sector Procurement and Freedom of Information Guidance issued in December 2004 by the Scottish Procurement Directorate and Environmental Information (Scotland) Regulations 2004, as amended		Not later than 30 days prior to the Commencement of Service Date	Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	1.5.2	Proposed storage facilities for Records		Not later than 30 days prior to the Commencement of Service Date	Director
	5.2.1	Proposed Information and Communication Technology System Management plan		Not later than 30 days prior to the Commencement of Service Date	Director
5,4 – The Operating Company's Representative, Core Management Team and Key Staff	1.4.3	Nominations for new Operating Company Representative or Core Management Team or Key Staff members	When necessary		Director
5,5 - Audits by the Performance Audit Group	1.4.8	Audit report	When necessary	Within 5 Working Days of audit completion	Director
5,6 - Performance Measurement	1.1.2	Information required for all Performance Indicators, Monitoring Indicators and Payment Adjustment Factors	No later than 5 Working Days after the end of the reporting period		Director, copied to PAG
5,7 – Operating Company Offices and Depots	1.6.1	Details of all Transport Scotland property available for use under this Contract		No later than 30 days before the end of the Mobilisation Period	Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	1.6.6	Inventory	When a new item has been provided, when any item has been stolen or damaged and when there has been a reduction in the quantity of items available		Director
5,8 – Environmental Sustainability and Waste	2.3.1	Report on feasibility of sourcing at least 10% of the materials required for the Scheme from recycled, secondary or re-used sources.	For all Works Contracts with a Bid Estimate of Value greater than £1,000,000		Director
	3.1.1	Report on sustainability aspects of all Operations and Works undertaken during each Annual Period	Annually	No later than 28 Working Days after the start of each Annual Period	Director
	3.1.3(i)	Report of carbon emissions for material usage in Schemes and for individual Schedule of Rate items within the one year Programme	Quarterly		Director
	3.1.3(ii)	Report of carbon emissions for material usage in Schemes and for individual Schedule of Rate items within the one year Programme	Annually	Included within the annual report required in 3.1.1	Director
	3.1.4	Total carbon emissions recorded in the Carbon Management System Road Infrastructure Projects Tool for each Works Contract		No later than 28 Working Days after completion of each Works Contract	Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
6,1 - Procurement & Management of Schemes	3.1.1	Nominations for Contract Administrators		No later than 30 days before the Commencement of Service Date of this Contract	Director
	3.1.2	Resubmitted nominations for Contract Administrators	Annually (or whenever a person consented to is unavailable to undertake the role, and whenever the Director requests the Operating Company to provide further nominations)	No later than 25 Working Days prior to the start of the second Annual Period and each subsequent Annual Period,	Director
	3.1.4	Names, qualifications & experience of individuals nominated as Contract Administrator(s) in accordance with & recommendations for which other Schemes they are suitable		For each Works Contract	Director
	3.1.5	Recommendations on form of contract	Prior to commencing any tender process	Prior to commencing any tender process	Director
	3.1.17	Finalised tender documents and model checklists as per Annex 6.1/A	Prior to issue of any tender documents & after completion of Design		PAG
	3.2.1(i), (ii) & (iii)	Recommendations on suitability of Works Contract, maintenance period and Works Contractor responsibilities	Prior to the preparation of each Works Contract		Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	3.2.3(iii)	Tender advertisement and prequalification questionnaire			Director
	5.2.3	Proposed templates for reporting when OC acts as Contract Administrator		No later than 30 days prior to the Commencement of Service Date	Director
	5.2.5	Standard forms Certificate of Payment CC1A, CCII and CCIII as shown in Annex 6.1/C	With each payment request or monthly valuation		Director
	5.2.5	Form CCIII for each Scheme	Quarterly intervals		Director
	5.2.6	Lane rental monitoring form	Each Lane Rental Contract	Within 25 Working Days of issuing Certificate of Completion	Director & PAG
	5.4.2	The monthly statement and forms CCIA, CCII and CCIII		No later than 10 Working Days before the contractual payment due date	Director & PAG
	5.5.2	Amended as built records	When any works are undertaken after issue of the Works Contract Completion Certificate	No later than 10 Working Days prior to issue of the Maintenance Certificate	Director
6,2 – CDM Regulations	1.2.1	Report on suitability of a company for appointment as Principal Contractor	Prior to award of a Works Contract		Director
	1.2.2	Report summarising checks on the competence, suitability and appropriateness of resources in organisations being considered for appointment as designer(s) or contractor(s)	When required		Director
	1.2.7	Upload files and other records required by the CDM Regulations into the Integrated Roads Information System.	When required	As indicated in paragraph 1.2.7	Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
6,3 -Road Safety Audits	3.1.2	Road safety audit report	When necessary	Within 5 Working Days of audit being undertaken	Director
	3.1.4	Exception report	When necessary		Director
	3.1.5	Audit brief	When necessary		Director
	3.5.3	Stage 4 road safety audit report	When necessary		Director
	5.1.1	Road safety audit certificate		Within 5 Working Days of audit being undertaken	Director
6,4 - Design & Certification of Operations & Works	2.1.1	Design brief	For each Scheme		Director
	2.2.12	The required road orders, plans, schedules, environmental impact assessments and environmental statements	Where the Design of any Scheme requires new road orders, variations to existing road orders, environmental impact assessments and subsequent environmental statements		Director
	3.1.2	Certification to cover the Design element(s)	Where the OC executes a Design		Director
	3.1.4	A Design proposal on form TA1	Prior to the OC commencing Design for Structures		Director
	3.2.1	The name of the independent Checker	Prior to executing any Design checks		Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	3.3.4	Draft Design brief	Prior to an Order being issued and when requested		Director
	3.3.5	The name of the independent Checker	Prior to executing any Design checks for the earthworks		Director
7,1 - Management, Inspection & Maintenance	4.3.4	Report on performance of Undertakers with regard to Category 1 Defects	Annually	Within 25 Working Days of the end of each Annual Period	Director
	4.14.2	Recommendations regarding remedial action	When necessary		Director
	4.17.3	Report on the condition of mature woodland areas and trees and any recommended actions		Within 25 Working Days of the inspections of each area or individual tree	Attach to relevant inspection record in IRIS
	4.28.19	In-Service Report form as detailed in <i>Local Transport Note 1/98, Appendix B</i>	At intervals not exceeding five years and on approximately 20 percent of the network each Annual Period		Attach to relevant inspection record in IRIS
	4.28.19	Method statement for electrical testing		Within 25 Working Days of Commencement of Service Date	Director
	4.28.20	Procedural manual for the undertaking of operational reviews		No later than 25 Working Days after the Commencement of Service Date	Director
	4.28.23	Performance report	Annually	On completion of annual operational review	Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	4.29.25	Periodic testing & inspection certification	Quarterly	The end of each quarter	Relevant authority
	4.34.9	When the local authority does not carry out its statutory duties	When necessary	Within 25 Working Days of becoming aware	Director
	4.39.5	Flooding report in accordance with form shown in Annex 7.1/D	Each flooding incident	Within four days	Director
7,2 - Winter Service	1.2.6	Winter Service Plan for the period from commencement of Service Date to midnight on 15 May in the first Annual Period		Not later than 30 days prior to commencement of Service Date	Director
	1.2.7	Winter Service Plan for forthcoming Winter Service Period	Annually	Prior to 31 July	Director
	1.3.2	Salt stock monitoring reports	Monthly	First Working Day	Director
	1.3.3	Winter Service Report on the Winter Service Plan and Winter Service Operations for the previous Winter Service Period	Annually	No later than 31 May in each Annual Period	Director & PAG
	1.3.4	Winter Service Report	First Annual Period	Prior to 31 May	Director
	1.3.8	Winter Service Plan and Winter Service Report for the final Winter Service Period	Final Annual Period		Director
	1.3.9	Planned and actual treatments reports	Daily	By 15:00 hours	Upload to Traffic Scotland website
	1.3.10	Winter Service Operations report	Daily	By 15:00 hours	Upload to Traffic Scotland website

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	2.1.2	Proposed computerised road weather information system		No later than 30 days prior to the end of the Mobilisation Period	Director
	2.6.1	Severe Weather report	When necessary		Traffic Scotland operator
	2.6.2	Proposed Operations	When Winter Service Operations are planned		Organisations listed in paragraph 2.6.1
	2.7.5(vii)	Reports in the format indicated in Table 7.2.I.3 of Appendix WSP1 to Annex 7.2/I	Daily		Director
	2.10.6	Report on snow gate closures	Within 12 hours of snow gates being closed due to snow or other adverse weather		Director
	2.11.2	Recommendations in writing regarding snow fences, shelter belts and snow poles	First Annual Period		Director
	4.1.7 (ii)	Details of the Winter Service Plant supplier's calibration method	September and January of each Annual Period		Director
	Annex 7.1/A 7.1.2	Winter Service Patrol Report in accordance with Appendix WSP1 to Annex 7.2/J	On completion of each Patrol		Director
7,3 - Incident Response	3.1.1(iii)	Statements of Intent request	In accordance with the Manual for the Management of the Risk of Unplanned Network Disruption		Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	3.2.2	Draft Disruption Risk Management Plan		No less than 30 days prior to the Commencement of Service Date	Director
	3.2.3	Updated Disruption Risk Management Plan	Intervals not exceeding 12 months		Director
	4.1.1	Incident Response Plan		No less than 30 days prior to the Commencement of Service Date	Director
	4.4.2	One Electronic Copy and one controlled paper copy of the current Incident Response Plan			Operational Partners
	4.5.1	Updated Incident Response Plan	Intervals not exceeding three months		Director
	4.5.3	Incident Response Plan	Annual	No later than 10 Working Days prior to the end of each Annual Period	Director
	4.8.1	Contact details of Incident Liaison Officers			Director
	4.9.2	Rotas of trained operatives		Not later than 30 days prior to Commencements of Service Date and at least 10 Working Days prior to 1 April and 1 October in each subsequent Annual Period	Director & Operational Partners

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	5.3.4(iii)	Final documentation	Where the Operating Company undertakes a review of any Standard Incident Diversion Route to identify changes or potential improvements		Director
	7.5.2	Incident Support Units plan	As part of the Incident Response Plan	At intervals not exceeding 3 months	Director
	10.3.2	Detailed report of the fatal Incident using Part 1 of the fatal accident notification Form in Annex 7.3/D		Within 24 hours of Incident	Appropriate Director's staff
	10.3.3	Detailed report using Part 2 of the fatal accident notification form in Annex 7.3/D		Within five Working Days of the site visit having been carried out	Director
	11.1.2	Annual report reviewing the impact of Incidents on the Unit for the previous Annual Period		No later than 25 Working Days after the commencement of each Annual Period	Director
7,4 - Landscape Development Process and Deliverables	1.4.5	Report proposing changes to maintenance requirements for landscapes areas	When necessary		Director
	1.5.4	Programme for landscape Schemes & interventions	When requested		Director
	1.6.1	Landscape management report	Annual	No later than 25 Working Days before the end of each Annual Period	Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
7,5 – NRSWA 1991	6.1.3	Report recommending changes to associated data held in the Scottish Road Works Register		No later than 60 Working Days after the Commencement of Service Date and at quarterly intervals thereafter	Director
	7.1.8	Proposals for a coring programme to assist the national coring programme and a final report on each annual programme	Annually		Director
	8.1.1(v)	Reporting Undertaker's work when (a) progress is not in accordance with the programme, or (b) work is not being carried out in accordance with the designs and specifications consented to by the Director	When necessary		Director
	10.1.2	Recommendations on the liaison arrangements required between itself, other Operating Companies and agencies of the Scottish Government to deliver the requirement of the <i>New Roads and Streetworks Act 1991</i>		Not later than 30 days prior to the Commencement of Service Date	Director
	10.1.3 (i) and (ii)	Common Monitoring Indicators for Undertakers' works and Common Performance Indicators for the Operating Company's own works		Not later than 30 days prior to the Commencement of Service Date	Director
	10.1.5	Monitoring information and performance assessment reports	Quarterly and Annually		Director
	10.1.8	Report on the performance of the Operating Company against the Scottish Road Works Commissionaire's indicators	Annually	Not later than 50 Working Days after the end of each Annual Period	Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	10.1.10	Report of the amounts due from each Undertaker during the preceding three month period, together with any necessary information to support the reason for the fees, charges and penalties	Quarterly, commencing 75 Working Days after the start of the first Annual Period and thereafter throughout the duration of this Contract		Director
7,6 - Management and Maintenance of Structures	2.3.2	Maintenance schedule		No later than 25 Working Days prior to the commencement of the first Annual Period and all subsequent Annual Periods	Director
	2.4.1	Report on annual review of maintenance and operations manuals and health and safety files for Structures	Annually	Within 3 days of completion of review	Director
	2.4.3	New and amended as-built records		No later than 15 Working Days after completion of any works to new or existing Structures by the Operating Company or by a Works Contractor	Director
	3.2.2	Report on all random and reactive Structures Safety Inspections	Monthly		Director's bridges manager
	3.2.2	Programme	Annually	Prior to commencing General Inspections each year	Director & PAG
	5.1.4	Recommendations for structural maintenance Operations	Annually		Director
	5.4.1	Output from value management prioritisation	In accordance with		Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
			dates stated in S4P1		
	7.2.5	Recommendations relating to sub-standard Structures	Annually		Director
	9.1.1	Approval in principle forms and applications for departures from standards	When necessary		Director
7,7 - Structures with Particular Requirements	1.1.6	Inspection report	In the calendar year following the annual inspections of each Structure	By 31 January	Director
	1.1.7	Principal Inspection report	Every six years	By 30 November of the year in which the Principal Inspection cycle becomes due	Director
7,8 - Severe Weather Services	2.2.4	Details of its proposed expert weather forecasting service for Severe Weather events	No later than 30 days prior to the Commencement of Service Date		Director
	3.1.2	Severe Weather management plans at new Disruption Risk Sites	Subject to an Order		Director
	3.2.6	Proposed revisions to wind management plans	When necessary and as part of the Incident Response Plan required by S7P3		Director
	3.3.4	Proposed revisions to flood management plans	When necessary and as part of the Incident Response Plan required by S7P3		Director

Schedule, Part and Title	Paragraph	Description	Frequency	Day or Date [and time]	Issue to the Recipients listed
	3.4.4	Proposed revisions to landslide management plans	When necessary and as part of the Incident Response Plan required by S7P3		Director
8,2 - Development Management	1.4.2(vii)	Planning application inspection report	When necessary		Director
8,3 -Road Safety and Accident Investigation and Prevention	2.1.1	Route Safety File	Annually	15 November	Director
	3.1.2	Annual Road Safety Review Report	Annually	15 August	Director
8,4 – Signs Requiring Authorisation	1.1.1	Advice and recommendations	When necessary		Director
	1.2.4	A copy of the signed letter of agreement duly completed by the applicant	When necessary		Director
	1.6.4	Assessment and report as per <i>Signposting of Truckstop Facilities from Motorways and other Trunk Roads - Policy and Guidance</i> and other associated documentation	When necessary		Director

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 4

OPERATING COMPANY'S REPRESENTATIVE, CORE MANAGEMENT TEAM AND KEY STAFF

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 4

OPERATING COMPANY'S REPRESENTATIVE, CORE MANAGEMENT TEAM AND KEY STAFF

1. OPERATING COMPANY'S REPRESENTATIVE, CORE MANAGEMENT TEAM AND KEY STAFF

1.1 General

- 1.1.1 The resources identified in this Part are the minimum requirements and shall not be construed as representing all resources required by the Operating Company to fulfil its obligations under this Contract.
- 1.1.2 The Operating Company shall ensure that adequate cover is provided for all staff during absences including annual or public holidays and sickness periods.

1.2 Operating Company's Representative and Core Management Team

- 1.2.1 The Operating Company's Representative and Core Management Team shall be full-time permanent staff employed by and solely for the Operating Company to work on the Unit and shall act independently of other organisations who may have an interest in the Operating Company. The Operating Company's Representative and the Core Management Team shall be located in the Central Office.
- 1.2.2 The role of the Operating Company's Representative is stated in Schedule 1 Part 1.
- 1.2.3 The Operating Company's Representative and the Core Management Team shall be the persons named in Table 5.4.1 in Annex 5.4/A of this Part and shall fulfil the requirements of the role profiles listed in Annex 5.4/B of this Part.
- 1.2.4 The Core Management Team shall assist the Operating Company's Representative in securing the execution of all Operations required by this Contract. The Core Management Team shall undertake the roles relating to:
- (i) network management and maintenance,
 - (ii) Operations management and maintenance,
 - (iii) Structures management and maintenance,
 - (iv) Scheme development and delivery,
 - (v) Management System management, and
 - (vi) business management,
- as stated in Annex 5.4/B of this Part.
- 1.2.5 The Operating Company's Representative shall not undertake any Professional Services duties.
- 1.2.6 Members of the Core Management Team may, in addition to their Core Management Team roles, undertake Professional Services duties. Members of the Core Management Team shall not be paid for undertaking Professional Services and the Operating Company shall not charge Professional Services rates where such utilisation occurs.

1.2.7 The Operating Company shall propose any members of the Core Management Team who it intends to undertake Professional Services duties to the Director for his written consent prior to undertaking such duties.

1.3 Key Staff

1.3.1 The Operating Company's Key Staff shall be those persons named in Table 5.4.2 in Annex 5.4/A of this Part. The Operating Company's Key Staff shall fulfil the requirements of the role profiles listed in Annex 5.4/B of this Part.

1.3.2 Key Staff may, in addition to their Key Staff roles, undertake Professional Services duties. Key Staff shall not be paid for undertaking Professional Services and the Operating Company shall not charge Professional Services rates where such utilisation occurs.

1.3.3 The Operating Company shall propose any Key Staff who it intends to undertake Professional Services duties to the Director for his written consent prior to undertaking such duties.

1.4 Resource Management Arrangements

1.4.1 The Operating Company's organogram detailing management arrangements and responsibilities shall be as referred to in Annex 5.4/A of this Part and contain as a minimum the following requirements:

- (i) the Operating Company's Representative,
- (ii) the Core Management Team,
- (iii) the Key Staff,
- (iv) any other staff paid at professional rates in accordance with Schedule 2 Part 2,
- (v) administrative staff including those responsible for invoicing and payment,
- (vi) labour resources, and
- (vii) staffing arrangements including reporting lines to the Operating Company's head office.

The Operating Company shall state whether each role identified is full-time or part-time and whether each role is to be undertaken on a full-time or part-time basis by the identified staff.

1.4.2 Where the Operating Company intends that a member of the Core Management Team or Key Staff shall undertake more than one Core Management Team or Key Staff role, it shall make such proposals in writing to the Director for his prior consent. No individual shall be nominated to fulfil more than one full time role.

1.4.3 Changes to the Operating Company's Representative, Core Management Team, Key Staff and resources organogram shall not be permitted without the prior written consent of the Director. The Operating Company shall submit details of any proposed change in writing to the Director. Within 10 Working Days of receipt, the Director shall:

- (i) consent to or object to the proposed appointment in writing, or
- (ii) request in writing an interview with the proposed substitute.

If the Director decides to interview the proposed substitute, he shall consent or object to the proposed appointment in writing within 10 Working Days of the interview having taken place.

If the Director objects to the proposed appointment, the Operating Company shall repeat the above process with further candidates until the Director has consented to the proposed appointment in writing.

- 1.4.4 The Director may reject any proposed substitute whose qualifications or experience are, in his opinion, insufficient to give assurance that the substitute will be able to deliver the key responsibilities of the role as stated in Annex 5.4/B of this Part.

This is Annex 5.4/A to Schedule 5 Part 4 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 4

OPERATING COMPANY'S REPRESENTATIVE, CORE MANAGEMENT TEAM AND KEY STAFF

ANNEX 5.4/A – The Operating Company's Representative, Core Management Team and Key Staff

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 4

OPERATING COMPANY'S REPRESENTATIVE, CORE MANAGEMENT TEAM AND KEY STAFF

ANNEX 5.4/A – The Operating Company's Representative, Core Management Team and Key Staff

Tenderers shall fill in the relevant positions with names, titles and details requested. Tenderers may identify additional Core Management Team and Key Staff roles.

1. The Operating Company's Core Management Team shall be:

Table 5.4.1 – Operating Company's Core Management Team

COMMERCIALY SENSITIVE INFORMATION REDACTED

Core Management Team		
POST TITLE	POST HOLDER	
	NAME	CV Ref.

3. The Operating Company's Staff Structure

3.1 Detailed Staff Structure

The Operating Company's resources anagram shall be:

COMMERCIALY SENSITIVE INFORMATION REDACTED

3.2 Curricula Vitae for the Operating Company's Representative, the Core Management Team and the Key Staff

COMMERCIALY SENSITIVE INFORMATION REDACTED

This is Annex 5.4/B to Schedule 5 Part 4 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 4

OPERATING COMPANY'S REPRESENTATIVE, CORE MANAGEMENT TEAM AND KEY STAFF

ANNEX 5.4/B – Role Profiles for the Core Management Team and Key Staff

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 4

OPERATING COMPANY'S REPRESENTATIVE, CORE MANAGEMENT TEAM AND KEY STAFF

ANNEX 5.4/B – Role Profiles for the Core Management Team and Key Staff

For roles requiring professional qualifications, a non-UK professional qualification awarded by an appropriate engineering institution which in the opinion of the UK Engineering Council is Chartered Engineer equivalent, may be acceptable to the Scottish Ministers. For non-engineering professional qualifications, evidence of UK equivalence must be provided.

A non-UK academic qualification in an appropriate discipline which is acknowledged by UK academic institutions to be of equivalent standing may also be acceptable to the Scottish Ministers. Where non-UK qualifications are proposed, evidence of UK equivalence must be provided. Where a degree in an appropriate discipline is specified, either Masters, Honours or Ordinary level is acceptable.

Tenderers may identify additional Core Management Team and Key Staff roles.

Core Management Team Role Profiles

Role: Operating Company's Representative	Please refer to Schedule 1 Part 1.
Qualifications and Experience	<p>The Operating Company's Representative shall be a professional manager with a strong engineering background gained in a civil engineering or construction related environment. Operating at senior or board level, the Operating Company Representative shall possess a demonstrable track record in running and controlling all aspects of a successful business.</p> <p>The Operating Company's Representative shall be a Chartered Engineer as awarded by an appropriate UK engineering institution including the Institution of Civil Engineers, the Institution of Structural Engineers, the Institute of Highway Engineers and the Chartered Institution of Highways and Transportation.</p> <p>It is unlikely that anyone with less than 15 years' experience relevant to the position and performance of the role will meet the requirements for this post.</p>
Key Responsibilities	Please refer to Schedule 1 Part 1.

Role: Bridges Manager	The Bridges Manager is responsible for ensuring the delivery of the management and maintenance of Structures within the Unit.
Qualifications and Experience	<p>Degree in an appropriate engineering discipline and a corporate member of an engineering institution.</p> <p>Chartered Engineer as awarded by an appropriate UK engineering institution including the Institution of Civil Engineers, the Institution of Structural Engineers, the Institute of Highway Engineers or the Chartered Institution of Highways and Transportation.</p> <p>It is unlikely that anyone with less than 15 years' experience relevant to the position and performance of the role will meet the requirements for this post.</p>
<p>Key Responsibilities:</p> <ul style="list-style-type: none"> • Support the Operating Company's Representative to ensure delivery of all of the Director's requirements. • Ensure compliance at all times with the Operating Company's Management Systems. • Updating of the Director's management systems for Structures including the Structures Management System database. • Updating the Operating Company's maintenance schedule, maintenance and Operations manuals, Health and Safety Files, as-built records and sub-standard Structures proformas. • Review of documents and other items relating to the Operating Company's structural maintenance programme in accordance with the requirements of Schedule 7 Part 6. • Delivery of all the Structures programmes on time and within budget for all Structures inspections, Operations and Schemes whilst meeting the quality requirements of the Operating Company's Management System. • The preparation and design of all Structures schemes undertaken by, or on behalf of, the Operating Company as set out in Schedule 6 Part 4. • Delivery of accurate Bid Estimate of Costs for Structures and delivery of their proposed programmes with realistic budgets and/or Bids in accordance with the requirements of Schedule 4 Part 1. • Liaison with the Network Manager and Journey Time Reliability Coordinator to ensure traffic disruption caused by Structures Schemes is minimised. • Liaison with the Senior Planned Maintenance Manager to ensure any requirements relating to Structures are taken into account when undertaking planned structural maintenance Schemes. • Liaison with the Senior Operations Manager to ensure any Network Operations and maintenance requirements are taken into account during planning and delivery of Structures Schemes. • Ensure the health, safety and welfare of all staff involved with Structures Schemes. • Minimising the environmental impacts of Structures Schemes. 	

<p>Role: Business Manager</p>	<p>The Business Manager shall be responsible for the financial and commercial management of the Unit including budget forecasting, budget management, reporting of variances and the provision of timely and accurate invoices in accordance with the self certification procedures.</p> <p>In addition, the Business Manager will be responsible for Information and Communication Technology systems overall, but not for the operations of those systems.</p>
<p>Qualifications and Experience</p>	<p>Degree in Financial or Commercial Management or other relevant business related discipline or an appropriate professional qualification, including CA and ACCA.</p> <p>It is unlikely that anyone with less than 10 years' experience relevant to the provision and performance on the role will meet the requirements for this post.</p>
<p>Key Responsibilities:</p> <ul style="list-style-type: none"> • Support the Operating Company's Representative in securing the execution of all of Operations in accordance with this Contract. • Ensuring compliance at all times with the Operating Company's Management System. • Financial and business planning for the Unit to meet the Director's objectives. • Support to the Operating Company's Representative through the provision of robust budget planning and management for all activities undertaken. • Provision of accurate expenditure forecasts to the Director. • Provision of accurate and timely invoices, with supporting substantiation as required, to the Director. • Ensuring prompt payment to sub-contractors. • To be the key contact within the Operating Company on all issues relating to Information Communication Technology. 	

<p>Role: Design Manager</p>	<p>The Design Manager has overall responsibility for the coordination of the preparation, checking and approval of Design in relation to roads and Structures within the Unit. The Design Manager is responsible for appointing staff from within the Professional Services register to undertake Design duties according to the discipline, competence, experience and qualifications required.</p> <p>The Design Manager will assign individuals undertaking Design duties to Schemes or Works Contracts on the basis of their competence and experience and not as a general appointment for all Schemes or Works Contracts delivered under this Contract.</p>
<p>Qualifications and Experience</p>	<p>Degree in appropriate engineering discipline or corporate member of an engineering institution.</p> <p>Chartered Engineer as awarded by an appropriate UK engineering institution including the Institution of Civil Engineers, the Institution of Structural Engineers, the Institute of Highway Engineers and the Chartered Institution of Highways and Transportation.</p> <p>It is unlikely that anyone with less than 15 years' experience relevant to the provision and performance of the role will meet the requirements of the post.</p>
<p>Key Tasks:</p>	
(i)	Liaison with the Operating Company's Core Management Team as appropriate.
(ii)	Being the primary contact within the Operating Company for all matters relating to Design.
(iii)	Ensuring that the Design Certificates required in accordance with Schedule 6 Part 4 are signed by an appropriately competent, qualified and experienced member of the Professional Services staff.
(iv)	Ensuring that Operations for which the Operating Company has undertaken or instructed the Design have been constructed and completed in accordance with this Contract.
(v)	Ensuring Professional Services staff liaise with the CDM Coordinator regarding ongoing Designs on all notifiable projects in addition to checking that the Client is aware of its duties.
(vi)	Ensuring Professional Services staff attend Design meetings arranged by the Director as and when required and liaise with other Professional Services staff undertaking Design duties and Checkers as appropriate during the Design phase of any Operations.
(vii)	Ensuring that the Operating Company Site Operations in relation to Design are supervised by an appropriate member of the Professional Services staff.

Role: Management System Manager	The Management System Manager is responsible for the effectiveness of all elements of the Management System including the Quality Plan.
Qualifications and Experience	<p>Degree in an engineering or science discipline or hold an appropriate professional qualification, including Chartered Engineer, corporate member or chartered member of the Institute of Quality Assurance.</p> <p>It is unlikely that anyone with less than 10 years' experience relevant to the provision and performance of the role will meet the requirements of this post.</p>
<p>Key Responsibilities:</p> <ul style="list-style-type: none"> • Responsible for achieving accreditation of the Management System within one year of the Commencement of Service. • Responsible for ensuring correction of Non-Conformances, preventing the continuance of Non-Conformances and investigating the root causes of Non-Conformances. • Acts upon reports from the Director or the Performance Audit Group on the Operating Company's performance and initiates all necessary actions, including procedural changes, required to prevent the recurrence of any Non-conformances. • Responsible for integrating corrective and other actions into the Management System including the Quality Plan and into the Operating Company's documented control management and working procedures, including method statements. • Responsible for the planning and undertaking of internal audits. • Attends meetings with and reports to the Director on the effectiveness of the Management System. • Responsible for reporting on the effectiveness of the Management System in the Operating Company's monthly and annual reports. 	

Role: Network Manager	The Network Manager is responsible for the management of all activities undertaken or occurring on or near the Trunk Road network within the Unit and supporting Transport Scotland's in delivery of its Corporate Plan priority of "Better journey times, better reliability" and the safety of its customers.
Qualifications and Experience	<p>Degree in an appropriate engineering discipline or corporate membership of an appropriate engineering institution including the Institution of Civil Engineers, the Institution of Structural Engineers, the Institute of Highway Engineers and the Chartered Institution of Highways and Transportation.</p> <p>It is unlikely that anyone with less than seven years' experience relevant to the provision and performance of the role will meet the requirements of this post.</p>
<p>Key Responsibilities:</p> <ul style="list-style-type: none"> • Supporting the Operating Company's Representative in securing execution of all Operations required by this Contract including duties and responsibilities in relation to the <i>Traffic Management Act, Transport Act (Scotland) 2005 and the New Roads and Streetworks Act 1991</i>. • Ensuring all activities undertaken on the Trunk Road network comply at all times with the Operating Company's Management System. • Ensuring the resilience of the Trunk Road network during the Contract Period. • Overall management of the delivery of the Operating Company's Incident Response Operations within the Unit including management of Incident Liaison Officer and Journey Time Reliability Coordinator personnel. • Management and use of information and communications technology within the Unit to support the provision of information to Transport Scotland's customers. • Liaison and coordination with the Core Management Team during the planning phases of all activities to minimise their impacts on Transport Scotland's customers. • Ensuring adequate liaison and coordination with all Operational Partners on all matters relating to planned works to be undertaken on or near to the Trunk Road network. • Appointing appropriate support personnel to assist in delivery of Incident Response Operations and the planning and implementation of roadworks. • Liaising with the Media & Communications Officer on: <ul style="list-style-type: none"> (i) press or ministerial communications relating to activities that affect road users including major roadworks, Incidents and Severe Weather Events, and (ii) any activities that may lead to adverse publicity or adverse consequences for Transport Scotland's customers. • Managing the recovery of costs in relation to Damage to Crown Property. 	

Role: Operations Manager	The Operations Manager shall be responsible for all day to day operational activities within the Unit covering maintenance and Winter Service.
Qualifications and Experience	It is unlikely that anyone with less than seven years' experience relevant to the provision and performance of the role will meet the requirements for this post.
<p>Key Responsibilities:</p> <ul style="list-style-type: none"> • Supporting the Operating Company's Representative in securing the execution of all Operations in accordance with the requirements of this Contract. • Ensuring compliance at all times with the Operating Company's Management System. • The successful delivery of maintenance and Winter Service requirements on the Trunk Road network throughout the Unit. • Ensuring the continual updating of accurate network inventory data in the Director's systems. • The identification of potential Schemes within the Unit. • Liaison with other Core Management Team members to ensure all maintenance and Winter Service activities are undertaken to minimise the effects of congestion to road users and where suitable, coordinating works to enable maintenance activities to be undertaken within the boundaries of a Scheme to reduce the number of traffic management interventions on the network. • Ensuring the health, safety and welfare of all staff involved with Operations. • Minimising the environmental impacts of Operations. 	

<p>Role: Planned Maintenance Manager</p>	<p>The Planned Maintenance Manager shall be responsible for the planning, design and execution of all planned maintenance schemes (excluding Structures) within the Unit.</p>
<p>Qualifications and Experience</p>	<p>Degree in an appropriate engineering discipline or corporate membership of appropriate engineering institution including the Institution of Civil Engineers, the Institution of Structural Engineers, the Institute of Highway Engineers and the Chartered Institution of Highways and Transportation.</p> <p>It is unlikely that anyone with less seven years' experience relevant to the provision and performance of the role will meet the requirements of the post.</p>
<p>Key Responsibilities:</p> <ul style="list-style-type: none"> • Support the Operating Company's Representative in securing the execution of all of Operations in accordance with this Contract. • Ensuring compliance at all times with the Operating Company's management system. • The successful delivery of the programme and budget preparation process for all schemes. • The design of all planned maintenance Schemes undertaken by, or on behalf of, the Operating Company. • The successful delivery of all planned maintenance Schemes within time and budget whilst meeting the quality requirements. • Liaison with Network Management personnel to ensure each planned maintenance Scheme minimises the effects of congestion to road users. • Liaison with the Bridges Manager to ensure any requirements relating to Structures are adhered to as part of each planned maintenance Scheme. • Liaison with the Operations Manager and Journey Time Reliability Coordinator to ensure any requirements relating to maintenance and Winter Service, including access to the Site, are taken into account during the planning and delivery of each planned maintenance scheme. • Ensuring the health, safety and welfare of all staff involved with planned maintenance Schemes. • Minimising the environmental impacts of planned maintenance schemes. • Ensuring duties referred to in Schedule 3 Part 7 with respect to Traffic Scotland Equipment are undertaken. 	

Key Staff Role Profiles

Role: Abnormal Load Routing Manager	The Abnormal Load Routing Manager is responsible for managing all aspects relating to the movement of abnormal indivisible loads and abnormal vehicles within the Unit.
Qualifications and Experience	Chartered member of the Institution of Civil Engineers, the Institution of Structural Engineers, the Institute of Highway Engineers or the Chartered Institution of Highways and Transportation. It is unlikely that anyone with less than ten years' experience relevant to the provision and performance of the role will meet the requirements of the post.
Key Tasks: in accordance with the requirements of Schedule 8 Part 1:	
(i)	Respond directly to particular correspondence and enquiries from statutory undertakers, stakeholders and users of the Trunk Road network seeking advice on the movement of abnormal indivisible loads and abnormal vehicles within the Unit.
(ii)	Provide a routing and coordination service for hauliers and industry for proposed movements of abnormal indivisible loads and abnormal vehicles within the geographical area of the Unit.
(iii)	Undertake route assessments using the Director's Structures Management System to identify Structures that may be affected by the proposed movement of abnormal indivisible loads and, where necessary, advise on alternative routes.
(iv)	Liaise with the Unit's Bridge and Operations Managers and Journey Time Reliability Coordinators to ensure all aspects of any requirements relating to planned maintenance activities are identified and taken into account in route selection.
(v)	Inform the Director in a timely manner of all proposed and agreed movements within the Unit and of any incidents resulting from such movements.
(vi)	Maintain and adhere to the documented procedures for the effective management of abnormal indivisible load routing within the Operating Company's Management System, including its Quality Plan.

<p>Role: Client's Representative</p>	<p>The Client's Representative will ensure that the Operating Company fully undertakes the client's duties under the CDM Regulations and will be responsible for coordinating these duties and reporting status and progress on all projects to Transport Scotland with regards to compliance with the CDM Regulations.</p> <p>The Client's Representative will be responsible for the appointment of other duty holders under the CDM Regulations.</p> <p>Note: There will be a general requirement that the Client's Representative will be appointed on the basis of their skill, experience, knowledge and resource.</p>
<p>Qualifications and Experience</p>	<ul style="list-style-type: none"> • Chartered membership of the Institution of Civil Engineers, the Institution of Structural Engineers, the Institute of Highway Engineers or the Chartered Institution of Highways and Transportation and/or a relevant, recognised Health and Safety qualification such as IOSH ('Technical' membership as a minimum). • Demonstrable composite knowledge of health and safety in construction and relevant legislation. • Experience of significant work with comparable hazards and complexity, relevant to the duties to be undertaken.
<p>Key Tasks: In accordance with the requirements of Schedule 6 Part 2:</p>	
<p>(i)</p>	<p>Report monthly (or other such frequency as agreed with the Director) to the client on the activities being undertaken and the progress of the Schemes being undertaken. The report will be in a format agreed with the Director.</p>
<p>(ii)</p>	<p>Ensure Schemes are notified to the enforcing authorities as required by the CDM Regulations.</p>
<p>(iii)</p>	<p>Ensure that the client's duties are undertaken in order to comply with the CDM Regulations.</p>
<p>(iv)</p>	<p>Ensure that the Operating Company has put in place suitable arrangements for the implementation and coordination of health and safety measures during planning and preparation for the construction phase of Schemes, including facilitating:</p> <p>cooperation of duty holders and coordination of activities in accordance with the CDM Regulations</p> <ul style="list-style-type: none"> • the application of the general principles of prevention in accordance with the CDM Regulations
<p>(v)</p>	<p>Ensure liaison with all duty holders under the CDM Regulations regarding:</p> <ul style="list-style-type: none"> • the contents of health and safety files, • the information which the Principal Contractor needs to prepare construction phase plans, and • coordination by the Principal Designer of any design development that

	may affect planning and management of Operations and Works Contracts.
(vi)	Ensure the provision of pre-construction information to every person designing and every contractor appointed by the Operating Company.

Role: Correspondence Officer	The Correspondence Officer is the main contact within the Operating Company for all correspondence, enquiries and complaints relating to the Unit.
Qualifications	<p>Drafting skills, experience of writing correspondence for public consumption, an appreciation of plain English, the ability to understand the audience for whom the reply is intended and the ability to draft correspondence on behalf both the Operating Company, Transport Scotland and the Scottish Ministers.</p> <p>It is unlikely that anyone with less than two years' experience relevant to the provision and performance of the role will meet the requirements of the post.</p>
Key Tasks: In accordance with the requirements of Schedule 3 Part 5:	
(i)	Provide draft responses and briefing material to the Director to general, Transport Scotland Chief Executive and Ministerial correspondence in respect of any matter requiring input relevant to the Operating Company or this Contract.
(ii)	Provide briefing notes and draft responses related to the topics raised in written or oral Parliamentary questions from Members of the Scottish Parliament, Members of the United Kingdom Parliament, Members of the European Parliament and local authority councillors to allow the Director to develop a suitable response for the Minister to issue.
(iii)	Provide information and relevant data to the Director to allow the development of a response by either the Director or the Scottish Minister to requests received under the Freedom of Information (Scotland) Act 2002 and the Information (Scotland) Regulations 2004.
(iv)	Respond directly to particular correspondence, enquiries and complaints received from any source as detailed in Schedule 3 Part 5.
(v)	Maintain an electronic register of all communications it receives and the replies thereto relating to the Unit or to this Contract.

Role: Gantry Manager	<p>The Gantry Manager has overall responsibility for the supervision of use and inspections, testing, maintenance and operation of Access Systems within their unit, in addition to ensuring their compliance with current regulations and standards. The Gantry Manager shall report to the Bridges Manager.</p> <p>This role may be combined with the Major Bridges Manager.</p>
Qualifications and Experience	<p>Chartered Structural or Civil Engineer.</p> <p>It is unlikely that anyone with less than five years' experience relevant to the provision and performance of the role will meet the requirements of the post.</p> <p>Details of any relevant qualifications and/or professional institution membership and any other specific qualifications such as such as the Institution of Civil Engineers are required.</p>
Key Tasks: In accordance with the requirements of Schedule 7 Part 6:	
(i)	Control gantry operations.
(ii)	Ensure that operations and maintenance manuals are reviewed at regular intervals and kept up to date.
(iii)	Ensure that the design, installation and required certification for any temporary Access System is in place prior to use and that elements supporting such Access Systems have been assessed and certified.
(iv)	Ensure Access Systems comply with current standards.
(v)	Fulfil the requirements under the Construction (Design and Management) Regulations with respect to Access Systems including direct liaison with the CDM Coordinator to ensure Health and Safety Plans for Access Systems are prepared.
(vi)	Maintain the Health and Safety File and all documents and certificates therein relating to Access Systems.
(vii)	Ensure management and emergency procedures in relation to Access systems are in place and kept up to date.

Role: Incident Liaison Officers	The Incident Liaison Officer supports the Network Manager in the delivery of the Operating Company's Incident Response Operations and is responsible for providing an effective response appropriate to each Incident occurring on or near the Trunk Road network on a 24 hours a day, seven days a week basis.
Qualifications and Experience	It is unlikely that anyone with less than five years' experience relevant to the provision and performance of the role will meet the requirements of the post.
Key Tasks: in accordance with the requirements of Schedule 7 Part 3:	
(i)	Being the first point of contact within the Operating Company for all Incidents occurring on or near the Trunk Road network during Normal Working Hours and outwith Normal Working Hours.
(ii)	Managing the delivery of the Incident Support Units' requirements.
(iii)	Mobilisation of Incident Response resources.
(iv)	Ensuring Standard Incident Diversion Routes are kept updated at all times and activates Standard Incident Diversion Routes in response to Incidents.
(v)	Implementing contact arrangements with Operational Partners during the occurrence of an Incident and ensures prompt notification of Incidents to Operational Partners.
(vi)	Coordinating activities relating to the planning, response and mitigation of Incidents.
(vii)	Utilising appropriate support personnel to assist in delivering Incident Response Operations.
(viii)	Recording and managing all relevant information relating to Incidents.
(ix)	Providing Incident reports to the Network Manager.
(x)	Co-ordination of Incident Response Operations relating to Severe Weather.

Role: Journey Time Reliability Coordinators	The Journey Time Reliability Coordinator supports the Network Manager by undertaking the delivery of the liaison, coordination and management service necessary to minimise the impact of roadworks or events occurring on or near the Trunk Road network within the Unit to minimise delays and congestion to Transport Scotland customers on a 24 hours a day, seven days a week basis.
Qualifications and Experience	Degree or equivalent. It is unlikely that anyone with less than five years' experience relevant to the provision and performance of the role will meet the requirements of the post.
Key Tasks: in accordance with the requirements of Schedule 3 Part 7:	
(i)	Being the first point of contact within the Operating Company's organisation for all roadworks undertaken by the Operating Company and events occurring on or near the Trunk Road network during both Normal Working Hours and outwith Normal Working Hours.
(ii)	Liaison and communication with relevant Operational Partners including the dissemination of accurate and timely information to assist in the effective delivery and coordination of their roadworks and events throughout the Trunk Road network.
(iii)	Coordinating, monitoring and controlling all roadworks or events to minimise road closures, potential impacts and conflicts and maximise the capacity of the Trunk Road network, using the Automated Diary Facility and Scottish Roadworks Register where necessary and undertaking periodic site visits to assess the implementation and impact of roadworks and events.
(iv)	Ownership and management of the Automated Diary Facility.
(v)	Implementation of escalation procedures for roadworks and events which exceed allowable delay thresholds.
(vi)	Evaluating the impact of roadworks or events to identify improvements for future roadworks and events with similar impacts.
(vii)	Liaison with the Incident Liaison Officer and relevant Operational Partners in dealing with Incidents occurring during roadworks including coordination of the activation and implementation of Standard Incident Diversion Routes.
(viii)	Supporting the Network Manager in delivering the Operating Company's duties and responsibilities in relation to the <i>Traffic Management Act, Transport Act (Scotland) 2005 and the New Roads and Streetworks Act 1991</i> .
(ix)	Utilising and managing support personnel on specific tasks relating to the planning and implementation of roadworks or events including coordinating, mobilising, deploying and supervising Traffic Management arrangements and evaluating their impacts.
(x)	Providing reports on the impacts of the Operating Company's activities on the Journey Time Reliability of the Trunk Road network with recommendations for proposed improvements.

Role: Landscape Architect	The Landscape Architect is the main point of contact within the Operating Company for landscape management and design issues.
Qualifications and Experience	Chartered Member of the Landscape Institute. It is unlikely that anyone with less than 10 years' experience relevant to the provision and performance of the role will meet the requirements of the post.
Key Tasks: in accordance with the requirements of Schedule 7 Part 4:	
(i)	Prepare and deliver the landscape strategy, the Landscape Development Plan and the annual landscape management plan.
(ii)	Undertake landscape opportunity inspections and prepare the schedule of landscape opportunities including the design of proposals.
(iii)	Attend all landscape and environmental progress meetings arranged by the Director.
(v)	Attend necessary meetings concerning landscape issues related to the Unit.

Role: Major Bridges Manager	<p>The Major Bridges Manager has overall responsibility for the inspections, testing, monitoring, management and maintenance of any Structures with particular requirements within the Unit and reports to the Bridges Manager.</p> <p>This role may be combined with the Gantry Manager.</p>
Qualifications and Experience	<p>Degree in an appropriate engineering discipline.</p> <p>Chartered membership of the Institution of Civil Engineers or the Institution of Structural Engineers.</p> <p>It is unlikely that anyone with less than 10 years' experience relevant to the provision and performance of the role will meet the requirements of the post.</p>
Key Tasks: In accordance with the requirements of Schedule 7 Part 7:	
(i)	Review, update and maintain maintenance and operations manuals, health and safety files and other documentation relating to Structures with particular requirements as required.
(ii)	Ensure compliance at all times with the Operating Company's Management System.
(iii)	Liaise with stakeholders and others as appropriate when undertaking maintenance and inspection testing of Structures owned by third parties with maintenance agreements in place.
(iv)	Ensure the health, safety and welfare of all staff involved with Structures with particular requirements.
(v)	Minimise the environmental impact of Operations relating to Structures with particular requirements.
(vi)	Compile inspection reports and test certificates relating to Structures with particular requirements and deliver these annually to the Director.
(vii)	Update the Director's management systems including the Structures Management System database as required.
(viii)	Liaise with the Operations Manager and others to ensure any network Operations and maintenance requirements are taken into account during planning and delivery of other Operations which may affect Structures with particular requirements.

Role: Media & Communications Officer	The Media and Communications Officer shall represent the Operating Company in all its dealings with the media including television companies, radio stations and the local, regional and national press.
Qualifications and Experience	It is unlikely that individuals with less than five years' experience in a similar role are likely to meet the requirements of this post. This post may be sourced from a professional public relations organisation.
Key Tasks: in accordance with the requirements of Schedule 3 Part 5:	
(i)	Develop, manage, review and update the Operating Company's annual Unit-specific communications plan throughout the Contract Period.
(ii)	Manage media enquiries in accordance with the media enquiries procedure.
(iii)	Initiate communications which present the Operating Company and Transport Scotland in a positive manner to the media, customers and stakeholders.
(iv)	Prepare and issue factual media releases for public information, notifying the local, regional and national media as appropriate of forthcoming roadworks and expected commencement dates, rescheduling of Core Operations, Operations, Schemes or Works Contracts and expected completion dates and any relevant diversionary routes.
(v)	Attend quarterly review meetings with Press Transport Scotland and the Director.
(vi)	Attend annual review meetings with Press Transport Scotland, other Operating Companies' Media and Communications Officers and the Director.

Role: Planning Application Officer	The Planning Application Officer is the Operating Company's main point of contact for all matters relating to planning applications and management of the Development Management System.
Qualifications and Experience	<p>It is unlikely that anyone with less than five years' experience relevant to the provision and performance of the role will meet the requirements of the post.</p> <p>The Planning Application Officer will also be required to attend any training organised by Transport Scotland or the Performance Audit Group in relation to the development management function of the Integrated Roads Information System.</p>
Key Tasks: In accordance with the requirements of Schedule 8 Part 2:	
(i)	Liaison with Developers and Transport Scotland in relation to all planning applications and providing advice on the suitability of applications to the Director.
(ii)	Management and development of the development management function of the Integrated Roads Information System throughout the Contract Period.
(iii)	Assistance with applications requiring transport appraisal/assessment, local development plans and any appeal process.
(iv)	Assisting the Director with preparation and administration of minutes or letters of agreement.

Role: Road Safety Manager	The Road Safety Manager is the Operating Company's point of contact for all matters relating to road safety and will be responsible for the management of all road safety and accident investigation and prevention matters including road safety audits.
Qualifications and Experience	It is unlikely that anyone with less than 10 years' experience relevant to the provision and performance of the role will meet the requirements of the post.
Key Tasks: In accordance with the requirements of Schedule 6 Part 3 and Schedule 8 Part 3:	
(i)	Manage the requirements of road safety and accident investigation and prevention measures including road safety audits throughout the Contract Period.
(ii)	Nominate appropriate personnel for road safety audit team membership.
(iii)	Ensure adequate information is submitted by the Designer for road safety audits.
(iv)	Provide input into the Development Control process on road safety issues.
(v)	Certify all road safety audit reports.
(vi)	Liaise closely and cooperate with the Director, the Police, Emergency Services relevant local authorities and other stakeholders on road safety issues.
(vii)	Attend Route Safety Groups and assist the Director in the development of joint road safety initiatives nationally and in the local area.

<p>Role: Integrated Roads Information System (IRIS) Coordinator</p>	<p>The IRIS Coordinator supports the Business Manager. Responsibilities include the following Operating Company activities associated with IRIS functionality:</p> <ul style="list-style-type: none"> • coordinate software installation on Operating Company devices where applicable, • coordinate training for relevant Operating Company staff, • coordinate day to day usage of IRIS functionality, • coordinate data entry validation and correction procedures, • coordinate reporting requirements, • input views via the User Group to assist the Director to continually develop IRIS functionality.
<p>Qualifications and Experience</p>	<p>Degree, Higher National Diploma or Higher National Certificate in an appropriate engineering discipline relevant to the role.</p> <p>Significant experience within the engineering field and proven understanding of information and communication technology concepts, work practices and methodologies. It is expected the post holder should have at least seven years' relevant experience.</p>
<p>Key Tasks: In accordance with the requirements of Schedule 4 Part 2 and Schedule 7 Part 1:</p>	
(i)	Provide the Director with the names and email addresses of staff whom the Operating Company has authorised to use IRIS functionality.
(ii)	Attend the IRIS user group at the dates and times notified in writing by the Director.
(iii)	Support the Business Manager and the Director in the rollout and initial training for IRIS including the routine maintenance & management function of IRIS during the Mobilisation Period.
(iv)	Ensure ongoing compliance with the general operational requirements of the routine maintenance & management function of IRIS in addition to the other functions of IRIS.
(v)	Ensure compliance with the Operating Company's Management Systems and Quality Plan in the operation of the routine maintenance and management function of IRIS in addition to the other functions of IRIS.
(vi)	Arrange with the Director appropriate training for Operating Company staff in the use and operation of IRIS including the routine maintenance and management function in addition to the other functions of IRIS.
(vii)	Oversee provision of appropriate data capture device hardware to the Operating Company as required by this Contract.

Role: Skid Resistance Manager	The Skid Resistance Manager is responsible for managing activities relating to the skid resistance requirements in the Design Manual for Roads and Bridges and the <i>Guidance Document for Implementing a Skid Resistance Policy for Transport Scotland</i> .
Qualifications and Experience	It is unlikely that anyone with less than five years' experience relevant to the provision and performance of the role will meet the requirements of the post.
Key Tasks: in accordance with the requirements of Schedule 4 Part 1:	
(i)	Nominate personnel for and manage a skid resistance policy team to deliver the skid resistance requirements of this Contract.
(ii)	Manage the annual cycle of skid resistance management activities including production of the monthly progress reports and annual report.
(iii)	Liaison and coordination with the Planned Maintenance Manager to ensure recommendations arising from skid resistance management activities are incorporated into the programme and budget preparation process.
(iv)	Liaison and coordination with the Operations Manager on Scheme identification and to ensure that skid resistance management detailed Site investigations requirements are undertaken as part other activities where practicable to minimise disruption on the network.

Role: Winter Service Manager	The Winter Service Manager is responsible for all aspects of planning and delivery of the Severe Weather Service. He is assisted by Winter Service Duty Officers.
Qualifications and Experience	<p>It is unlikely that anyone with less than seven years' experience relevant to the provision and performance of the role will meet the requirements of the post.</p> <p>Within the last seven years, the Winter Service Manager must have attended weather forecasting training or refresher courses and received training on the operation of road weather information systems and will be expected to complete training on all systems used to determine, monitor and record satisfactory delivery of the Winter Service including data logging and GPS tracking.</p>
Key Tasks: In accordance with the requirements of Schedule 7 Part 2:	
(i)	Responsible for delivering the Winter Service in accordance with the Winter Service Plan.
(ii)	Responsible for the authorisation of proposed winter treatments and providing advice and support to the Winter Service Duty Officer.
(iii)	Initiates and reviews establishment of the Winter Service desk.
(iv)	Reviews all Winter Service operations to identify weaknesses noted from observations and reports by Winter Service operators and Winter Service Duty Managers. Identifies and reports on opportunities to introduce service delivery innovations.

<p>Role: Winter Service Duty Officers</p>	<p>The Winter Service Duty Officer receives and monitors weather forecasts and advises on suitable treatment action and is responsible for the overall coordination of Winter Service operations within the Unit and the collation of information from a range of sources including from Winter Service operators on a 24 hours a day, seven days a week basis.</p>
<p>Qualifications and Experience</p>	<p>Must be trained and competent in the winter decision-making process. Must have attended weather forecasting training or refresher courses and received training on the operation of road weather information systems and will be expected to complete training on all systems used to determine, monitor and record satisfactory delivery of the Winter Service including data logging and GPS tracking.</p> <p>It is unlikely that anyone with less than four years' experience relevant to the provision and performance of the role will meet the requirements of the post.</p>
<p>Key Tasks: In accordance with the requirements of Schedule 7 Part 2:</p>	
<p>(i)</p>	<p>Obtains the daily forecast and forecast updates from the specialist forecast provider.</p>
<p>(ii)</p>	<p>Decides on which treatment actions are to be taken.</p>
<p>(iii)</p>	<p>Advises the Winter Service Manager of updates to the weather forecasts received outside the normal Working Day.</p>
<p>(iv)</p>	<p>Supplies the Traffic Scotland Operator with the forecasts and action decisions.</p>

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 5

AUDITS BY THE PERFORMANCE AUDIT GROUP

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 5

AUDITS BY THE PERFORMANCE AUDIT GROUP

1. AUDITS BY THE PERFORMANCE AUDIT GROUP

1.1 Introduction

1.1.1 The performance of the Operating Company in delivering the requirements of this Contract will be audited by the Performance Audit Group.

1.1.2 The Director and the Performance Audit Group shall undertake both unannounced and programmed audits. When the Performance Audit Group intends to carry out a programmed audit, it will give 10 Working Days' notice to the Operating Company.

The Operating Company shall allow the Performance Audit Group to have unrestricted access at all times to the Operating Company's Central Office, offices, depots and all other places where work is prepared or executed or documents and records are stored, including all personnel documentation and records, in connection with any part of the Operations.

The Operating Company shall ensure such access for the Performance Audit Group.

1.1.3 This Schedule does not apply to any other audits required under this Contract which are carried out by other organisations acting on behalf of the Director.

1.2 Arrangements for Programmed Audits by the Performance Audit Group

1.2.1 The arrangements for programmed audits by the Performance Audit Group are as follows:

- (i) no later than 30 days prior to the Commencement of Service Date, the Operating Company shall provide the Performance Audit Group in writing with the names and contact details of the persons whom the Performance Audit Group shall contact to arrange audits,
- (ii) the Operating Company shall notify the Performance Audit Group in writing of changes to the persons whom the Performance Audit Group shall contact to arrange audits,
- (iii) the Performance Audit Group shall contact the relevant persons to arrange audits at least 10 Working Days before the proposed audit date,
- (iv) the Performance Audit Group shall notify the Operating Company of the date, time and location of the audit and the name of the Performance Audit Group principal contact,
- (v) the Operating Company shall provide every assistance in ensuring unrestricted access for the Performance Audit Group and shall make available all necessary resources to allow the Performance Audit Group to carry out and complete the audits,
- (vi) at least five Working Days before the date notified for the audit, the Performance Audit Group shall write to the Operating Company confirming:
 - (a) the location, date, time and programme for the audit,

- (b) the activities, topics or records to be audited,
 - (c) the topics for which documented procedures shall be made available for review by the Performance Audit Group, and
 - (d) the names of the Performance Audit Group audit staff and the contact person who shall be undertaking the audit,
- (vii) the Operating Company shall contact the Performance Audit Group immediately on receipt of the audit details if it does not understand any matter in relation to the audit and shall clarify the requirements prior to the date of the audit.

1.3 Unannounced Audits

- 1.3.1 The Performance Audit Group will conduct unannounced audits when instructed by the Director.

1.4 Conduct of Audits

- 1.4.1 The Operating Company shall arrange for all requested data and other relevant and appropriate information to be available at the location of the audit and shall provide suitable working areas and facilities for the auditors. If requested by the auditors, the Operating Company shall provide photocopies or Electronic Copies of selected information. This requirement shall apply particularly to data in support of charges that are or may be included in invoices and statements for payments.
- 1.4.2 A brief entry meeting between the Operating Company and the Performance Audit Group shall be held immediately before the audit. A senior representative of the Operating Company shall attend this meeting, together with those staff who have direct responsibility for the data and activities to be audited. The purpose of the meeting is to ensure that the Operating Company's staff are aware of the purpose of the audit and that the required data and information are available.
- 1.4.3 Performance Audit Group staff shall not discuss contractual issues with the Operating Company during the audit but may take notes or request copies of documents to enable them to bring issues to the attention of the Director.
- 1.4.4 The Operating Company's staff shall not generally be required to be present at all times throughout the audit, but shall be readily available to deal with any questions that the Performance Audit Group may have. When requested, they shall initial the auditor's checklist or audit notes alongside points of fact recorded by the auditor to confirm the accuracy of these. They shall subsequently assist in any relevant discussions at the exit meeting.
- 1.4.5 An exit meeting between the Operating Company and the Performance Audit Group shall be held at the end of the audit. A senior representative of the Operating Company shall attend the exit meeting with a representative from each of the offices, departments and sections of the Operating Company which were audited.

The Performance Audit Group shall inform the Operating Company of any matters arising from the audit and of any data and information that were not made available for inspection as part of the audit. The Operating Company shall have an opportunity at the exit meeting to record any comments that it may have regarding the manner in which the audit was conducted.

1.4.6 Any findings that the Performance Audit Group identifies shall be explained to the Operating Company. The Operating Company shall sign the relevant forms in acknowledgement that it understands the issues raised.

Whenever possible, the actions and timescales required to:

- (i) correct the specific Non-Conformances identified in the audit,
- (ii) prevent recurrence of the Non-Conformances, and
- (iii) investigate the causes of the Non-Conformances and where necessary initiate further corrective actions,

to address the audit findings shall be agreed between the Operating Company and the Performance Audit Group at the exit meeting.

Subject to the other provisions of this Contract, the Operating Company shall take action to ensure the specific Non-Conformances are corrected within 10 Working Days after identification.

The Operating Company shall take immediate action to mitigate the effect of the Non-Conformances.

1.4.7 Where there is no agreement on actions and timescales reached at the exit meeting, the Operating Company shall write to the Performance Audit Group, providing the details stated in paragraph 1.4.6 of this Part, within three Working Days after the completion of the audit. In these circumstances, the Operating Company shall still be required to adhere to the actions and timescale requirements stated in paragraph 1.4.6 of this Part for mitigating and correcting Non-Conformances.

1.4.8 The Performance Audit Group shall issue a report on the audit to the Operating Company, copied to the Director, within five Working Days after completion of the audit.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 6

PERFORMANCE MEASUREMENT

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 6

PERFORMANCE MEASUREMENT

1. REQUIREMENTS

1.1 General Requirements

1.1.1 The Director will measure the performance of the Operating Company through the use of performance measures. The performance measures the Director will use are:

- (i) Performance Indicators,
- (ii) Monitoring Indicators, and
- (iii) Payment Adjustment Factors.

1.1.2 The Operating Company shall carry out the necessary data aggregation and analysis to provide the information required for all Performance Indicators, Monitoring Indicators and Payment Adjustment Factors to the Director no later than five Working Days after the end of the relevant reporting period in the format provided by the Director, with a copy to the Performance Audit Group.

1.1.3 The Operating Company shall work with the Director to amend and improve the Performance Indicators and the Monitoring Indicators over the period of the Contract with the aim of achieving continuous improvement in service delivery. The performance targets for any new or amended Performance Indicators shall be set by the Director with the objective of improving performance over the period of the Contract.

1.2 Performance Indicators

1.2.1 The Director will use the Performance Indicators detailed in Annex 5.6/A of this Part to measure the performance of the Operating Company in complying with this Contract.

1.2.2 The Performance Audit Group may issue a Notice of Non-Conformance when a Performance Indicator indicates a failure to achieve the required performance target stated in Annex 5.6/A of this Part.

1.2.3 The maximum value which will be reported for any Performance Indicator will be 100 percent, indicating achievement of the specified requirements.

1.3 Monitoring Indicators

1.3.1 The Director will use the Monitoring Indicators detailed in Annex 5.6/B of this Part to measure and monitor service performance.

1.4 Payment Adjustment Factors

1.4.1 The Payment Adjustment Factors are detailed in Annex 5.6/C of this Part and shall be used to measure the items subject to Payment Adjustment Factors.

1.4.2 The measurement of items subject to Payment Adjustment Factors is set out in Schedule 2 Part 1.

2. PUBLICATION OF PERFORMANCE AND MONITORING INDICATORS

2.1.1 The Director may publish the Performance Indicators and Monitoring Indicators within the public domain.

This is Annex 5.6/A to Schedule 5 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 6

PERFORMANCE MEASUREMENT

ANNEX 5.6/A – Performance Indicators

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 6

PERFORMANCE MEASUREMENT

ANNEX 5.6/A – Performance Indicators

No.	Title	Measure Description	Reporting period	Target
00	Overall Performance Indicator	The arithmetical average of all the Performance Indicators listed below which have a target of 100% and are reported each reporting period.	Monthly	100%
01	RIDDOR (<i>Reporting of Injuries, Diseases and Dangerous Occurrences Regulations</i>)	The incident rate based on the number of RIDDOR 'reportable' accidents, incidents and injuries reported within working sites under control or supervision of the Operating Company.	Monthly	Year on year improvement on a benchmark to be agreed in the first Annual Period
02	Accident Frequency Rate	The accident frequency rate based on the number RIDDOR 'reportable' incidents and injuries reported within working sites under control or supervision of the Operating Company.	Monthly	Year on year improvement on a benchmark to be agreed in the first Annual Period
03	Repair of Category 1 Defects	The percentage of all Category 1 Defect repairs that are carried out within the required timescales.	Monthly	100%
04	Incident Response	Percentage of Incident Responses within the required timescales.	Monthly	100%
05	Safety Inspections and Patrols	Percentage of days on which link/sections within the Unit are within the required inspection interval for Safety Inspections, Safety Patrols and night time Safety Patrols.	Monthly	100%
06	Detailed Inspections	Percentage of Detailed Inspections carried out within the required intervals.	Monthly	100%

No.	Title	Measure Description	Reporting period	Target
07	Maintenance	Percentage of asset maintained within the required timescales.	Monthly	100%
08	Structures Principal Inspections	Percentage of Structures Principal Inspections and reports carried out to agreed programme.	Monthly	100%
09	Structures General Inspections	Percentage of Structures General Inspections and reports carried out to agreed programme.	Monthly	100%
10	Structures maintenance	Percentage of Structures maintenance activities carried out within the required timescales.	Annually (Monthly progress)	100%
11	Winter Service treatments	Percentage of Winter Service treatments carried out in compliance with the required timescales.	Monthly (winter period)	100%
12	Actual spend against profile	Percentage of total spend on Schemes as a proportion of profiled total spend.	Monthly	100%
13	Works Contracts cost estimates	Accuracy of Works Contracts cost estimates.	Monthly	100%
14	Works Contracts out turn cost	Success in delivering Schemes at the awarded tender value.	Monthly	100%
15	Closure of Non-Conformances	Percentage of Non-Conformances, closed out within the required timescales.	Monthly	100%
16	Submission of reports	Percentage of monthly reports and submissions that are submitted within the required timescales.	Monthly	100%
17	Planning applications	Percentage of planning applications processed within the required timescales.	Monthly	100%
18	Communications response	Percentage of communications processed by the Operating Company within the required timescales.	Monthly	100%

No.	Title	Measure Description	Reporting period	Target
19	Carbon emissions	Annual carbon emissions	Annually	Year on year improvement on a benchmark to be agreed after the first Annual Period

Performance Indicator No. 01			
Title	RIDDOR		
Measure Description	The incident rate based on the number of RIDDOR 'reportable' accidents, incidents injuries and diseases reported within working sites under control or supervision of the Operating Company.		
Measure Aim	To measure the effectiveness of the Operating Company's safety processes by monitoring the incident rate per 100,000 hours worked, according to the standard reporting practice of the Health and Safety Executive.		
Methodology	The Operating Company shall use the records required by the <i>Reporting of Injuries, Diseases and Dangerous Occurrences Regulations</i> (RIDDOR) of accidents, incidents, injuries and diseases incurred within their Unit to produce the Performance Indicator.		
Data input	<p>A = total number of RIDDOR reportable deaths or major injuries during reporting period,</p> <p>B = total number of RIDDOR reportable over seven day lost time injuries during reporting period,</p> <p>C = total number of RIDDOR reportable diseases during reporting period,</p> <p>D = total number of RIDDOR reportable dangerous occurrences during reporting period,</p> <p>F = Total number of working hours on Unit during reporting period.</p> <p>The following data shall be derived based on the sum of the previous 12 months* data:</p> <p>P = sum of all RIDDOR reportable incidents during previous 12 months* (A+B+C+D),</p> <p>R = sum of all working hours during previous 12 months* (Sum of F values).</p> <p>* or number of months elapsed after the Commencement of Service Date which ever is the lesser.</p>		
Formula	Performance Indicator = $(P/R) \times 100,000$		
Required supporting information	<p>In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. • Lists and commentary of all incidents during period. 		
Measurement Period	Monthly	Data Source	RIDDOR data
Return Format	RIDDOR score	Decimal places	1

Performance Indicator No. 02			
Title	Accident Frequency Rate		
Measure Description	The accident frequency rate based on the number RIDDOR 'reportable' incidents and injuries reported within working sites under control or supervision of the Operating Company.		
Measure Aim	To measure the effectiveness of the Operating Company's safety processes by monitoring the frequency rate of injuries per 100,000 hours worked, according to the standard reporting practice of the HSE.		
Methodology	The Operating Company shall use the records required by the <i>Reporting of Injuries, Diseases and Dangerous Occurrences Regulations</i> and Records of other accidents and near misses required by Schedule 5 Part 1, of accidents, incidents and injuries and near misses incurred within their Unit to produce the Performance Indicator.		
Data input	<p>A = total number of RIDDOR reportable deaths or major injuries during reporting period,</p> <p>B = total number of RIDDOR reportable over seven day lost time injuries during reporting period,</p> <p>C = total number of RIDDOR reportable diseases during reporting period,</p> <p>D = total number of RIDDOR reportable dangerous occurrences during reporting period,</p> <p>E = total number of other accidents (non RIDDOR reportable) recorded in accident books during reporting period,</p> <p>F = Total number of working hours on Unit during reporting period.</p> <p>The following data shall be derived based on the sum of the previous 12 months* data:</p> <p>P = sum of all accidents and incidents during previous 12 months* (A+B+C+D+E),</p> <p>R = sum of all working hours during previous 12 months* (Sum of F values).</p> <p>* or number of months elapsed after the Commencement of Service Date which ever is the lesser.</p>		
Formula	Performance Indicator = $(P / R) \times 100,000$		
Required supporting information	<p>In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. • Lists and commentary of all incidents during period. • Number of near misses during reporting period. 		
Measurement Period	Monthly	Data Source	RIDDOR accident data.
Return Format	Accident frequency rate	Decimal places	1

Performance Indicator No. 03			
Title	Repair of Category 1 Defects		
Measure Description	The percentage of all Category 1 Defect repairs that are carried out within the required timescales.		
Measure Aim	To measure the Operating Company's performance in undertaking the Repair of Category 1 Defects.		
Methodology	The Operating Company shall use the records in the routine maintenance and management function of the Integrated Roads Information System of the actual dates and times when the Operating Company was aware of the presence of a Category 1 Defect and the date and time of all temporary and permanent repairs of Category 1 Defects to produce the Performance Indicator.		
Data input	<p>A = total number of Category 1 Defect temporary repairs due during the month,</p> <p>B = total number of Category 1 Defect temporary repairs repaired on time during the month,</p> <p>C = total number of Category 1 Defect permanent repairs due during the month,</p> <p>D = total number of Category 1 Defect permanent repairs repaired on time during the month.</p>		
Formula	<p>Performance Indicator for temporary repairs = $(B/A) \times 100\%$</p> <p>Performance Indicator for permanent Repairs = $(D/C) \times 100\%$</p> <p>Reported Performance Indicator = $((B + D) / (A + C)) \times 100\%$</p>		
Required supporting information	<p>In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. • Any trends or differences between temporary and permanent repairs. • Numbers of each Defect type raised each month and their trends. • Numbers of Defects raised by inventory type each month and their trends. • Lists of all late and overdue Defects and analysis of their reasons. 		
Measurement Period	Monthly	Data Source	routine maintenance and management function of the Integrated Roads Information System
Return Format	Percentage	Decimal places	0

Performance Indicator No. 04			
Title	Incident Response		
Measure Description	Percentage of Incident Responses within the required timescales.		
Measure Aim	To measure the Operating Company's performance in providing the Incident Response service.		
Methodology	The Operating Company shall use the Records in the Incidents database, required by Schedule 7 Part 3, to produce the Performance Indicator.		
Data input	<p>A = total number of initial responses required during the reporting period,</p> <p>B = total number of initial responses carried out on time during the reporting period,</p> <p>C = total number of s secondary responses required during the reporting period,</p> <p>D = total number of secondary responses carried out on time during the reporting period,</p> <p>E = total number of contingency responses required during the reporting period,</p> <p>F = total number of contingency responses carried out on time during the reporting period.</p>		
Formula	<p>Performance Indicator for initial response = $(B/A) \times 100\%$</p> <p>Performance Indicator for secondary response = $(D/C) \times 100\%$</p> <p>Performance Indicator for contingency response = $(F/E) \times 100\%$</p> <p>Reported Performance Indicator N = $((B + D + F)/(A + C + E)) \times 100\%$</p>		
Required supporting information	<p>In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. • Reasons for any failures and actions taken to prevent recurrence. • Percentage of initial responses carried out >20 minutes early. • Percentage of initial responses carried out 20-10 minutes early. • Percentage of initial responses carried out 10-0 minutes early. • Percentage of initial responses carried out 0-10 minutes late. • Percentage of initial responses carried out >10 minutes late. 		
Measurement Period	Monthly	Data Source	Incidents data required by Schedule 7 Part 3
Return Format	Percentage	Decimal places	0

Performance Indicator No. 05	
Title	Safety Inspections and Patrols
Measure Description	Percentage of days on which each route or part of route (link/section) is within the required inspection interval for Safety Inspections, Safety Patrols and night time Safety Patrols.
Measure Aim	To measure the Operating Company's performance in carrying out of Safety Inspections, Safety Patrols and night time Safety Patrols.
Methodology	The Operating Company shall use the records in the routine maintenance and management function of the Integrated Roads Information System of the actual date and time when the Operating Company carried out Safety Inspections, Safety Patrols and night time Safety Patrols to produce the Performance Indicator.
Data input	<p>A = the number of days during the reporting period on which each route or part of route (link/section) is compliant with the specification in respect of Safety Inspections, aggregated for all link/sections recorded in routine maintenance and management function of the Integrated Roads Information System,</p> <p>B = the number of days during the reporting period on which each route or part of route (link/section) is not compliant with the specification in respect of Safety Inspections, aggregated for all link/sections recorded in routine maintenance and management function of the Integrated Roads Information System,</p> <p>C = the number of days during the reporting period on which each route or part of route (link/section) is compliant with the specification in respect of Safety Patrols, aggregated for all link/sections recorded in routine maintenance and management function of the Integrated Roads Information System,</p> <p>D = the number of days during the reporting period on which each route or part of route (link/section) is not compliant with the specification in respect of Safety Patrols, aggregated for all link/sections recorded in routine maintenance and management function of the Integrated Roads Information System,</p> <p>E = the number of days during the reporting period on which each route or part of route (link/section) is compliant with the specification in respect of Night Time Safety Patrols, aggregated for all link/sections recorded in routine maintenance and management function of the Integrated Roads Information System,</p> <p>F = the number of days during the reporting period on which each route or part of route (link/section) is not compliant with the specification in respect of Night Time Safety Patrols, aggregated for all link/sections recorded in routine maintenance and management function of the Integrated Roads Information System.</p>

Performance Indicator No. 05			
Formula	Performance Indicator for Safety Inspection = $((A) / (A+B)) \times 100\%$ Performance Indicator for Safety patrol = $((C) / (C+D)) \times 100\%$ Performance Indicator for night time safety patrol = $((E) / (E+F)) \times 100\%$ Reported Performance Indicator = $((A + C + E) / (A + B + C + D + E + F)) \times 100\%$.		
Required supporting information	In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information: <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. • Any trends or differences between each inspection type. • Lists of all late and overdue inspections and commentary on their reasons. 		
Measurement Period	Monthly	Data Source	routine maintenance and management function of the Integrated Roads Information System
Return Format	Percentage	Decimal places	0

Performance Indicator No. 06			
Title	Detailed Inspections		
Measure Description	Percentage of Detailed Inspections carried out within the required intervals.		
Measure Aim	To measure the Operating Company's performance in carrying out Detailed Inspections.		
Methodology	The Operating Company shall use the Records in the routine maintenance and management function of the Integrated Roads Information System of the actual date and time when the Operating Company carried out Detailed Inspections on each inventory item to calculate the Performance Indicator.		
Data input	<p>For each of the interval based Detailed Inspection activities as listed in Appendix 6A of this Part the following shall be calculated:</p> <p>A = the number of inventory items where the inspection activity is compliant with the required Detailed Inspection activity interval,</p> <p>B = the number of inventory items where the inspection activity is not compliant with the required detailed inspection activity interval.</p>		
Formula	<p>Detailed Inspection activity Performance Indicator = $(A/A+B) \times 100\%$.</p> <p>Overall Performance Indicator shall be the arithmetic average of all the Detailed Inspection activity Performance Indicator percentages for the Detailed Inspection activities listed in Appendix 6A.</p>		
Required supporting information	<p>In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values for each Detailed Inspection activity. • Any trends in the figures. • Lists of all late and overdue inspections and analysis of their reasons. 		
Measurement Period	Monthly	Data Source	routine maintenance and management function of the Integrated Roads Information System
Return Format	Percentage	Decimal places	0

Appendix 6A – Inspection Activities

Inspection activity

Carriageway

Carriageway (offside)

Footways and cycleways

Covers, Gratings and Frames

Covers, Gratings and Frames (offside)

Kerbs and Edgings

Kerbs and Edgings (offside)

Linear Drainage System

Gullies Catchpits, Soakaways and Oil Separators

Gullies Catchpits, Soakaways and Oil Separators (offside)

Drainage Grips

Drainage Grips (offside)

Ditches

Filter drain

Filter drain (offside)

Balancing Ponds

Head walls, aprons and spillways -

Sluices, tidal flaps, penstocks, valves, pumps and other specialist equipment

Geotechnical asset

Earthwork monitoring

Grass areas

Bulbs and wildflower areas

Woodland areas and trees

Woodland areas and trees (mature

Scrub, shrub and hedges

Wetland areas

Special Ecological Measures

Invasive species

Vehicle Road Restraint System

Vehicle Road Restraint System (tensioning devices)

Pedestrian Road Restraint System

Fences walls screens and noise barriers

Road Markings (High Speed Monitor)

Road Markings (Hand held)

Road marking (Visual survey)

Inspection activity

Road markings (skid resistance)
Road studs (visual, daytime)
Road studs (conspicuity, night time)
Road Traffic Sign (visual performance)
Road Traffic Sign (structural integrity)
Road Traffic Sign (electrical safety & operation)
Road Traffic Sign (Sign Plate Replacement)
Road Traffic Sign (co-efficient of retroreflectivity)
Road Traffic Sign (obscuration)
Road Traffic Sign (electrical testing)
Traffic signals
Traffic signals (Operational review)
Road Lighting
Arrestor beds
Traffic control barriers (structural condition & integrity)
Traffic control barriers (electrical)
Node markers
Network referencing
Drainage structures
Traffic signals (Obscuration)
Road Sensors
Snow poles, signs, fences and barriers

Performance Indicator No. 07			
Title	Maintenance		
Measure Description	Percentage of asset maintained within the required timescales.		
Measure Aim	To measure the Operating Company's performance in carrying out maintenance.		
Methodology	The Operating Company shall use the records in the routine maintenance and management function of the Integrated Roads Information System of the actual date and time when the Operating Company carried out maintenance to produce the Performance Indicator.		
Data input	<p>For each of the interval based maintenance activities as listed in Appendix 7A of this Part the following shall be calculated:</p> <p>A = total number/length/area of live inventory items on network,</p> <p>B = total number/length/area of live inventory items where the last maintenance action is within the required maintenance interval at the end of the reporting period.</p>		
Formula	<p>Each maintenance activity Performance Indicator = $(B/A) \times 100\%$.</p> <p>Overall Performance Indicator shall be the arithmetic average of all the maintenance activity Performance Indicator percentages for the maintenance activities listed in Appendix 7A.</p>		
Required supporting information	<p>In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values for each maintenance activity. • Any trends in the figures. • Lists of all late and overdue activities and analysis of their reasons. 		
Measurement Period	Monthly	Data Source	routine maintenance and management function of the Integrated Roads Information System
Return Format	Percentage	Decimal places	0

Appendix 7A –Maintenance Activities

Interval Based Maintenance Activities

Inspection activity

Cleaning of slot drains and kerb block drains

Cleaning of gullies, catchpits, soakaways, manholes and Oil Separators

Cleaning of drainage grips

Harrowing of filter drain

Grass – minimum frequency

Special ecological measures

Vehicle road restrain system (tensioning)

Road traffic signs (sign face cleaning)

Performance Indicator No. 08			
Title	Structures Principal Inspections		
Measure Description	Percentage of Structures Principal Inspections and reports carried out to agreed programme.		
Measure Aim	Measure the Operating Company's performance in carrying out Structures Principal Inspections on programme.		
Methodology	The Operating Company shall use the Records in the structures management function of the Integrated Roads Information System of the programmed inspection dates and the actual inspection dates to produce the Performance Indicator.		
Data input	A = total cumulative number of Principal Structures Inspection reports programmed to be completed by the end of current reporting period, B = total cumulative number of Principal Inspection reports completed at the end of current reporting period.		
Formula	Reported Performance Indicator = $(B/A) \times 100\%$		
Required supporting information	In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information: <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. • Lists of all late and overdue activities and analysis of their reasons. 		
Measurement Period	Monthly	Data Source	structures management function of the Integrated Roads Information System
Return Format	Percentage	Decimal places	0

Performance Indicator No. 09			
Title	Structures General Inspections		
Measure Description	Percentage of Structures General Inspections and reports carried out to agreed programme.		
Measure Aim	Measure the Operating Company's performance in carrying out Structures General Inspections on programme.		
Methodology	The Operating Company shall use the Records in the structures management function of the Integrated Roads Information System of the programmed inspection dates and the actual inspection dates to produce the Performance Indicator.		
Data input	A = total cumulative number of Structures General Inspection reports programmed to be completed by the end of current reporting period, B = total cumulative number of Structures General Inspection reports completed at the end of current reporting period.		
Formula	Reported Performance Indicator = $(B/A) \times 100\%$		
Required supporting information	In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information: <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. • Lists of all late and overdue activities and analysis of their reasons. 		
Measurement Period	Monthly	Data Source	structures management function of the Integrated Roads Information System
Return Format	Percentage	Decimal places	0

Performance Indicator No. 10			
Title	Structures Maintenance		
Measure Description	Percentage of Structures maintenance activities carried out within the required timescales.		
Measure Aim	To measure the Operating Company's performance in carrying out Structures maintenance.		
Methodology	The Operating Company shall use the Records in the structures management function of the Integrated Roads Information System of the number of Structures with maintenance activities due and the number of Structures with maintenance activities completed to produce the Performance Indicator.		
Data input	<p>A = total cumulative number of Structures with maintenance activities programmed to be completed by the end of the current reporting period,</p> <p>B = total cumulative total number of Structures with maintenance activities completed by the end of the end of the current reporting period.</p>		
Formula	Performance Indicator = (B) / (A) x 100%		
Required supporting information	<p>In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. • Lists of all late and overdue activities and analysis of their reasons. 		
Measurement Period	Monthly	Data Source	structures management function of the Integrated Roads Information System or Operating Company records
Return Format	Percentage	Decimal places	0

Performance Indicator No. 11			
Title	Winter Service treatments		
Measure Description	Percentage of Winter Service treatments carried out in compliance with required timescales.		
Measure Aim	To measure the Operating Company's performance in carrying out Winter Service activities.		
Methodology	The Operating Company shall use the register, as required by Schedule 7 Part 2, of all daily proposed and actual actions including all dates and times for each route and each treatment to produce the Performance Indicator.		
Data Input	<p>A = number of operations where a planned (precautionary treatment) or unplanned (call out) treatment is required,</p> <p>B = number of operations which are completed within the required treatment timescale,</p> <p>C = number of operations for which full Data Capture Device (DCD) downloads are achieved,</p> <p>D = total number of unplanned (call out) treatments called out,</p> <p>E = total number of unplanned (call out) treatments commenced within required timescale.</p>		
Formula	<p>Performance Indicator (treatment time) = $(B/A) \times 100\%$</p> <p>Performance Indicator (DCD downloads) = $(C/A) \times 100\%$</p> <p>Performance Indicator (response time) = $(E/D) \times 100\%$</p> <p>Overall Performance Indicator shall be the arithmetic average of all the three Performance Indicator items' percentages.</p>		
Required supporting information	<p>In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. • Reasons for any failures and actions taken to prevent reoccurrence. 		
Measurement Period	Monthly during Winter Service Period	Data Source	Winter Service Records, as required by Schedule 7 Part 2
Return Format	Percentage	Decimal places	0

Performance Indicator 12	
Title	Actual spend against profile
Measure Description	Percentage of total spend on Schemes as a proportion of profiled total spend.
Measure Aim	To measure actual spend at the end of each reporting period against the profiled spend set at the start of the reporting period.
Methodology	The Operating Company shall use the records of profiled and actual spend recorded in the contract control and management function of the Integrated Roads Information System, as required by Schedule 4 Part 1, to produce the Performance Indicator.
Data input	<p>A = sum of actual spend included in the Statement for all routine/cyclic Schemes,</p> <p>B = sum of profiled spend for all routine/cyclic Schemes,</p> <p>C = sum of actual spend included in the Statement for all Structural maintenance Schemes,</p> <p>D = sum of profiled spend for all Structural maintenance schemes,</p> <p>E = sum of actual spend included in the Statement for all Structures Schemes,</p> <p>F = sum of profiled spend for all Structures Schemes,</p> <p>G = sum of actual spend included in the Statement for all Minor Improvement Schemes,</p> <p>H = sum of profiled spend for all Minor Improvement Schemes,</p> <p>I = sum of actual spend included in the Statement for all strategic road safety Schemes,</p> <p>J = sum of profiled spend for all strategic road safety Schemes.</p>
Formula	<p>Performance Indicator for routine and cyclic = $(A/B) \times 100\%$</p> <p>Performance Indicator for Structural maintenance = $(C/D) \times 100\%$</p> <p>Performance Indicator for Structures = $(E/F) \times 100\%$</p> <p>Performance Indicator for minor improvements = $(G/H) \times 100\%$</p> <p>Performance Indicator for strategic road safety = $(I/J) \times 100\%$</p> <p>Reported Performance Indicator = $(A+C+E+G+I) / (B+D+F+H+J) \times 100\%$.</p>

Performance Indicator 12			
Required supporting information	<p>In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. • Any significant findings as a result of further analysis by route, work code or expenditure type. 		
Measurement Period	Monthly	Data Source	contract control and management function of the Integrated Roads Information System
Return Format	Percentage	Decimal places	0

Performance Indicator No. 13			
Title	Works Contracts cost estimates		
Measure Description	Accuracy of Works Contracts cost estimates.		
Measure Aim	To measure the accuracy of the Operating Company's estimates for Works Contracts.		
Methodology	<p>The Operating Company shall use the Records of pre-tender estimate, awarded tender value and tender return date, recorded in accordance with the requirements of Schedule 6 Part 1, to produce the Performance Indicator.</p> <p>For each Scheme tender the accuracy shall be calculated and the Performance Indicator shall be based on all Scheme tenders completed during the previous 12 months or number of months elapsed after the Commencement of Service Date which ever is the lesser.</p>		
Data input	<p>The following data shall be used:</p> <p>A = pre-tender scheme estimate for each Scheme,</p> <p>B = tender value for each Scheme,</p> <p>C = number of Schemes tendered in previous 12 months or number of months elapsed after the Commencement of Service Date which ever is the lesser.</p>		
Formula	<p>The accuracy for each Scheme tender shall be calculated:</p> <p>Scheme tender accuracy = $(1 - (\sqrt{(A-B)^2/A}) \times 100\%$</p> <p>Overall Performance Indicator shall be sum of the individual Scheme tender accuracy percentages divided by the number of Scheme tenders completed during the previous 12 months or number of months elapsed after the Commencement of Service Date which ever is the lesser.</p>		
Required supporting information	<p>In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	Monthly	Data Source	Records required by Schedule 6 Part 1,
Return Format	percentage	Decimal places	0

Performance Indicator No. 14			
Title	Works Contracts out turn cost		
Measure Description	Success in delivering Schemes at the awarded tender value.		
Measure Aim	To measure the Operating Company's success in delivering Schemes at the awarded tender value.		
Methodology	<p>The Operating Company shall use the records of awarded tender value, final value and Scheme Completion Dates recorded in accordance with the requirements of Schedule 6 Part 1 to produce the Performance Indicator.</p> <p>For each Scheme the accuracy shall be calculated and the Performance Indicator shall be based on all Schemes completed during the previous 12 months or number of months elapsed after the Commencement of Service Date which ever is the lesser.</p>		
Data input	<p>The following data shall be used:</p> <p>A = awarded tender value for each Scheme,</p> <p>B = final value for each Scheme,</p> <p>C = number of Schemes completed in previous 12 months or number of months elapsed after the Commencement of Service Date which ever is the lesser.</p>		
Formula	<p>The accuracy for each Scheme shall be calculated:</p> $\text{Scheme accuracy} = (1 - \sqrt{(A-B)^2/A}) \times 100\%$ <p>Overall Performance Indicator shall be sum of the individual Scheme accuracy percentages divided by the number of Schemes completed during the previous 12 months or number of months elapsed after the Commencement of Service Date which ever is the lesser.</p>		
Required supporting information	<p>In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	Monthly	Data Source	Records required by Schedule 6 Part 1
Return Format	percentage	Decimal places	0

Performance Indicator No. 15	
Title	Closure of Non-Conformances (NCR)
Measure Description	Percentage of Non-Conformances closed out within required timescale.
Measure Aim	To measure the Operating Company's performance in the closure of Non-Conformances.
Methodology	The Operating Company shall use the details recorded in a register, as required by Schedule 5 Part 1, of all Non-Conformances, corrections and corrective actions on Non-Conformances raised to produce the Performance Indicator. The Performance Indicator shall be measured monthly using the Records of the previous 6 months or number of months elapsed after the Commencement of Service Date whichever is the lesser.
Data input	<p>A = total number of Performance Audit Group NCR corrections due for closure during the reporting period,</p> <p>B = total number of Performance Audit Group NCR corrections closed on time during the reporting period,</p> <p>C = total number of Performance Audit Group NCR corrective actions due for closure during the reporting period,</p> <p>D = total number of Performance Audit Group NCR corrective actions closed on time during the reporting period,</p> <p>E = total number of Operating Company NCR corrections due for closure during the reporting period,</p> <p>F = total number of Operating Company NCR corrections closed on time during the reporting period,</p> <p>G = total number of Operating Company NCR corrective actions due for closure during the reporting period,</p> <p>H = total number of Operating Company NCR corrective actions closed on time during the reporting period.</p>
Formula	<p>Performance Indicator for Performance Audit Group corrections = $\{(B/A) \text{ sum latest 6 months* data}\} \times 100\%$</p> <p>Performance Indicator for Performance Audit Group corrective actions = $\{(D/C) \text{ sum latest 6 months* data}\} \times 100\%$</p> <p>Performance Indicator for Operating Company corrections = $\{(F/E) \text{ sum latest 6 months* data}\} \times 100\%$</p> <p>Performance Indicator for Operating Company corrective actions = $\{(H/G) \text{ sum latest 6 months* data}\} \times 100\%$</p> <p>Reported Performance Indicator = $\{(B+D+F+H) / (A+C+E+G) \text{ sum 6 months* data}\} \times 100\%$</p> <p>* or number of months elapsed after the Commencement of Service Date which ever is the lesser</p>

Performance Indicator No. 15			
Required supporting information	In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information: <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. • Reasons for any failures and actions taken to prevent reoccurrence. 		
Measurement Period	Monthly (on a rolling 6 month data set)	Data Source	Non-Conformance register, as required by Schedule 5 Part 1
Return Format	Percentage	Decimal places	0

Performance Indicator No. 16			
Title	Submission of monthly reports and submissions.		
Measure Description	Percentage of monthly reports and submissions listed in Table 5.3.A.1 in Schedule 5 Part 3, Annex A that are submitted within the required timescales.		
Measure Aim	To measure the Operating Company's performance in the submission of the monthly reports and submissions.		
Methodology	The Operating Company shall use the records necessary to produce all reports and submissions required by Table 5.3.A.1 to produce the Performance Indicator.		
Data input	A = total number of monthly reports and submissions due during the month, B = total number of monthly reports and submissions, submitted as required during the month.		
Formula	Performance Indicator = $B/A \times 100\%$		
Required supporting information	In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information: <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. • Reasons for any failures and actions taken to prevent reoccurrence. 		
Measurement Period	Monthly	Data Source	Records necessary to produce all reports and submissions required by Table 5.3.A.1
Return Format	Percentage	Decimal places	0

Performance Indicator No. 17			
Title	Planning applications		
Measure Description	Percentage of planning applications processed within the required timescale.		
Measure Aim	To measure the Operating Company's performance in the delivery of the delegated function of the Roads Authority by processing planning applications received from Planning Authorities effectively and within the required timescale.		
Methodology	<p>The Operating Company shall use the register, as required by Schedule 8 Part 2, of all planning applications received and returned to produce the Performance Indicator.</p> <p>The Performance Indicator shall be based the total number of planning applications due for return during the reporting period, excluding those that require transportation assessments.</p>		
Data input	<p>A = total number of planning applications due for return during the reporting period,</p> <p>B = total number of planning applications due for return during the reporting period that are processed within the required timescale.</p>		
Formula	Performance Indicator = $(B / A) \times 100\%$		
Required supporting information	<p>In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. • Lists of all late and overdue deliverables and analysis of their reasons. 		
Measurement Period	Monthly	Data Source	Planning Applications register, as required by Schedule 8 Part 2
Return Format	Percentage	Decimal places	0

Performance Indicator No. 18			
Title	Communications response		
Measure Description	Percentage of communications processed by the Operating Company within the required timescale.		
Measure Aim	To measure the Operating Company's performance in dealing with the correspondence.		
Methodology	<p>The Operating Company shall use the register, as required by Schedule 3 Part 5, of communications received to produce the Performance Indicator.</p> <p>The Performance Indicator shall be based on the total number of items due a response during the reporting period.</p> <p>The Performance Indicator shall be based on a rolling 12 month average.</p>		
Data input	<p>A = total number of communications due a response during the reporting period,</p> <p>B = total number of communications responded to on time during the reporting period,</p> <p>C = total number of requests from the Director or written responses and briefings due for a response during the reporting period,</p> <p>D = total number of responses to requests from the Director for written responses and briefings provided to Transport Scotland within the required timescale during the reported period.</p>		
Formula	Performance Indicator = $(B+D) / (A+C) \times 100\%$		
Required supporting information	<p>In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. • Lists of all late and overdue deliverables and analysis of their reasons. 		
Measurement Period	Monthly	Data Source	Operating Company's register, as required by Schedule 3 Part 5
Return Format	Percentage	Decimal places	0

Performance Indicator No. 19			
Title	Carbon emissions		
Measure Description	Annual carbon emissions.		
Measure Aim	To measure the Operating Company's performance within the Unit in reducing their carbon emissions.		
Methodology	The Operating Company shall use the records compiled in the Transport Scotland Carbon Management System (CMS) as required by Schedule 5 Part 8 to produce the Monitoring Indicator.		
Data input	N = annual carbon emissions (tonnes) produced by the Operating Company as recorded by the Carbon Management System.		
Formula	Performance Indicator (second year onwards) = N (current year) / N (benchmark figure agreed after first year) x 100%		
Required supporting information	<p>In addition to reporting the Performance Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	Annually	Data Source	Carbon Management System
Return Format	Percentage	Decimal places	0

This is Annex 5.6/B to Schedule 5 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 6

PERFORMANCE MEASUREMENT

ANNEX 5.6/B – Monitoring Indicators

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 6

PERFORMANCE MEASUREMENT

ANNEX 5.6/B – Monitoring Indicators

No.	Title	Measure Description	Reporting Period
01	Well lit network	Percentage of lighting points operational on the Unit.	Monthly
02	Network availability	The lane length availability on the Unit.	Monthly
03	Traffic disruption caused by un-programmed works	The lane length and duration unavailable on the Unit due to un-programmed works.	Monthly
04	Orders against Budget	Percentage of ordered work against budget.	Monthly
05	Works Contractor Invoice submission	Percentage of Works Contractor invoices submitted to Transport Scotland by the Operating Company within the required timescales.	Monthly
06	Accuracy of Operations cost estimates	Accuracy of Operations cost estimates.	Monthly
07	Disputed items in the Statement	Percentage value of disputed items against the total value of the Statement submitted by the Operating Company.	Monthly
08	Operations Instructions completed on target	Percentage of Operations Instructions completed by the target date.	Monthly
09	Staff turnover	Percentage staff turnover during last 12 months	Monthly
10	Sickness absence	Average number of days lost due to sickness per employee.	Monthly
11	Working hours	Average hours worked per employee in last 12 months.	Monthly
12	Training	Average number of training hours per employee provided in last 12 months.	Monthly

No.	Title	Measure Description	Reporting Period
13	Responses to Observations Resulting from Inspections and Hazard Notices	Percentage of Observations Resulting from Inspections and Hazard Notices responded to within the required timescale.	Monthly
14	Remedial Notices issued	Number of Remedial Notices.	Monthly
15	Innovation	Financial value of innovations introduced by the Operating Company.	Monthly
16	Collaboration	Value of collaborative services provided by Operating Company.	Monthly
17	Sustainability – use of reused, recycled, renewable materials	Percentage of raw materials used sourced from reused, recycled or renewable sources.	Monthly
18	Sustainability – waste generation and management	Percentage of waste materials re-used or recycled.	Monthly
19	Salt Usage	Total amount of salt used in each contract year as a percentage of the amount used in the first year of the contract	Annual
20	Forecast Accuracy	Percentage of accurate weather forecasts	Monthly

Monitoring Indicator 01			
Title	Well lit network		
Measure Description	Percentage of lighting points operational on the Unit.		
Measure Aim	To monitor the number of operations lighting points on the network.		
Methodology	The Operating Company shall use the record all non-working lamp in the routine maintenance and management function of the Integrated Roads Information System to produce the Monitoring Indicator.		
Data input	<p>A = total number of street lighting lamps on the network,</p> <p>B = total number of non-operational street lighting lamps during reporting period,</p> <p>C = total number of sign lamps on the network,</p> <p>D = total number of non-operational sign lamps during reporting period,</p> <p>E = total number of bollard lamps on the network,</p> <p>F = total number of non-operational bollard lamps during reporting period.</p>		
Formula	<p>Monitoring Indicator for street lighting = $((A - B) / A) \times 100\%$</p> <p>Monitoring Indicator for lit signs = $((C - D) / C) \times 100\%$</p> <p>Monitoring Indicator for lit bollards = $((E - F) / E) \times 100\%$</p> <p>Reported Monitoring Indicator = $((A+C+E) - (B+D+F)) / (A+C+E) \times 100\%$</p>		
Required supporting information	<p>In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	Monthly	Data Source	routine maintenance and management function of the Integrated Roads Information System
Return Format	Percentage	Decimal places	1

Monitoring Indicator 02			
Title	Network availability		
Measure Description	The lane length availability on the Unit.		
Measure Aim	To measure lane availability in terms of lane/km/hours.		
Methodology	The Operating Company shall use the retrospective records of traffic management required by Schedule 3 Part 7 to produce the Monitoring Indicator.		
Data input	A = lane km of available network, B = lane/km/hours of closures (Sum for all closures).		
Formula	Monitoring Indicator = (B) / (A x 24 x days in reporting period).		
Required supporting information	In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information: <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	Monthly	Data Source	Retrospective traffic management reports provide by the Operating Company as required by Schedule 3 Part 7
Return Format	Value	Decimal places	0

Monitoring Indicator 03			
Title	Traffic disruption caused by un-programmed works		
Measure Description	The lane length and duration unavailable on the Unit due to un-programmed works.		
Measure Aim	To measure disruption caused by un-programmed works in terms of lane/km/hours.		
Methodology	The Operating Company shall use the retrospective records of traffic management required by Schedule 3 Part 7 to produce the Monitoring Indicator.		
Data input	A = length of un-programmed lane closed in km, B = duration of closure in hours.		
Formula	Monitoring Indicator = A x B		
Required supporting information	In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information: <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	Monthly	Data Source	Proposed weekly traffic management programme and retrospective traffic management reports provide by the Operating Company as required by Schedule 3 Part 7
Return Format	Value	Decimal places	0

Monitoring Indicator 04	
Title	Orders against Budget
Measure Description	Percentage of ordered work against budget.
Measure Aim	To measure value of work Ordered for the current Financial Year at the end of each reporting period against the budget for the Financial Year as set at the end of the reporting period.
Methodology	<p>Analysis for each budget heading shall be carried out.</p> <p>The ordered work value shall be calculated by summing the ordered work values for each scheme as recorded in contract control and management function of the Integrated Roads Information System at the end of each reporting period.</p> <p>The budget value shall be the current Financial Year budget as notified in writing by Transport Scotland. Where budget values are varied during the year, the last notified value shall be used.</p>
Data input	<p>A = sum of Ordered Work for all routine/cyclic schemes, B = notified Financial Year Budget for routine/cyclic schemes, C = sum of Ordered Work for all Structural Maintenance schemes, D = notified Financial Year Budget for Structural Maintenance schemes, E = sum of Ordered Work for all Structures schemes, F = notified Financial Year Budget for Structures schemes, G = sum of Ordered Work for all Minor Improvement schemes, H = notified Financial Year Budget for Minor Improvement schemes, I = sum of Ordered Work for all Strategic Road Safety schemes, J = notified Financial Year Budget for Strategic Road Safety schemes.</p>
Formula	<p>Monitoring Indicator for routine and cyclic = $A/B \times 100\%$ Monitoring Indicator for Structural Maintenance = $C/D \times 100\%$ Monitoring Indicator for Structures = $E/F \times 100\%$ Monitoring Indicator for Minor Improvements = $G/H \times 100\%$ Monitoring Indicator for Strategic Road Safety schemes = $I/J \times 100\%$ Reported Monitoring Indicator = $(A+C+E+G+I) / (B+D+F+H+J) \times 100\%$</p>

Monitoring Indicator 04			
Required supporting information	In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information: <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. • Any significant findings as a result of further analysis by route, work code or expenditure type. 		
Measurement Period	Monthly	Data Source	contract control and management function of the Integrated Roads Information System
Return Format	Percentage	Decimal places	0

Monitoring Indicator No. 05			
Title	Works Contracts invoice submissions		
Measure Description	Percentage of Works Contractor invoices submitted to Transport Scotland by the Operating Company within the required timescales.		
Measure Aim	To monitor efficiency of Operating Companies process for turnaround of Works Contractor invoices enabling Transport Scotland to make payment within contractual timescales.		
Methodology	The Operating Company shall use the records of the date the invoice is received, the date the invoice is submitted to transport Scotland or rejected and the due submission date, which is the date the invoice is received plus 14 calendar days, as recorded in accordance with the requirements of Schedule 6 Part 1, to produce the Monitoring Indicator.		
Data input	<p>A = number of Works Contractor invoice submission dates due during the reporting period,</p> <p>B = number of Works Contractor invoices submitted or rejected on time, with submission dates due during the reporting period.</p>		
Formula	Monitoring Indicator = $B/A \times 100\%$		
Required supporting information	<p>In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	Monthly	Data Source	Records required by Schedule 6 Part 1
Return Format	percentage	Decimal places	0

Monitoring Indicator No. 06			
Title	Accuracy of Operation cost estimates		
Measure Description	Accuracy of Site Operations cost estimates.		
Measure Aim	Measure the accuracy of the Operating Companies estimates for Operations.		
Methodology	<p>For each Site Operation the Operating Company use the record of the estimate, out turn value and scheme completion date in contract control and management function of the Integrated Roads Information System to produce the Monitoring Indicator.</p> <p>For each scheme the quantum accuracy shall be calculated and the monitoring indicator based on all Operations completed during the previous 3 months or number of months elapsed after the Commencement of Service Date which ever is the lesser.</p>		
Data input	<p>For each scheme the following data shall be used:</p> <p>A = Site Operation cost estimate, B = Site Operation out turn value.</p>		
Formula	<p>The accuracy for each scheme shall be calculated:</p> $\text{Monitoring Indicator for scheme} = (1 - \sqrt{(A-B)/A})^2 \times 100\%$ <p>Overall Monitoring Indicator shall be the arithmetic average of accuracy percentages for individual schemes completed in the previous 3 months or number of months elapsed after the Commencement of Service Date which ever is the lesser.</p>		
Required supporting information	<p>In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	Monthly	Data Source	contract control and management function of the Integrated Roads Information System
Return Format	percentage	Decimal places	0

Monitoring Indicator No. 07			
Title	Disputed items in invoice		
Measure Description	Percentage value of disputed items against the total value of the Statement submitted by the Operating Company.		
Measure Aim	To measure success in minimising disputed items.		
Methodology	The Operating Company shall use the information in contract control and management function of the Integrated Roads Information System to produce the Monitoring Indicator.		
Data input	A = total value of the statement submitted by the Operating Company including disputed items, B = value of disputed items of the statement submitted by the Operating Company.		
Formula	Monitoring Indicator = $B/A \times 100\%$		
Required supporting information	In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information: <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	Monthly	Data Source	contract control and management function of the Integrated Roads Information System
Return Format	Percentage	Decimal places	0

Monitoring Indicator No. 08			
Title	Operations Instructions completed on target		
Measure Description	Percentage of Operations Instructions completed by the target date.		
Measure Aim	To measure success in completing Operations Instructions.		
Methodology	The Operating Company shall use the proposed and actual completion dates for each Operations Instructions in the contract control and management function of the Integrated Roads Information System to produce the Monitoring Indicator.		
Data input	<p>A = number of Operations Instructions programmed for completion during reporting period,</p> <p>B = number of Operations Instructions programmed for completion during reporting period with a valid actual completion date entered.</p>		
Formula	Monitoring Indicator = $B/A \times 100\%$		
Required supporting information	<p>In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	Monthly	Data Source	contract control and management function of the Integrated Roads Information System
Return Format	Percentage	Decimal places	0

Monitoring Indicator No. 09			
Title	Staff turnover		
Measure Description	Percentage staff turnover during last 12 months.		
Measure Aim	To measure staff turnover.		
Methodology	The Operating Company shall use the records required by Schedule 5 Part 1 of the number of staff directly employed on the Unit leaving and the number of direct employees employed on the Unit during each reporting period to produce the Monitoring Indicator.		
Data input	P = number of direct employees leaving during previous 12 months*, Q = average number of all direct employees during previous 12 months*. * or number of months elapsed after the Commencement of Service Date which ever is the lesser.		
Formula	Monitoring Indicator = $P/Q \times 100\%$		
Required supporting information	In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information: <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	Monthly	Data Source	Operating Company records
Return Format	Percentage	Decimal places	0

Monitoring Indicator 10			
Title	Staff absence		
Measure Description	Average number of days lost due to sickness per employee.		
Measure Aim	To record the average number of days lost due to sickness.		
Methodology	The Operating Company shall use the records required by Schedule 5 Part 1 of the number of sick days taken by direct employees employed on the Unit and the number of direct employees employed on the Unit during each reporting period to produce the Monitoring Indicator.		
Data input	<p>P = sum of working days lost during previous 12 months*,</p> <p>Q = average number of all direct employees during previous 12 months*.</p> <p>* or number of months elapsed after the Commencement of Service Date which ever is the lesser.</p>		
Formula	Average days absence per person = P/Q		
Required supporting information	<p>In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	monthly	Data Source	Operating Company staff records
Return Format	Day	Decimal places	0

Monitoring Indicator 11			
Title	Working hours		
Measure Description	Average hours worked per employee in last 12 months.		
Measure Aim	To measure the average number of hours worked per employee.		
Methodology	The Operating Company shall use the records required by Schedule 5 Part 1 of the number of working hours of direct employees employed on the Unit and the number of direct employees employed on the Unit during each reporting period to produce the Monitoring Indicator.		
Data input	<p>P = sum of working hours by all employees during previous 12 months*,</p> <p>Q = average of all direct employees during previous 12 months.</p> <p>* or number of months elapsed after the Commencement of Service Date which ever is the lesser.</p>		
Formula	Average working hours per person per week = P/Q/52		
Required supporting information	<p>In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	monthly	Data Source	Operating Company records
Return Format	Hours per week	Decimal places	0

Monitoring Indicator 12			
Title	Training		
Measure Description	Average number of training hours per employee provided in last 12 months.		
Measure Aim	To measure the Operating Companies performance in providing training and development to all direct employees.		
Methodology	The Operating Company shall use records required by Schedule 5 Part 1 of all training undertaken by direct employees employed on the Unit and the total number of direct employees employed on the Unit during each reporting period to produce the Monitoring Indicator.		
Data input	P = sum of all training hours provided during previous 12 months*, Q = average number of all direct staff during previous 12 months*. * or number of months elapsed after the Commencement of Service Date which ever is the lesser.		
Formula	Average training hours per person = P/Q		
Required supporting information	In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information: <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	Monthly	Data Source	Operating Company records
Return Format	Hours	Decimal places	0

Monitoring Indicator No. 13			
Title	Observations Resulting from Inspections and Hazard Notice responses		
Measure Description	Percentage of Observations Resulting from Inspections and Hazard Notices responded to within the required timescale.		
Measure Aim	To measure the number of Observations Resulting from Inspections and Hazard Notices responded to within the required timescale.		
Methodology	The Operating Company shall use the records necessary to comply with the requirements of Schedule 7 Part 1, to produce the Monitoring Indicator.		
Data input	<p>A = total number of Observations Resulting from Inspections and Hazard Notices (combined) due a response during the reporting period,</p> <p>B = total number of Observations Resulting from Inspections and Hazard Notices (combined) due a response during the reporting period and responded to by the required response date.</p>		
Formula	Monitoring Indicator = $(B/A) \times 100\%$		
Required supporting information	<p>In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information:</p> <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	Monthly	Data Source	Records necessary to comply with the requirements of Schedule 7 Part 1
Return Format	Percentage	Decimal places	0

Monitoring Indicator No. 14			
Title	Remedial Notices		
Measure Description	Number of Remedial Notices.		
Measure Aim	To measure the performance of the Operating Company in dealing with Non-Conformances.		
Methodology	The Operating Company shall use the records required by Schedule 5 Part 1 of the Remedial Notices issued during each reporting period and any remedial notices remaining open from previous periods to produce the Monitoring Indicator.		
Data input	A = Total number of Remedial Notices issued during reporting period. B = Total number of Remedial Notices from previous reporting periods remaining open at the end of the current reporting period.		
Formula	Total number of remedial notices issued and still open = A + B		
Required supporting information	In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information: <ul style="list-style-type: none"> • Data input values. • Commentary on any Remedial Notices issued during each reporting period and any remedial notices remaining open from previous periods. 		
Measurement Period	Monthly	Data Source	Operating Company records
Return Format	Number	Decimal places	0

Monitoring Indicator No. 15			
Title	Innovation		
Measure Description	Financial value of innovations introduced by the Operating Company.		
Measure Aim	To measure the Operating Company's performance in delivering an efficient and effective service whilst minimising costs.		
Methodology	The Operating Company shall use the records of innovations submitted and accepted by the Director and the agreed financial benefits attributable to each innovation, as referred to in Schedule 1, to calculate the total financial benefit.		
Data input	The financial benefit to Transport Scotland of each introduced innovation.		
Formula	Total financial value to Transport Scotland of benefits of all accepted innovations to date = sum of individual innovation benefit financial values.		
Required supporting information	In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information: <ul style="list-style-type: none"> Financial benefit for each innovation accepted by the Director. 		
Measurement Period	Monthly	Data Source	Operating Company Records
Return Format	Value (£)	Decimal places	0

Monitoring Indicator No. 16			
Title	Collaboration		
Measure Description	Value of collaborative services provided by Operating Company.		
Measure Aim	To measure the Operating Company's performance in providing efficiency savings in the provision of public sector services through collaborative agreements.		
Methodology	The Operating Company shall use the records in the Collaboration Schedule, referred to in Schedule 3 Part 9, to produce the Monitoring Indicator.		
Data input	The financial value of goods and services provided to local authorities through collaboration agreements.		
Formula	Monitoring Indicator = sum of the values of goods and services provided to local authorities through collaboration agreements.		
Required supporting information	None		
Measurement Period	Monthly	Data Source	Operating Company records
Return Format	Value	Decimal places	0

Monitoring Indicator No. 17			
Title	Sustainability – use of reused, recycled, renewable materials		
Measure Description	Percentage of raw materials used sourced from reused, recycled or renewable sources.		
Measure Aim	To encourage sustainability.		
Methodology	The Operating Company shall use the records required by Schedule 5 Part 8 of the quantities of raw materials used and quantities of raw materials obtained from recycled, reused, renewable or certified sources to produce the Monitoring Indicator.		
Data input	A = total raw materials consumed (tonnes), B = total raw materials from a recycled or reused source (tonnes), C = total raw materials from a renewable or certified source (tonnes).		
Formula	Percentage of raw materials from reused, recycled or renewable sources (tonnes) = $(B + C) / A \times 100\%$		
Required supporting information	In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information: <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	Monthly	Data Source	Operating Company Records
Return Format	Percentage	Decimal places	0

Monitoring Indicator No. 18			
Title	Sustainability – waste generation and management		
Measure Description	Percentage of waste materials reused or recycled.		
Measure Aim	To measure the amount of waste generated by the OC's operations.		
Methodology	The Operating Company shall use the shall use the records required by Schedule 5 Part 8 of the quantities of construction and demolition waste created and its destination to produce the Monitoring Indicator.		
Data input	A = total construction and demolition waste reused in Operations (tonnes), B = total construction and demolition waste recycled (tonnes), C = total construction and demolition waste taken to landfill (tonnes).		
Formula	Percentage of waste materials reused or recycled (tonnes). = $(A + B) / (A + B + C) \times 100\%$		
Required supporting information	In addition to reporting the Monitoring Indicator, the Operating Company shall also provide the following supporting information: <ul style="list-style-type: none"> • Data input values. • Any trends in the figures. 		
Measurement Period	Monthly	Data Source	Operating Company Records
Return Format	Percentage	Decimal places	0

Monitoring Indicator No. 19			
Title	Salt Usage		
Measure Description	Total amount of salt used in each contract year as a percentage of the amount used in the first year of the contract (used as benchmark). Base salt usage to be established in the first contract year and Monitoring Indicator to be reported annually from the second Contract Year onwards).		
Measure Aim	To monitor the amount of salt used during the winter season.		
Methodology	The Operating Company shall use the route cards and the data logging system fitted into the Winter Service vehicles to provide the data to produce this monitoring indicator.		
Data input	Total amount of salt used per month in tonnes.		
Formula	Total amount of salt used_aggregated for the contract year as a percentage of the amount used in the first year of the contract.		
Required supporting information			
Measurement Period	Monthly	Data Source	Operating Company Records & Data Logging System
Return Format	Percentage	Decimal places	0

Monitoring Indicator No. 20			
Title	Weather Forecast Accuracy		
Measure Description	Total number of accurate forecasts provided in each month (during the Winter Service Period) as a percentage of the total number of forecasts provided in that same month.		
Measure Aim	To monitor the accuracy of forecasts obtained during the winter season.		
Methodology	The Operating Company shall use data provided by its expert weather forecasting service to produce this monitoring indicator.		
Data input	Frost vs. No Frost and No Frost vs. Frost.		
Formula	Number of accurate forecasts during the month/ Total number of forecasts during the month x 100.		
Required supporting information			
Measurement Period	Monthly	Data Source	Operating Company Records
Return Format	Percentage	Decimal places	0

This is Annex 5.6/C to Schedule 5 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 6

PERFORMANCE MEASUREMENT

ANNEX 5.6/C – Payment Adjustment Factors

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 6

PERFORMANCE MEASUREMENT

ANNEX 5.6/C – Payment Adjustment Factors

No.	Applicable item
01	Schedule 7 Part 1 Repair of Category 1 Defects of Value not more than £10,000
02	Schedule 7 Part 3 Incident Response Operations for Incidents of Value not more than £10,000
03	Schedule 7 Part 1 Safety Inspections, Safety Patrols and Night Time Safety Patrols
04	Schedule 7 Part 1 Detailed Inspections
05	Schedule 7 Part 1 Linear Drainage System
06	Schedule 7 Part 1 Gullies, Catchpits, Interceptors, Soakaways, Manholes and Oil Separators
07	Schedule 7 Part 1 Drainage Grips
08	Schedule 7 Part 1 Filter material
09	Schedule 7 Part 1 Minimal Frequency Grass Cutting
10	Schedule 7 Part 1 Road Restraint systems
11	Schedule 7 Part 1 Road Traffic Signs
12	Schedule 7 Part 1 High Frequency Grass Cutting
13	Schedule 7 Part 1 Medium Frequency Grass Cutting
14	Schedule 7 Part 1 Low Frequency Grass Cutting

Payment Adjustment Factor No. 1	
Applicable Item	Schedule 7 Part 1 Repair of Category 1 Defects of Value not more than £10,000
Measurement description	The percentage of all Category 1 Defect Repairs that are carried out within the required timescale.
Measure Aim	To adjust monthly payments to reflect the Operating Company's performance in undertaking the Repair of Category 1 Defects.
Methodology	The Operating Company shall use the records in the routine maintenance and management function of the Integrated Roads Information System of the actual dates and times when the Operating Company was aware of the presence of a Category 1 Defect and the date and time of all temporary and permanent repairs of Category 1 Defects to calculate the Payment Adjustment Factor for the month.
Data input	<p>A = total number of Category 1 Defect temporary repairs due during the month,</p> <p>B = total number of Category 1 Defect temporary repairs repaired on time during the month,</p> <p>C = total number of Category 1 Defect permanent repairs due during the month,</p> <p>D = total number of Category 1 Defect permanent repairs repaired on time during the month.</p>
Formula	Payment Adjustment Factor* = $((B + D) / (A + C)) \times 100\%$

*rounded to nearest whole percentage point

Payment Adjustment Factor No. 2	
Applicable Item	Schedule 7 Part 3 Incident Response Operations for Incidents of Value not more than £10,000
Measure Description	Percentage of all Incident Response Operations that are attended to within the required timescale.
Measure Aim	To measure the Operating Company's performance in and adjust monthly payments to reflect performance.
Methodology	The Operating Company shall use the records in the incident response register of the actual date and time when the Operating Company was aware of the requirement for all Incident Response Operations and the date and time of all Incident Response Operations to calculate the Payment Adjustment Factor for the month.
Data input	A = total number of Incident Response Operations (including initial, secondary and contingency responses) required during the month, B = total number of Incident Response Operations (including initial, secondary and contingency responses) attended to within the required timescale during the month.
Formula	Payment Adjustment Factor* = $(B/A) \times 100\%$

*rounded to nearest whole percentage point

Payment Adjustment Factor No. 3	
Applicable Item	Schedule 7 Part 1 Safety Inspections, Safety Patrols and Night Time Safety Patrols
Measure Description	Percentage of days on which link/sections within the Unit are within the required inspection interval for Safety Inspections, Safety Patrols and Night time Safety Patrols.
Measure Aim	To adjust monthly payments to reflect the Operating Company's performance in carrying out of Safety Inspections, Safety Patrols and Night time Safety Patrols.
Methodology	The Operating Company shall use the records in the routine maintenance and management function of the Integrated Roads Information System of the actual date and time when the Operating Company carried out Safety Inspections, Safety Patrols and Night time Safety Patrols to calculate the Payment Adjustment Factor for the month.
Data input	<p>A = the number of days during the month on which each link/section is compliant with the specification in respect of Safety Inspections, aggregated for all link/sections recorded in routine maintenance and management function of the Integrated Roads Information System,</p> <p>B = the number of days during the month on which each link/section is not compliant with the specification in respect of Safety Inspections, aggregated for all link/sections recorded in routine maintenance and management function of the Integrated Roads Information System,</p> <p>C = the number of days during the month on which each link/section is compliant with the specification in respect of Safety Patrols, aggregated for all link/sections recorded in routine maintenance and management function of the Integrated Roads Information System,</p> <p>D = the number of days during the month on which each link/section is not compliant with the specification in respect of Safety Patrols, aggregated for all link/sections recorded in routine maintenance and management function of the Integrated Roads Information System,</p> <p>E = the number of days during the month on which each link/section is compliant with the specification in respect of Night Time Safety Patrols, aggregated for all link/sections recorded in routine maintenance and management function of the Integrated Roads Information System,</p> <p>F = the number of days during the month on which each link/section is not compliant with the specification in respect of Night Time Safety Patrols, aggregated for all link/sections recorded in routine maintenance and management function of the Integrated Roads Information System.</p>
Formula	Payment Adjustment Factor* = $((A + C + E) / (A + B + C + D + E + F)) \times 100\%$

*rounded to nearest whole percentage point

Payment Adjustment Factor No. 4	
Applicable Item	Schedule 7 Part 1 Detailed Inspections
Measure Description	Percentage of Detailed Inspections carried out within the required intervals.
Measure Aim	To adjust monthly payments to reflect the Operating Company's performance in carrying out of Detailed Inspections.
Methodology	The Operating Company shall use the records in the routine maintenance and management function of the Integrated Roads Information System of the actual date and time when the Operating Company carried out Detailed Inspections on each inventory item to calculate the Payment Adjustment Factor for the month.
Data input	<p>A = the number of inventory items where the inspection activity is compliant with the required detailed inspection activity interval, aggregated for all inventory items and for all detailed inspection activities recorded in routine maintenance and management function of the Integrated Roads Information System,</p> <p>B = the number of inventory items where the inspection activity is not compliant with the required detailed inspection activity interval, aggregated for all inventory item and for all detailed inspection activities recorded in routine maintenance and management function of the Integrated Roads Information System.</p>
Formula	Payment Adjustment Factor* = $((A) / (A + B)) \times 100\%$

*rounded to nearest whole percentage point

Payment Adjustment Factor No. 5	
Applicable Item	Schedule 7 Part 1 Linear Drainage System
Measurement description	The percentage of Linear Drainage System asset maintained within required maintenance interval.
Measure Aim	To adjust monthly payments to reflect the Operating Company's performance in carrying out of maintenance of the Linear Drainage System.
Methodology	The Operating Company shall use the records in the routine maintenance and management function of the Integrated Roads Information System of the actual date and time when the Operating Company carried out maintenance of the Linear Drainage System to calculate the Payment Adjustment Factor for the month.
Data input	A = total number of Linear Drainage System inventory items recorded within the Unit at the end of the month, B = total number of Linear Drainage System inventory items where the last maintenances action is within the required maintenance interval at the end of the month.
Formula	Payment Adjustment Factor* = $(B / A) \times 100\%$

*rounded to nearest whole percentage point

Payment Adjustment Factor No. 6	
Applicable Item	Schedule 7 Part 1 Gullies, Catchpits, Interceptors, Soakaways, Manholes and Oil Separators
Measurement description	The percentage of Gullies, Catchpits, Interceptors, Soakaways, Manholes and Oil Separators asset maintained within required maintenance interval.
Measure Aim	To adjust monthly payments to reflect the Operating Company's performance in carrying out of maintenance of Gullies, Catchpits, Interceptors, Soakaways, Manholes and Oil Separators.
Methodology	The Operating Company shall use the records in the routine maintenance and management function of the Integrated Roads Information System of the actual date and time when the Operating Company carried out maintenance of Gullies, Catchpits, Interceptors, Soakaways, Manholes and Oil Separators to calculate the Payment Adjustment Factor for the month.
Data input	A = total number of Gullies, Catchpits, Interceptors, Soakaways, Manholes and Oil Separators inventory items recorded within the Unit at the end of the month, B = total number of Gullies, Catchpits, Interceptors, Soakaways, Manholes and Oil Separators inventory items where the last maintenances action is within the required maintenance interval at the end of the month.
Formula	Payment Adjustment Factor* = (B / A) x 100%

*rounded to nearest whole percentage point

Payment Adjustment Factor No. 7	
Applicable Item	Schedule 7 Part 1 Drainage Grips
Measurement description	The percentage of Drainage Grip asset maintained within required maintenance interval.
Measure Aim	To adjust monthly payments to reflect the Operating Company's performance in carrying out of maintenance of all Drainage Grips.
Methodology	The Operating Company shall use the records in the routine maintenance and management function of the Integrated Roads Information System of the actual date and time when the Operating Company carried out maintenance of Drainage Grips to calculate the Payment Adjustment Factor for the month.
Data input	A = total number of Drainage Grip inventory items recorded within the Unit at the end of the month, B = total number of Drainage Grip inventory items where the last maintenance action is within the required maintenance interval at the end of the month.
Formula	Payment Adjustment Factor* = $(B / A) \times 100\%$

*rounded to nearest whole percentage point

Payment Adjustment Factor No. 8	
Applicable Item	Schedule 7 Part 1 Filter material
Measurement description	The percentage of Filter Material asset maintained within the required maintenance interval.
Measure Aim	To adjust monthly payments to reflect the Operating Company's performance in carrying out maintenance of Filter Material.
Methodology	The Operating Company shall use the records in the routine maintenance and management function of the Integrated Roads Information System of the actual date and time when the Operating Company carried out maintenance of the Filter Material to calculate the Payment Adjustment Factor for the month.
Data input	A = total aggregate length of Filter Material inventory items recorded within the Unit at the end of the month, B = total aggregate length of Filter Material inventory items where the last maintenances action is within the required maintenance interval at the end of the month.
Formula	Payment Adjustment Factor* = $(B / A) \times 100\%$

*rounded to nearest whole percentage point

Payment Adjustment Factor No. 9	
Applicable Item	Schedule 7 Part 1 Minimal Frequency Grass Cutting
Measurement description	The percentage of minimal frequency grass asset maintained within required maintenance interval.
Measure Aim	To adjust monthly payments to reflect the Operating Company's performance in carrying out maintenance of all minimal frequency grass areas.
Methodology	The Operating Company shall use the records in the routine maintenance and management function of the Integrated Roads Information System of the actual surface area of inventory plots and the actual date and time when the Operating Company carried out maintenance of the minimal frequency grass asset to calculate the Payment Adjustment Factor for the month.
Data input	A = total aggregate surface area of minimal frequency grass inventory plots within the Unit at the end of the month, B = total aggregate surface area of minimal frequency grass inventory plots where the last maintenance action is within the required maintenance interval at the end of the month.
Formula	Payment Adjustment Factor* = $(B / A) \times 100\%$

*rounded to nearest whole percentage point

Payment Adjustment Factor No. 10	
Applicable Item	Schedule 7 Part 1 Road Restraint systems
Measurement description	The percentage of Tensioned Road Restraint Systems asset maintained within required maintenance interval.
Measure Aim	To adjust monthly payments to reflect the Operating Company's performance in carrying out of maintenance of the Tensioned Vehicle Restraint Systems.
Methodology	The Operating Company shall use the records in the routine maintenance and management function of the Integrated Roads Information System of the actual date and time when the Operating Company carried out maintenance of the Tensioned Vehicle Restraint Systems to calculate the Payment Adjustment Factor for the month.
Data input	A = total linear length of Tensioned Vehicle Restraint Systems inventory items recorded within the Unit at the end of the month, B = total linear length of Tensioned Vehicle Restraint Systems inventory items where the last maintenances action is within the required maintenance interval at the end of the month.
Formula	Payment Adjustment Factor* = $(B / A) \times 100\%$

*rounded to nearest whole percentage point

Payment Adjustment Factor No. 11	
Applicable Item	Schedule 7 Part 1 Road Traffic Signs
Measurement description	The percentage of Road Traffic Signs maintained within required maintenance interval.
Measure Aim	To measure the Operating Company's carrying out of maintenance of the Road Traffic Signs and adjust monthly payments to reflect performance.
Methodology	The Operating Company shall use the records in the routine maintenance and management function of the Integrated Roads Information System of the actual date and time when the Operating Company carried out maintenance of the Road Traffic Signs to calculate the Payment Adjustment Factor for the month.
Data input	A = total number of Road Traffic Signs inventory items recorded within the Unit at the end of the month, B = total number of Road Traffic Signs inventory items where the last maintenance action is within the required maintenance interval at the end of the month.
Formula	Payment Adjustment Factor* = $(B / A) \times 100\%$

*rounded to nearest whole percentage point

Payment Adjustment Factor No. 12	
Applicable Item	Schedule 7 Part 1 High Frequency Grass Cutting
Measurement description	The percentage of the required high frequency grass cutting area completed at the end of each month.
Measure Aim	To adjust monthly payments to reflect the Operating Company's progress in carrying out maintenance of all high frequency grass areas.
Methodology	The Operating Company shall use the records in the routine maintenance and management function of the Integrated Roads Information System of the actual date and time when the Operating Company carried out maintenance of the high frequency grass asset to calculate the Payment Adjustment Factor for the month.
Data input	<p>A = the product of the surface area and minimum number of cuts required for each grass plot aggregated for all grass plots recorded within the Unit at the end of the month as requiring high frequency cutting,</p> <p>B = the product of the surface area and number of cuts completed, up to a maximum of the minimum number of cuts required for the plot, for each grass plot aggregated for all grass plots recorded within the Unit at the end of the month as requiring high frequency cutting.</p>
Formula	Payment Adjustment Factor* = (B / A) x 100%

*rounded to nearest whole percentage point

Payment Adjustment Factor No 13	
Applicable Item	Schedule 7 Part 1 Medium Frequency Grass Cutting
Measurement description	The percentage of the required medium frequency grass cutting area completed at the end of each month.
Measure Aim	To adjust monthly payments to reflect the Operating Company's progress in carrying out maintenance of all medium frequency grass areas.
Methodology	The Operating Company shall use the records in the routine maintenance and management function of the Integrated Roads Information System of the actual date and time when the Operating Company carried out maintenance of the medium frequency grass asset to calculate the Payment Adjustment Factor for the month.
Data input	<p>A = the product of the surface area and minimum number of cuts required for each grass plot aggregated for all grass plots recorded within the Unit at the end of the month as requiring medium frequency cutting,</p> <p>B = the product of the surface area and number of cuts completed, up to a maximum of the minimum number of cuts required for the plot, for each grass plot aggregated for all grass plots recorded within the Unit at the end of the month as requiring medium frequency cutting.</p>
Formula	Payment Adjustment Factor* = $(B / A) \times 100\%$

*rounded to nearest whole percentage point

Payment Adjustment Factor No 14	
Applicable Item	Schedule 7 Part 1 Low Frequency Grass Cutting
Measurement description	The percentage of the required low frequency grass cutting area completed at the end of each month.
Measure Aim	To adjust monthly payments to reflect the Operating Company's progress in carrying out maintenance of all low frequency grass areas.
Methodology	The Operating Company shall use the records in the routine maintenance and management function of the Integrated Roads Information System of the actual date and time when the Operating Company carried out maintenance of the low frequency grass asset to calculate the Payment Adjustment Factor for the month.
Data input	<p>A = the product of the surface area and minimum number of cuts for each grass plot aggregated for all grass plots recorded within the Unit at the end of the month as requiring low frequency cutting,</p> <p>B = the product of the surface area and number of cuts completed, up to a maximum of the minimum number of cuts required for the plot, for each grass plot aggregated for all grass plots recorded within the Unit at the end of the month as requiring low frequency cutting.</p>
Formula	Payment Adjustment Factor* = (B / A) x 100%

*rounded to nearest whole percentage point

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 7

OPERATING COMPANY OFFICES AND DEPOTS

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 7

OPERATING COMPANY OFFICES AND DEPOTS

1. OPERATING COMPANY OFFICES AND DEPOTS

1.1 Operating Company Central Office

- 1.1.1 The location and details of the Central Office shall be as referred to in Annex 5.7/A of this Part.
- 1.1.2 The Operating Company shall not change the location or any other material aspect of the Central Office without the prior written consent of the Director. An application to change the location or any other material aspect of the Central Office shall be made by the Operating Company in writing to the Director. This shall contain details of the proposed change. The Director shall consent to or reject in writing any such application within 14 days of receipt.
- 1.1.3 Within the Central Office, the Operating Company shall provide an office for the exclusive use of the Director's and the Performance Audit Group's staff. This office shall be available during all normal working hours and be accessible through the normal office reception area. This office shall be capable of accommodating up to four people and be provided with furniture and equipment that allows the Director's and the Performance Audit Group's staff to operate efficiently. As a minimum, this office shall:
- (i) have a lockable door with keys for the exclusive use of the Director's and the Performance Audit Group's nominated staff,
 - (ii) have heating, lighting and four power supply points per desk,
 - (iii) be maintained and serviced by the Operating Company to the same standard as the rest of the Central Office,
 - (iv) have desks and chairs compliant with the European Union directions for working at computers,
 - (v) have a colour laser printer capable of printing A4 and A3 sheets, with connections suitable for a laptop computer using a universal series bus 2.0 connection and certified under the European Union Energy Star Programme. The printer must be capable of being used using the HP universal driver,
 - (vi) have a broadband connection to the internet that runs at not less than 4Mb/second and has no download or upload limits with at least one network cable at each desk,
 - (vii) have a wireless broadband connection to the internet that runs at not less than 4Mb/second and has no download or upload limits. This connection shall be separate from and in addition to the broadband connection referred in (vi) above and shall be for use of the Performance Audit Group,
 - (viii) have a scanner capable of scanning documents up to A3 in size with connections suitable for a laptop computer,

- (ix) have a supply of A4 and A3 paper for the printer which is made from 100 percent recycled sources and maintained and replenished by the Operating company throughout the Contract Period,
- (x) have a supply of printer consumables for the printer maintained and replenished by the Operating Company throughout the Contract Period, and
- (xi) have an A3/A4 photocopier with paper made from 100 percent recycled sources, both of which shall be certified under the European Union Energy Star Programme.

1.1.4 The Operating Company shall provide at least two separate video conferencing facilities at its Central Office and allow the Director and the Performance Audit Group access and use of such video conferencing facilities when required.

1.1.5 The Operating Company shall ensure that the Director's and the Performance Audit Group's staff has full access to welfare facilities within the Central Office including toilets, hot water, rest areas and fresh water.

1.1.6 The Operating Company shall ensure that a minimum of four parking spaces within the Central Office car park are reserved and available for the use of the Director's and the Performance Audit Group's staff.

1.2 Operating Company's Control Room

1.2.1 The location and details of the Operating Company's control room shall be within its Central Office as referred to in Annex 5.7/A of this Part.

1.2.2 The Operating Company shall not change the location or any other material aspect of the control room without the prior written consent of the Director. An application providing full details of the proposed change of location or any other material aspect of the control room shall be made by the Operating Company in writing to the Director. The Director shall consent to or reject in writing any such application within 14 days of receipt.

1.2.3 The Operating Company's control room shall:

- (i) enable the Operating Company to provide a single point of contact for all of its Operations,
- (ii) provide an environment which is suitable to support decision making,
- (iii) enable the Operating Company to efficiently manage, coordinate and control its Operations,
- (iv) enable the Operating Company to coordinate and support working outwith the Unit, including dealing with emergencies, roadworks, Incidents, and winter resilience issues,
- (v) operate on a 24 hours a day, seven days a week basis,
- (vi) have sufficient, suitable workstations for all staff working at computers,
- (vii) enable the Operating Company to access, view and use real-time data from various sources including closed circuit television feeds from the Traffic Scotland Operator's website, weather station closed circuit television, remote monitoring sites, road sensors, the locations of vehicles fitted with a

geographical positioning system and weather forecasting service data for Severe Weather and Winter Service Operations,

- (viii) have information and communication technology systems that can access all Records relating to the Trunk Road network as required to support the delivery of Operations, and
- (ix) enable the Operating Company to view anemometer wind speed displays from existing anemometers associated with the operation of Structures and the Trunk Road network.

1.3 Sub-Offices and Depots

1.3.1 Details of the Operating Company's sub-offices and depots shall be as referred to in Annex 5.7/A of this Part. This shall include the location and layout of each sub-office and depot, the Operations that shall be executed from each sub-office and depot, and the fleet management and maintenance activities to be undertaken at each sub-office and depot.

1.3.2 The Operating Company shall require prior written consent from the Director for:

- (i) any change in the location of any sub-office or depot, and
- (ii) a change in the Operations to be executed from any sub-office or depot.

The Operating Company shall submit an application in writing to the Director with details of the proposed change. The Director shall consent to or reject in writing any such application within 14 days of receipt.

1.4 Quarries and Tips

1.4.1 Details of the quarries and tips which Operating Company proposes to use for disposal of construction waste and all other waste shall be as referred to in Annex 5.7/A of this Part.

1.5 Material Stocks

1.5.1 The Operating Company shall not use or sell materials from its stocks for works which are not connected with this Contract.

1.5.2 The Operating Company shall ensure the safety and security of the materials in its depots.

1.5.3 The Operating Company shall maintain an inventory of the material stocks held at each depot and produce a monthly statement of the quantities of stocks held within the Unit. This monthly statement shall be held at the Central Office.

1.5.4 The Operating Company shall maintain sufficient stock levels to ensure compliance for the replacement of equipment during maintenance Operations to comply with the Specification.

1.6 Transport Scotland Property held by the Operating Company

1.6.1 An indicative list of all Transport Scotland property available for use under this Contract can be found in Annex 5.7/B of this Part. No later than 30 days before the end of the Mobilisation Period, the Operating Company shall review this list in conjunction with the outgoing operating company and provide a report to the Director confirming the details of all Transport Scotland property available for use under this Contract. This report shall include:

- (i) a description of all items,
 - (ii) details of the quantities of the items,
 - (iii) the location of the items, and
 - (iv) the condition of the items.
- 1.6.2 The Operating Company shall maintain the inventory of all Transport Scotland property. This shall contain a description of each item, the quantity, location and condition of all items and a record of the deployment or use of the items.
- 1.6.3 Subject to an Order, the Operating Company shall make arrangements with the outgoing operating company for the transfer of any items of Transport Scotland's property from the outgoing operating company's premises to the Operating Company's premises prior to the Commencement of Service Date.
- 1.6.4 The Operating Company shall provide safe and secure storage for all items of Transport Scotland property to prevent degradation of any item of Transport Scotland property. The Operating Company shall replace at no cost to the Director, any item of Transport Scotland property that is stolen or damaged whilst stored at its premises or on the Unit.
- 1.6.5 The Operating Company shall take possession of the Transport Scotland items and materials listed in Annex 5.7/B of this Part from the Commencement of Service Date. The Operating Company shall store, maintain, deploy and return to store all items of Transport Scotland property used to execute Operations.
- 1.6.6 The Operating Company shall regularly update the inventory and provide an updated inventory to the Director when:
- (i) a new item of Transport Scotland property has been provided,
 - (ii) any item of Transport Scotland property has been stolen or damaged, and
 - (iii) there has been a reduction in the quantities of items available.

This is Annex 5.7/A to Schedule 5 Part 7 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 7

OPERATING COMPANY OFFICES AND DEPOTS

ANNEX 5.7/A – Details of the Operating Company's Central Office, Depots and Offices

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 7

OPERATING COMPANY OFFICES AND DEPOTS

ANNEX 5.7/A – Details of the Operating Company's Central Office, Depots and Offices

1. Details of the Operating Company's Central Office

1.1.1 The Operating shall base its Central Office at:

Figure 1.1.1/A – Location Plan of Central Office

COMMERCIALLY SENSITIVE INFORMATION REDACTED

2. Details of the Operating Company's Control Room

2.1.1 The Operating shall base its Control Room at:

COMMERCIALLY SENSITIVE INFORMATION REDACTED

2.1.2 The Operations to be undertaken at the Control Room shall be as follows:

- (i) Provide a Customer Contact Enquiry Line.
- (ii) Liaise with Traffic Scotland.
- (iii) Liaise with Incident Liaison Officers.
- (iv) Co-ordinate Winter Service Actions via our Winter Service Manager / Officers.
- (v) Be in constant contact our Emergency Response Teams.
- (vi) Monitor all vehicle movements via GPS Tracking System.
- (vii) Provide communication updates via Twitter.
- (viii) Maintain Winter Action records on our Live Electronic Database.

3. Primary Depots and Offices

3.1.1 The Operating Company's primary depots and offices shall be as follows:

COMMERCIALLY SENSITIVE INFORMATION REDACTED

- 3.1.2 The Operations and the fleet management and maintenance to be undertaken at each primary depot and office shall be as follows:

COMMERCIALLY SENSITIVE INFORMATION REDACTED

4. Secondary Depots

- 4.1.1 The Operating Company's secondary depots shall be as follows:

COMMERCIALLY SENSITIVE INFORMATION REDACTED

- 4.1.2 The Operations and the fleet management and maintenance to be undertaken at each secondary depot and office shall be as follows:

COMMERCIALLY SENSITIVE INFORMATION REDACTED

5. Quarries and Tips

- 5.1.1 Location and details of all quarries and tips and the like for disposal of construction waste and all other waste.

COMMERCIALLY SENSITIVE INFORMATION REDACTED

Listed below are the quarries and tips that the Operating Company shall use to allow the disposal of all types of waste.

COMMERCIALLY SENSITIVE INFORMATION REDACTED

This is Annex 5.7/B to Schedule 5 Part 7 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 7

OPERATING COMPANY OFFICES AND DEPOTS

ANNEX 5.7/B – Transport Scotland Property held by the Operating Company

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 8

ENVIRONMENTAL SUSTAINABILITY AND WASTE

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 5 PART 8

ENVIRONMENTAL SUSTAINABILITY AND WASTE

1. INTRODUCTION

1.1 General Requirements

- 1.1.1 The Operating Company shall follow the principles of the Scottish Government's and Transport Scotland's requirements for sustainable development.
- 1.1.2 When undertaking any Operations, the Operating Company shall ensure all of its activities support and contribute towards the Scottish Minister's objectives and targets for carbon reduction.

2. REQUIREMENTS FOR SUSTAINABILITY

2.1 General

- 2.1.1 The Operating Company shall have documented procedures detailed in its Management System, to enable it to achieve the requirements of this Part through planning and executing all Operations associated with the management and maintenance of the Unit, including:

- (i) the work of sub-contractors and sub-consultants,
- (ii) the collection and reporting of data required by this Part, and
- (iii) certification and compliance with statutory requirements including licences, environmental permits, exemptions and waste transfer notes to meet the requirements of this Contract.

2.2 The Transport Scotland Carbon Management System

- 2.2.1 The Operating Company shall supply and record all data required to meet the requirements for carbon reporting, carbon management and carbon accounting as detailed in the Director's Carbon Management System. The relevant components of the Director's Carbon Management System are:

- (i) Carbon Management System Annual Account data template,
- (ii) TS Projects Carbon Tool (Data templates for Contractors are incorporated within the tool).

- 2.2.2 The Operating Company shall comply with the requirements of the Carbon Management System in accordance with the guidance contained within the system as amended by the Director from time to time.

- 2.2.3 The Director shall provide the Operating Company with the relevant components of the Carbon Management System listed in paragraph 2.2.1 of this Part. The Director shall notify the Operating Company of any subsequent changes made to the scope of the Carbon Management System and the Operating Company shall implement the changes.

2.3 Sustainability Requirements

2.3.1 For all Works Contracts with an Estimated Bid Value greater than £1,000,000, the Operating Company shall provide a report to the Director on the feasibility of sourcing at least 10% of the materials required for the Scheme from recycled, secondary or re-used sources. When required by the Director, the Operating Company shall include a requirement for such material sourcing within the Works Contract.

2.3.2 The Operating Company is expected to make an application for an award under the *Civil Engineering Environment Quality Assessment and Award Scheme Term Contracts Version* and achieve interim verifications in accordance with the timescales set out in this document.

Once awarded an interim verification, the Operating Company shall achieve a final verification during the last Annual period.

2.4 Site Waste Management Plans

2.4.1 The Operating Company, as part of its Design as stated in Schedule 6 part 4, shall develop a Site Waste Management Plan for all Schemes with an Estimated Bid Value greater than £350,000. The Site Waste Management Plan shall be developed in accordance with current best practice guidance and instructions issued by the Director or any amendments to the *Design Manual for Roads and Bridges*.

The Site Waste Management Plan shall:

- (i) provide details of the quantity and type of waste that will be produced for each Scheme and Works Contract,
- (ii) provide details of how the waste produced will be minimised, reused, recycled, recovered or otherwise diverted from landfill,
- (iii) provide details of how any materials that cannot be reused, recycled or recovered will be disposed of at a legitimate site,
- (iv) take account of the Scottish Government's targets for waste reduction and recycling, and
- (v) be regularly updated during the construction process to record how all waste is managed.

The Site Waste Management Plan developed as part of the Operating Company's Design shall be completed and implemented by the Works Contractor.

2.5 Data recording

2.5.1 The Operating Company shall prepare and keep Records for submission to the Director of:

- (i) evidence that at least 10 percent of the materials sourced for Works Contracts with an Estimated Bid Value greater than £1,000,000 has been obtained from recycled or secondary sources for all Schemes where this requirement has been consented to by the Director,
- (ii) execution of the requirements for carbon reporting, management and accounting detailed in the Director's Carbon Management System,
- (iii) Site Waste Management Plans as required in paragraph 2.4.1 of this Part,

- (iv) the *Civil Engineering Environment Quality Assessment and Award Scheme Term Contracts Version*,
- (v) the total amount of material resources consumed in undertaking its Operations and in Works Contracts measured in tonnes per £100k of construction value,
- (vi) the proportion of total material resources consumed in Operations and in Works Contracts which are sourced from recycled, secondary or re-used sources,
- (vii) the proportion of total material resources consumed in Operations and in Works Contracts which are sourced from renewable or certified sources,
- (viii) the total amount of controlled waste produced in Operations and in Works Contracts measured in tonnes per £100k of construction value, including a breakdown of the individual waste types produced,
- (ix) the total amount measured in tonnes per £100k of construction value and the proportion of the total amount of controlled waste produced in Operations and in Works Contracts that is re-used, recycled and sent for disposal to landfill,
- (x) the total amount measured in tonnes per £100k of construction value and the proportion of construction and demolition waste produced which is re-used, recycled and sent for disposal to landfill in Operations and in Works Contracts,
- (xi) the total volume of water consumed in Operations and in Works Contracts, and
- (xii) the monthly total fuel consumption measured in litres.

2.5.2 The Operating Company shall ensure that obligations are included in all Works Contracts to require Works Contractors to prepare and keep the same records as required by this Part as appropriate.

2.5.3 The Operating Company shall undertake regular documented and recorded reviews to ensure it complies with:

- (i) the requirements for implementing and managing the Director's Carbon Management System,
- (ii) the requirements for Site Waste Management Plans,
- (iii) the collection, recording and reporting of other information required by this Part, and
- (iv) the control of all documentation including the identification and traceability of documents, document issues and status. This shall also include the control of documentation recording the relevant environmental licences, permits, exemptions, waste transfer notes and other environmental Records in respect of Operations and Works Contracts.

The outcomes of these reviews shall be recorded by the Operating Company and provided to the Director and the Performance Audit Group when requested.

3. REPORTS

3.1 Requirements

- 3.1.1 The Operating Company shall provide an annual report on the sustainability aspects of all Operations and Works undertaken during each Annual Period. This report shall be provided to the Director and the Performance Audit Group no later than 25 Working Days after the start of each Annual Period and shall include:
- (i) the total carbon emissions recorded in the Carbon Management System Annual Account data templates associated with carrying out the Operations required by this Contract,
 - (ii) the activities stated in paragraph 2.5.1 of this Part, and
 - (iii) any other sustainability aspects required by the Director.
- 3.1.2 The annual report shall contain separate sections including the following information:
- (i) the Records detailed in paragraph 3.1.1 of this Part,
 - (ii) matters subject to any notice from a regulatory body, and
 - (iii) any other relevant matters that shall either be required by the Director or, which in the opinion of the Operating Company, should be brought to the attention of the Director.
- 3.1.3 The Operating Company shall provide the following reports using the carbon emissions data generated by the contract control and management function of the Integrated Roads Information System as required by Schedule 4 Part 1:
- (i) a quarterly report of carbon emissions associated with material usage and transportation in Schemes using the contract control and management function of the Integrated Roads Information System's carbon conversion factors for individual Schedule of Rate items within the one year Programme, and
 - (ii) an annual report of carbon emissions associated with material usage and transportation in Schemes using the contract control and management function of the Integrated Roads Information System's carbon conversion factors for individual Schedule of Rate items within the one year Programme. This shall be included within the annual report required in paragraph 3.1.1 of this Part.
- 3.1.4 The Operating Company shall provide a report detailing the total carbon emissions using the carbon emissions data generated from the Carbon Management System Road Infrastructure Projects Tool for each Works Contract. This report shall be provided no later than 25 Working Days following completion of the Works Contract and include a comparison between Statement of Intent (Scheme approval) carbon emissions estimates of works as required by Schedule 4 Part 1 and the total carbon emissions recorded in the Carbon Management System Road Infrastructure Projects Tool at the completion of the Works Contract.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 1

PROCUREMENT AND MANAGEMENT OF SCHEMES

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 1

PROCUREMENT AND MANAGEMENT OF SCHEMES

1. INTRODUCTION

1.1 General Requirements

- 1.1.1 Subject to an Order, the Operating Company shall:
- (i) execute Schemes as part of Operations, or
 - (ii) assist the Director to procure works by means of a competitive tendering procedure,
 - (iii) assist the Director to procure works via a Scottish Minister's framework, or
 - (iv) assist the Director to procure works via any other procedure decided by the Director.
- 1.1.2 The Operating Company shall include documented procedures in its Management System for delivering the requirements of this Part.
- 1.1.3 The Operating Company is not permitted to tender for any Works Contracts which are to be executed within the Unit.
- 1.1.4 The Operating Company shall ensure that the construction phase of all Works Contracts and Schemes are completed no later than 25 Working Days before the Contract Expiry Date of this Contract.
- 1.1.5 For the purposes of this Part, "Contract Administrator" means the Engineer or Project Manager and Supervisor or equivalent as stated in the form of Works Contract used.

2. SCHEMES EXECUTED AS OPERATIONS

2.1 General

- 2.1.1 The Operating Company shall establish, document, implement and continually improve its procedures for the issue of Operations Instructions for any Scheme executed as Operations by the Operating Company.

Where a Scheme is to be executed as Operations, no Operations shall commence until all statutory procedures have been completed and the requirements for entry to land have been met including:

- (i) completion of road orders,
- (ii) completion of any traffic regulation orders,
- (iii) permissions required from the Scottish Environment Protection Agency including obtaining any licences required by the *Controlled Activities (Scotland) Regulations 2005*,
- (iv) the environmental impact assessment,
- (v) the environmental statement,
- (vi) the publication of the environmental notice, and

(vii) any other regulatory requirement specific to the Scheme.

The completion of the statutory procedures and the requirements for entry to land shall represent a hold point in the Operating Company's Quality Plan.

2.1.2 The Operating Company's Quality Plan shall identify the level of supervision for any Scheme to be executed as Operations. When requested by the Director, the Operating Company shall provide proposals for supervisory staff for any Scheme to be executed as Operations. This shall represent a hold point in the Operating Company's Quality Plan.

2.1.3 Subject to an Order, the Operating Company shall undertake the supervision and management of Schemes executed as Operations. When undertaking the supervision and management of Schemes executed as Operations, the requirements stated in paragraphs 5.1.5, 5.2, 5.3, 5.4 and 5.5 of this Part shall be executed as part of the supervision and management requirements.

2.1.4 The Operating Company shall ensure that suitably qualified and experienced employees are available at all times, for all Schemes where Operations are in progress.

2.1.5 The Operating Company shall undertake the relevant duties required to fulfil the obligations of the *Construction (Design and Management) Regulations 2007* as stated in Schedule 6 Part 2.

2.1.6 The Operating Company shall maintain Records of all Site activities.

2.1.7 The Operating Company shall undertake the financial management and monitoring of each Scheme undertaken as Operations in accordance with the requirements stated in Schedule 4 Part 1.

2.1.8 Operations Instructions with a financial value below £1,000 may be collected together in batches related to a common activity by the Operating Company at monthly intervals, for confirmation by a change order.

2.1.9 Change orders issued by the Operating Company shall:

- (i) be in a format provided by the Director,
- (ii) state the Operations Instructions including the reference to which such work shall apply, and
- (iii) include a complete description of location and the extent of work.

2.1.10 The Operating Company shall record the carbon emissions associated with Schemes executed as Operations using the Director's Carbon Management System Road Infrastructure Projects Tool.

3. SCHEMES PROCURED AS WORKS CONTRACTS

3.1 General

3.1.1 Subject to an Order, the Operating Company shall act as the Contract Administrator(s) in accordance with the form of Works Contract used. No later than 30 days prior to the Commencement of Service Date, the Operating Company shall submit its nominations for such roles to the Director for consent. The Operating Company's nominations shall include the nominees' qualifications and experience related to the role for which they are being proposed.

- 3.1.2 The Operating Company shall re-submit nominations for these roles:
- (i) no later than 25 Working Days prior to the start of the second Annual Period and each subsequent Annual Period,
 - (ii) whenever a person consented to is unavailable to undertake the role, and
 - (iii) whenever the Director requests the Operating Company to provide further nominations.
- 3.1.3 Consent to the nominees for the role of the Contract Administrator(s) shall represent a hold point in the Operating Company's Quality Plan. No tender documents shall be issued until the Director has consented to the use of the nominee and the nominee has been named in the Works Contract. All nominees that have been consented to shall be deemed to be acting on behalf of the Operating Company when acting as the Contract Administrator(s) in accordance with the form of contract used.
- 3.1.4 For each Works Contract, the Operating Company shall confirm to the Director:
- (i) the names of the individuals nominated to act as the Contract Administrator(s) together with the proposed level of supervision, and
 - (ii) details of other Schemes for which such nominees are responsible.
- The Operating Company shall not permit an individual to act as the Contract Administrator(s) for more than one Works Contract during critical activities.
- 3.1.5 The Director will require Works Contracts to be procured through:
- (i) a competitive tendering procedure, or
 - (ii) a Scottish Ministers' framework contract, or
 - (iii) any other procedure decided by the Director.
- Allowing sufficient time prior to commencing any tender process, the Operating Company shall provide a report to the Director recommending which form of contract is to be used from the Director's library of model contracts as referred to in this Part. This report shall represent a hold point in the Operating Company's Quality Plan.
- The Director will inform the Operating Company on the procurement method and form of contract that shall be used.
- 3.1.6 For each Works Contract, the Director shall inform the Operating Company of the name and e-mail address of the person to be designated as the sole point of contact for all tender correspondence. The Operating Company shall include such details in the tender documentation for each Works Contract.
- 3.1.7 When procuring a Works Contract through a competitive tendering procedure, the restricted tendering procedure stated in the *Public Contracts (Scotland) Regulations 2006* (as amended from time to time) shall be used, unless otherwise instructed by the Director.
- 3.1.8 All Works Contracts shall use:
- (i) the current version of the *Manual of Contract Documents for Highway Works*,
 - (ii) any amendments issued by Transport Scotland to the *Manual of Contract Documents for Highway Works*,

- (iii) one of the Director's library of model works contract documents, and
 - (iv) any other requirements stated as part of an Order.
- 3.1.9 There shall be no departure from the *Manual of Contract Documents for Highway Works* or Transport Scotland's procurement documentation without the prior written consent of the Director.
- 3.1.10 For each Works Contract, the Director shall inform the Operating Company of the tender assessment criteria to be used for assessing tender submissions. The Operating Company shall include the assessment criteria in the tender documents and, where applicable, in the advertisement for the Works Contract.
- 3.1.11 The Operating Company shall ensure that all Works Contracts contain provisions for Works Contractors to:
 - (i) provide the data necessary to complete the Director's Carbon Management System contractors' data template for projects,
 - (ii) submit a completed Carbon Management System contractors' data template for projects to the Operating Company on a weekly basis during the Works Contract,
 - (iii) submit to the Operating Company the completed Carbon Management System contractors' data template for projects within five Working Days of the completion of the Works, and
 - (iv) ensure the Site is restored to a clean and tidy condition with a minimum standard of grade B as stated in the *Code of Practice on Litter and Refuse*.
- 3.1.12 The Operating Company shall ensure all Works Contracts require the Works Contractor to prepare and provide a detailed quotation covering each change.
- 3.1.13 When required by the Director, the Operating Company shall ensure that Works Contracts contain provisions requiring Works Contractor's to source at least 10 percent of the materials required for the Scheme from recycled, secondary or re-used sources when the Scheme has a Bid Estimate of Costs over £1,000,000.
- 3.1.14 The Operating Company shall ensure that all Works Contracts contain provisions to allow the Director and the Performance Audit Group the right to access the locations of Works or Works Contractor's premises, with or without prior notification. The Operating Company shall provide all assistance necessary to ensure that access for such visits is available to the Director and the Performance Audit Group.
- 3.1.15 The Operating Company shall inform the Director immediately should it consider that there are conflicting requirements between the obligations detailed in paragraph 5 of this Part and the form of contract selected for a Works Contract.
- 3.1.16 The Operating Company shall use a self certification, check and counter signature process to ensure the tender documents required for each Works Contract comply with the Director's requirements.
- 3.1.17 Prior to the issue of any tender documents and following completion of the Design, the Operating Company shall submit one Electronic Copy of the finalised tender documents including the model checklist provided in Annex 6.1/A of this Part to the Performance Audit Group for review and counter certification.

- 3.1.18 The Operating Company shall modify the tender documents when required by the Performance Audit Group. When satisfied that any required amendments have been dealt with, the Performance Audit Group will issue the certificate shown in Annex 6.1/B of this Part. The Operating Company shall remain responsible at all times for the drafting of the tender documents.
- 3.1.19 The Operating Company shall not proceed further with the procurement process and no tender documents shall be issued until the certification process is complete. This shall represent a hold point in the Operating Company's Quality Plan.
- 3.1.20 No tender documents shall include any contingency sum other than a provisional sum that has been previously consented to by the Director.
- 3.1.21 Works Contracts with a Bid Estimate of Cost over £2,000,000 shall be procured using a Works Contract with fixed price lump sum from the Director's library of model contracts, unless otherwise consented to in writing by the Director.

3.2 Competitively Tendered Contracts

- 3.2.1 The Director's library of model contracts supports the use of lane rental and lane occupation charge procedures and can accommodate varying maintenance periods of one, two or five years. The Works Contractors' responsibilities during the maintenance period can also be varied.

Prior to the preparation of each Works Contract, the Operating Company shall provide a report to the Director making recommendations on:

- (i) the suitability of the Works for the use of lane rental and lane occupation charges,
- (ii) the length of the maintenance period, and
- (iii) the Works Contractor's responsibilities during the maintenance period.

- 3.2.2 At the discretion of the Director and as stated in the Order, the Operating Company shall incorporate within each Works Contract the Director's requirements for lane rental or lane occupation charges, the length of the maintenance period and the Works Contractor's responsibilities during these periods.

- 3.2.3 The Operating Company shall:

- (i) use the drawings, specifications and schedules prepared as part of the Design as stated in Schedule 6 Part 4 for the preparation and production of all tender documents to be issued to all tenderers,
- (ii) prepare for consent by the Director, an advertisement inviting applicants to apply to be on the tender list. When consented to by the Director, the Operating Company shall place the advertisement on the Public Contracts Scotland portal and in any other publications required by the Director,
- (iii) prepare the Director's pre-qualification questionnaire and submit this to the Director for consent. This shall represent a hold point in the Operating Company's Quality Plan,
- (iv) following consent by the Director, issue the Director's pre-qualification questionnaire as necessary. The Operating Company shall assist the Director in responding to any questions from or clarifications sought by applicants relating to the pre-qualification questionnaire,

- (v) issue the tender documents,
- (vi) provide support to the Director for answering tender questions and providing clarifications within defined timescales, relating to the tender documents, and
- (vii) undertake any other activities required by the Director to assist in the procurement of Works.

3.3 Use of a Scottish Ministers' Framework Contract

3.3.1 The Operating Company shall:

- (i) use the drawings, specifications and schedules prepared as part of the Design as stated in Schedule 6 Part 4 for the preparation and production of tender documents, as required by the Scottish Ministers' framework contract, to enable the Director to determine the most suitable framework contractor for the Scheme,
- (ii) provide support to the Director for answering questions and providing clarifications sought by framework contractors relating to the tender documents,
- (iii) undertake any other activities required to ensure the Director fulfils the requirements of the Scottish Ministers' framework contract, and
- (iv) undertake any other activities required to assist in the determination of the most suitable framework contractor for the Scheme.

3.4 Inviting Tenders

3.4.1 The Director shall inform the Operating Company of the tender list for each Scheme.

3.4.2 Tenders shall not be invited for any Scheme under a Works Contract until the Director has issued confirmation to the Operating Company that:

- (i) negotiations for entry to all the land required for the Works by the planned date for commencement of such Works have been completed,
- (ii) any required traffic regulation orders have been consented to and are in place,
- (iii) permissions required from the Scottish Environmental Protection Agency have been obtained and any licences required by the *Controlled Activities (Scotland) Regulations 2005* are in place,
- (iv) all necessary new or modified road orders for any such Scheme and, where required, the environmental impact assessment or the environmental statement, are not open to any statutory or legal challenge by any third party, and
- (v) the environmental notice has been published.

Confirmation from the Director shall represent a hold point in the Operating Company's Quality Plan.

3.4.3 When instructed by the Director, the Operating Company shall issue the tender documents to the tenderers on the tender list.

4. AWARD OF WORKS CONTRACT AND FRAMEWORK ORDER

- 4.1.1 The Director will assess all tenders received and determine the winning tender. The Scottish Ministers will issue a letter of acceptance to the winning tenderer and inform the Operating Company of the details of the winning tenderer.
- 4.1.2 No later than 25 Working Days prior to the commencement of the Works Contract, the Operating Company shall prepare and distribute copies of the Works Contract documents including the letters of acceptance, amendments and clarifications as follows:
- (i) an Electronic Copy and if requested a paper copy, to the Works Contractor,
 - (ii) the original to the Performance Audit Group,
 - (iii) one Electronic Copy, when requested, to the Performance Audit Group,
 - (iv) one Electronic Copy to the Director,
 - (v) Electronic Copies as required for the use of the Contract Administrator(s), and
 - (vi) one paper and one Electronic Copy to the Central Office where they shall be retained in accordance with the requirements of Schedule 5 Part 2.

5. CONTRACT MANAGEMENT DUTIES

5.1 General

- 5.1.1 Subject to an Order, the Operating Company shall act as the Contract Administrator(s) according to the form of contract used for the Works Contract. When acting as the Contract Administrator(s), the Operating Company shall undertake the roles required of the Contract Administrator(s) as stated in this part.
- 5.1.2 The Operating Company shall ensure that all Works Contracts are executed, certified for payment and completed in accordance with the terms of the contract used.
- 5.1.3 The Operating Company shall ensure that any communications with the Works Contractor are responded to in accordance with the timescales detailed in the terms of contract used.
- 5.1.4 The Operating Company, in addition to undertaking the duties and roles of the Contract Administrator(s) according to the form of contract used, in acting as the Contract Administrator(s) shall also:
- (i) comply with the guidance documents provided by the Director,
 - (ii) review the Works Contractor's insurance documents to ensure compliance with the Works Contract requirements and report any discrepancies to the Director,
 - (iii) prepare for, and facilitate, partnering workshops when required by the Director,
 - (iv) liaise and consult with relevant interested parties including all relevant authorities, the Police, landowners and other third parties as necessary,
 - (v) notify the Director of changes in accordance with the requirements of paragraph 5.3 of this Part,

- (vi) attend Works Contract progress meetings,
- (vii) grant access to the Works Contractor to the Site, and
- (viii) deal with third party claims in accordance with the provisions of this Contract.

5.1.5 The Operating Company shall undertake the relevant duties required to fulfil the obligations of the *Construction (Design and Management) Regulations 2007* as stated in Schedule 6 Part 2.

5.1.6 The Operating Company shall update the Carbon Management System Road Infrastructure Projects Tool using the data provided by the Works Contractor on the Carbon Management System contractors' data template for projects. The update of the Carbon Management System Road Infrastructure Projects Tool shall be completed no later than 25 Working Days following the completion of the Works.

5.1.7 The Operating Company when acting as the Contract Administrator(s) shall comply with the restrictions on its authority given in this Part.

5.1.8 The Operating Company shall not authorise any person other than the accepted nominee(s) acting as Contract Administrator(s) to act on its behalf for any matter referred to in the Works Contract.

5.1.9 The Operating Company shall not authorise any person other than the accepted nominee(s) acting as the Contract Administrator(s) to act on its behalf at Works Contracts progress meetings except in exceptional circumstances and with the prior written consent of the Director.

5.2 Financial Control and Monitoring of Works Contracts

5.2.1 No later than 10 Working Days prior to the commencement of the Works Contract on Site, the Operating Company shall provide the Director with a copy of the agreed programme and financial forecast for the Works Contract. The Operating Company shall monitor the programme and financial forecast and inform the Director, at intervals not exceeding one month, of:

- (i) the physical progress of the Works compared to the agreed programme, and
- (ii) the current expenditure and forecast expenditure of the Works Contract compared to the financial forecast.

5.2.2 Within three days of identification by the Operating Company of any circumstances that:

- (i) will or may lead to increases or decreases in cost or value in the Works Contract, or
- (ii) result in changes in the bills of quantities, programme or milestone schedules contained in the Works Contract,

the Operating Company shall seek consent from the Director as required by Schedule 4 Part 1.

5.2.3 The Operating Company shall develop and propose standard templates for written reporting to the Director when acting as the Contract Administrator(s). These templates shall enable the keeping of a continuous record of physical progress of the Works, the expenditure to date and forecasts of the final costs of each Works

Contract. The proposed standard templates shall be submitted to the Director for consent no later than 30 days prior to the Commencement of Service Date and when consented to, shall be used by the Operating Company for reporting on each Works Contract. The Director shall determine the frequency at which reports shall be submitted by the Operating Company for each Works Contract and notify the Operating Company when consenting to the standard templates.

- 5.2.4 The Operating Company shall comply with the requirements of Schedule 4 Part 1 when in receipt of a Works Contractor's application for payment.
- 5.2.5 The Operating Company shall use standard forms Certificate of Payment CC1A, CCII and CCIII as shown in Annex 6.1/C of this Part. For all Works Contracts regardless of value, the Operating Company shall submit forms CC1A and CCII to the Director with each payment request or monthly valuation, whichever shall be the lesser amount. In addition, form CCIII shall be submitted to the Director for each Scheme at quarterly intervals.
- 5.2.6 Within 25 Working Days of issuing the Certificate of Completion of a Works Contract involving lane rental conditions, the Operating Company shall prepare and submit to the Director and the Performance Audit Group, the lane rental monitoring form shown in Annex 6.1/D of this Part in accordance with the requirements of the *Design Manual for Roads and Bridges*.

5.3 Changes to Works Contracts

- 5.3.1 The Operating Company shall ensure that any proposals for changes to the Works or the programme are executed in accordance with the obligations stated in the Works Contract.
- 5.3.2 The Operating Company shall keep detailed diary records of all relevant information to assist in any discussions, assessment or determination of the changes.
- 5.3.3 The Operating Company shall have the authority to issue changes in the specification for the Works, Works information, timing, quantities, cost or value that involve changes in expenditure without prior reference to the Director, only when:
- (i) there is an emergency when the safety of life or the Works is threatened by imminent danger, or
 - (ii) the total value of the change proposed does not exceed five percent of the tender value or the change does not exceed £20,000 (whichever shall be the lesser amount).

All such changes shall be reported immediately to the Director in writing.

- 5.3.4 Any proposals for changes to the Works that are outwith the Operating Company's authority stated in paragraph 5.3.3 of this Part shall be referred to the Director for written consent prior to the changes to the Works being agreed.
- 5.3.5 Before the issue of any instruction to change or vary the Works, the Operating Company shall consider and value the direct and consequential effects of the various options for implementing change from a financial, engineering or time perspective. The Operating Company shall provide and record accurate estimates to support the selection and agreement of the best value option for the change.
- 5.3.6 All instructions to change or vary the Works shall be sufficiently detailed to show the precise identification of the location, a description of the change, the estimated cost

or the actual cost of the change and any change to the agreed programme. The instructions to change or vary the Works issued to the Works Contractor shall not state the estimated cost or the actual cost of the change.

- 5.3.7 The Operating Company shall continually review and assess the progress and value of the Works executed under an instruction to change or vary the Works. Where the estimate of value changes for any Works Contract, the Operating Company shall immediately provide such information in writing to the Director, using forms CC1A, CCII and CCIII.
- 5.3.8 Subject to the requirements in paragraph 5.3.3 of this Part, the Operating Company shall execute the obligations for assessing and agreeing changes to the prices and agreed programme detailed in the form of contract used for the Works Contract. In advance of any Works that are the subject of an instruction to change or vary the Works being carried out by the Works Contractor, the Operating Company shall ascertain or determine the rates and prices in writing.
- 5.3.9 When the Operating Company has determined that the Works Contractor is entitled to a change in prices and has certified such for payment, subject to the valuation requirements stated in Schedule 4 Part 1 and the requirements of paragraph 5.3.3 of this Part, no further authority shall be required before payment is effected.

The Operating Company shall ensure that the details of any instruction to change or vary the Works that will increase the financial commitment are provided to the Director in sufficient time for the funds to be available when the payment becomes due. The Operating Company shall ensure that the Director's financial commitment for each Scheme is kept under continual review.

- 5.3.10 When the Works Contractor has notified its intention to refer a dispute in accordance with the dispute resolution procedures contained in a Works Contract, the Operating Company shall immediately notify the Director. The Operating Company shall provide the Director with all information relating to the dispute. Subject to an Order, the Operating Company shall advise and support the Director in resolving the dispute.
- 5.3.11 Upon request by the Director, the Operating Company shall provide written explanations, advice and recommendations within two Working Days to the Director in respect of any issues whatsoever arising from any Works Contract.

5.4 Interim Valuations and Final Measurement for Works Contracts

- 5.4.1 The Operating Company shall record the date of receipt of the Works Contractor's monthly statement and all other communications from the Works Contractor.
- 5.4.2 The Operating Company shall forward the monthly statement together with forms CC1A, CCII and CCIII to the Director, copied to the Performance Audit Group, no later than 10 Working Days from receipt of the said statement.
- 5.4.3 When required by the form of Works Contract used, measurement of Works by the Operating Company shall proceed as a continuous activity to ensure that applications for interim payments (monthly statements) can be validated and the Works Contractor's final account settled in accordance with the provisions of the Works Contract.
- 5.4.4 Where the amount certified for payment for a monthly statement varies from the statement value submitted by the Works Contractor, the Operating Company shall

inform the Works Contractor using the Appendix to form CC1A, no later than 5 days before the Final Date for payment due date, in accordance with the provisions of the Works Contract, detailing the amount to be paid and any amounts not paid but claimed by the Works Contractor including the reasons why such amounts will not be paid by the Scottish Ministers. At the same time, the Operating Company shall provide copies of the correspondence to the Director and the Performance Audit Group.

The Operating Company shall ensure the Appendix to form CC1A constitutes the required payment and withholding notices as defined under Sections 110A and Section 111 of the *Housing Grants, Construction and Regeneration Act (Scotland) 1996 as amended for the Local Democracy, Economic Development Construction Act 2009*.

5.5 As-Built Records

5.5.1 The Operating Company shall prepare as-built drawings, maintenance schedules and construction and maintenance reports for all Works Contracts and shall include them with the other Records that are held in respect of each Works Contract in the Central Office. Such Records shall comply with the relevant *Design Manual for Roads and Bridges* standards and the *Construction (Design and Management) Regulations 2007* and shall be compiled progressively during the execution of the Works.

A full set of such as-built drawings and maintenance schedules, including an electronic version, shall be available within the Central Office no later than 75 Working Days after completion of the Works. These records shall be updated by the Operating Company for all Works Contracts whenever a change to the Works is required.

5.5.2 The Operating Company shall produce as-built records for Structures in accordance with the requirements of the *Design Manual for Roads and Bridges*. The Operating Company shall provide two copies of such as-built records for Structures, including an electronic version, one for retention and maintenance within the Central Office and one for issue to the Director, no later than 10 Working Days after completion of the Works.

Where any works are undertaken following the completion of the Works as referred to in the Works Contract, the Operating Company shall amend all copies of the as-built records accordingly and submit one copy to the Director no later than 10 Working Days after the work has been executed.

This is Annex 6.1/A to Schedule 6 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 1

PROCUREMENT AND MANAGEMENT OF SCHEMES

ANNEX 6.1/A – Model for Draft Tender Documents Checklist

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 1

PROCUREMENT AND MANAGEMENT OF SCHEMES

Annex 6.1/A – Model for Draft Tender Documents Checklist

MODEL FOR DRAFT TENDER DOCUMENTS CHECKLIST

Unit : _____
Route and Scheme Name: _____ _____
Scheme Identifier Number: _____
Form of Contract: _____

Note: This checklist is provided as a basis for the Operating Company to ensure all requirements have been addressed. The Operating Company shall adapt this checklist as necessary for use with any of the forms of contract and procurement options that the Operating Company may require to use and which are the subject of an Order.

Consent for any such other form of checklist for other forms of contract and procurement options shall be sought in writing by the Operating Company from the Director.

1. GENERAL DOCUMENTATION AND CONDITIONS OF CONTRACT

Yes/No/(N/A)

- | | | | |
|-----|------|--|--------------------------|
| 1.1 | (i) | Is the correct and up to date version of the Instructions for Tendering, as stated in the Model Contract Document (MCD) specified? | <input type="checkbox"/> |
| | (ii) | Are all relevant Scheme specific sections completed? | <input type="checkbox"/> |
| 1.2 | | Is a completed Health and Safety Plan included and do the Instructions for Tendering include reference to the successful tenderer being appointed as Principal Contractor? | <input type="checkbox"/> |
| 1.3 | | Are the correct Form of Tender and associated Certificates included and are the appropriate appendices to the Form of Tender all as specified in the MCD? | <input type="checkbox"/> |

- 1.4 (i) Is the correct and up to date version of the conditions of contract based on the specified MCD included.
- (ii) Are all amendments issued by the Director applied?
- 1.5 (i) Are any contract specific requirements to the conditions of contract specified, such as definitions of the Employer, Engineer/Project Manager and Special Requirements included?
- (ii) Are any changes listed in the Draft Tender Documents Certificate?
- 1.6 Has the Director given written consent to any additional requirements to the model of the type of contract issued by the Director?

2. SPECIFICATION Yes/No/(N/A)

- 2.1 (i) Are the correct Preamble and schedule of relevant publication dates included?
- (ii) Issue date of Specification use --/--
- (iii) Is the most up to date Specification referred to in any Specification clause amendments?
- 2.2 Are there any relevant clauses or paragraphs from the 4th Generation Term Management and Maintenance Contracts included in the Specification (for example patching or traffic management)?
- 2.3 (i) Are all additional or substitute clauses acceptable and have any departures from standard been approved by the Overseeing Department (including alternative materials)?
- (ii) Are all relevant Scottish Government/Transport Scotland Interim Amendments included?
- (iii) Are all such changes listed in the Draft Tender documents Certificate?
- 2.4 Are all relevant Specification Appendices included and completed in accordance with the Notes for Guidance to the Specification for Highway Works (NGSHW)?

Additional Scheme-Specific Specification Requirements: Yes/No/(N/A)

- 2.5 Are all relevant materials and workmanship testing requirements included in Appendices 1/5 or 1/6 as per NGSHW table NG 1/1 and other Scheme specific materials?
- 2.6 Is an appropriate method of setting out, including level control, included in Appendix 1/12 and is all information needed for tendering purposes included?

- | | | |
|-----------|---|--------------------------|
| 2.7 | Are all programming constraints and traffic management restrictions and requirements included in Appendices 1/13, 1/17, 1/18 and 1/20 as per the NGSHW sample Appendices? | <input type="checkbox"/> |
| 2.8 | Are schedules included for fencing, safety fencing and drainage as per NGSHW sample Appendices? | <input type="checkbox"/> |
| 2.9 | (i) Are full earthworks requirements included? | <input type="checkbox"/> |
| | (ii) Has a full geotechnical investigation been carried out where required? | <input type="checkbox"/> |
| | (iii) Has appropriate geotechnical certification been obtained where required? | <input type="checkbox"/> |
| | (iv) Has written consent been given by the Director for specialist materials or activities? | <input type="checkbox"/> |
| 2.10 | (i) Are scheme-specific requirements for pavement and surface dressing materials (including design mixes) included as per NGSHW sample appendices | <input type="checkbox"/> |
| | (ii) Has written consent been given by the Director for specialist materials? | <input type="checkbox"/> |
| 2.11 | Are fully detailed new sign and road marking schedules included (referenced to drawings if appropriate)? | <input type="checkbox"/> |
| 2.12 | Are all electrical, road lighting and cabling requirements as per the Design Manual for Roads and Bridges (DMRB) and NGSHW sample Appendices included? | <input type="checkbox"/> |
| 2.13 | Are all maintenance painting of steel Structures requirements included as specified in the stated MCD? | <input type="checkbox"/> |
| 2.14 | Are bridge deck waterproofing requirements clear, including approval of proprietary systems? | <input type="checkbox"/> |
| 2.15 | (i) Are all structural works clearly defined and do they comply with the appropriate DMRB standards? | <input type="checkbox"/> |
| | (ii) Has written consent been given by the Director for significant structural works? | <input type="checkbox"/> |
| 3. | BILL OF QUANTITIES OR MILESTONE SCHEDULES | Yes/No/(N/A) |
| 3.1 | (i) Are the correct Preamble and schedule of relevant publication dates included? | <input type="checkbox"/> |
| | (ii) Is the most relevant and/or most up to date Method of Measurement or Milestone Schedule referred to in any amendments? | <input type="checkbox"/> |

	(iii)	Issue date of Specification used	--/----
3.2		Are all items of work, as identified in the Drawings, Specification and Health and Safety Plan, covered?	<input type="checkbox"/>
3.3		Are all standard items as per the Bills of Quantities for Highway Works Library of Standard Item Descriptions?	<input type="checkbox"/>
			Yes/No/(N/A)
3.4	(i)	Has the Method of Measurement (including itemisation and item coverage) been amended to cover new or non-standard items?	<input type="checkbox"/>
	(ii)	Has cognisance been taken of non-standard items contained within the 4 th Generation Term Contract for Management and Maintenance of the Scottish Trunk Road Network?	<input type="checkbox"/>
3.5	(i)	Is a standard dayworks schedule included or, if not, has Conditions of Contract (ICE 5 th Edition Clause 52(3) or equivalent) been omitted?	<input type="checkbox"/>
	(ii)	Is the inclusion of any provisional sums reasonable?	<input type="checkbox"/>
	(iii)	Are any such provisional sums consented to in writing by the Director?	
3.6		Are all preliminary items (traffic management, offices/messes, recovery vehicles, diversions) included?	<input type="checkbox"/>
3.7		Have all quantities in the Bill of Quantities been checked and do similar items appear to correlate (for example earthwork excavation, disposal, deposition, imported material)?	<input type="checkbox"/>
3.8	(i)	Are Prime Cost, Provisional or Nominated Sub-contractor items correctly applied?	<input type="checkbox"/>
	(ii)	Are provisional sums reasonable?	<input type="checkbox"/>
4.		DRAWINGS	Yes/No/(N/A)
4.1	(i)	Are a location plan, general arrangement and a limit/extent of Site drawing or land made available by the Employer for the Works included as appropriate?	<input type="checkbox"/>
	(ii)	Do these include outlines of general Site clearance, earthworks and structural Works (Contractor Design)?	<input type="checkbox"/>
4.2		Are pavement construction and tie-in details, edge and drainage details, kerbing and footway alignments, electrical details, structural concrete and reinforcement detail and typical traffic management details included?	<input type="checkbox"/>
4.3		Have all drawings been checked and signed/initialled as such?	<input type="checkbox"/>

5. LANE RENTAL AND LANE OCCUPATION **Yes/No/(N/A)**

5.1 Is the scheme lane rental?

5.2 If not lane rental, has the written consent of the Director been obtained?

5.3 (i) Are the bonus/charge amounts or lane occupation charges for main Works and maintenance works defined in the Appendix to Form of Tender or equivalent?

(ii) Have the amounts been calculated in accordance with SH 4/91 of the DMRB or has the written consent of the Director been obtained?

5.4 (i) Is the working day correctly defined in the conditions of contract (ICE 5th Edition Clause 1 or equivalent)?

(ii) Has the maximum duration of Works been defined in the Instructions for Tendering in accordance with SH 4/91 of the DMRB?

5.5 Are paragraphs 5, 6, 7 and 8 for the Instructions for Tendering amended as per SH 4/91 of the DMRB or as appropriate for the particular type of contract to be used?

5.6 Are conditions of contract clauses 1, 14, 41, 43, 44, 47, 49 and 60 amended as per SH 4/91 of the DMRB or as appropriate for the particular type of contract to be used?

6. CERTIFICATION **Yes/No/(N/A)**

6.1 Have all relevant Design and Design Check Certificates Design Interim Certificates and Design Check Interim Certificates and Consultation Certificates from Annex 6.4/A to Schedule 6 Part 4 to the 4th Generation Term Contract for Management and Maintenance of the Scottish Trunk Road Network been completed?

6.2 Has the Draft Tender Documents Certificate and Appendix from Annex 6.1/A to Schedule 6 Part 1 to the 4th Generation Term Contract for Management and Maintenance of the Scottish Trunk Road Network been completed and included?

7. Any Other Operating Company or Scheme Specific Requirements:

8. Any further comments by the Operating Company in relation to sections 1 to 6 inclusive above:

9. Any further relevant comments:

Signed: _____

Name: _____
(BLOCK CAPITALS)

Position: _____

Operating Company: _____

Date: _____

Final tender Documents and Checklist reviewed by Performance Audit Group	YES	<input type="checkbox"/>
	NO	<input type="checkbox"/>

*** Tick as appropriate**

Signed Date

Name (Block Capitals)

Position in Performance Audit Group.....

This is Annex 6.1/B to Schedule 6 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 1

PROCUREMENT AND MANAGEMENT OF SCHEMES

ANNEX 6.1/B – Draft Tender Document Certificates

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 1

PROCUREMENT AND MANAGEMENT OF SCHEMES

ANNEX 6.1/B – Draft Tender Document Certificates

**TRANSPORT SCOTLAND
TRUNK ROAD AND BUS OPERATIONS DIRECTORATE
DRAFT TENDER DOCUMENTS CERTIFICATE**

SCHEME TITLE

SCHEME NUMBER

I certify that the draft tender documents enclosed comprising **(Insert list of draft tender documents)* are based on **...(Insert title of Model Contract Document use)...* and include the variations listed on the attached sheet(s).

I also certify that the draft tender documents comprising *** (Insert list of draft tender documents)* and fully detailed working drawings have been prepared for this Scheme and where appropriate, the quantities entered in the bill of quantities are a true measure of the various items of work represented by those drawings in accordance with ****(Insert title of the Method of Measurement used if appropriate)* . The drawings and documents enclosed herewith are listed on the attached sheet. *(Delete paragraph if bills of quantities not used)*

Signed Date

Name (Block Capitals)

Position

Operating Company

.....

Confirmation by Performance Audit Group that the hold point referred to at paragraph 3.1.19 of Schedule 6 Part 1 to the 4th Generation Term Contract for the Management and Maintenance of the Scottish Trunk Road Network shall be released subject to any comments contained in the attached covering letter.

Documents reviewed by Performance Audit Group **YES**

NO

*** Tick as appropriate**

Signed Date

Name (Block Capitals)

Position in Performance Audit Group.....

APPENDIX TO DRAFT TENDER DOCUMENTS CERTIFICATE

SCHEME TITLE

SCHEME NUMBER

Instructions for Tendering

The undernoted alterations/additions are proposed, compared with the latest standard version issued by the Scottish Ministers.

(List here only paragraph numbers with a note accompanying what has been added or deleted - do not list full wording.)

.....
.....

Conditions of Contract

The undernoted alterations/additions are proposed compared with the current Model Contract Document issued by the Scottish Ministers.

(Note Special requirements shall be restricted to those listed in the Model Contract Document unless prior written consent has been obtained from the Director in respect of any proposed additions)

(List here only clause numbers with a note clarifying what has been added or deleted - do not list full wording.)

.....
.....

Specification

The undernoted alterations/additions are proposed compared with the latest Manual of Contract Documents for Highway Works issued for the Scottish Ministers or with the paragraphs included in Schedule 6 Part 1 of the 4th Generation Term Contract for Management and Maintenance of the Scottish Trunk Road Network.

(List here only clause paragraph or appendix numbers.)

.....
.....

The undernoted scheme specific clauses or appendices have been included.

(List here only clause or appendix numbers but include all appendices which require to be prepared by the Contract Administrator(s))

.....
.....

Preamble and Method of Measurement

The undernoted alterations/additions are proposed compared with the latest Manual of Contract Documents for Highway Works issued for the Scottish Ministers or Schedule 2 Part 1 to the 4th Generation Term Contract for the Management and Maintenance of the Scottish Trunk Road Network.

(List here only clause numbers with a note as to what has been added or deleted. List if alternative Method of Measurement (for example fixed lump sum) used with date authorised by Director)

.....
.....

Further Tender Documents

The following documents are submitted herewith.

- (a) Health and Safety Plan
- (b) Drawings numbered and titled as follows:

.....
.....
.....
.....

- (c) Bill of Quantities and Milestone Schedule or other such document

This is Annex 6.1/C to Schedule 6 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 1

PROCUREMENT AND MANAGEMENT OF SCHEMES

ANNEX 6.1/C – Contract Control Forms

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 1

PROCUREMENT AND MANAGEMENT OF SCHEMES

ANNEX 6.1/C – Contract Control Forms

This annex contains the following Forms:

- (i) CC1A,
- (ii) CCIA,
- (iii) CCII,
- (iv) CCII Appendix 1,
- (v) CCII Appendix 2,
- (vi) CCIII,
- (vii) CCIII Appendix 1,
- (viii) CCIII Appendix 2.

TRANSPORT SCOTLAND

TRUNK ROAD AND NETWORK MANAGEMENT DIRECTORATE

OPERATING COMPANY:

CC1A

Monthly Statement Number _____

Contractor _____ Scheme Identifier

*(see note below)

Contractor code

SEAS code

Scheme Title: _____

Scheme Commencement Date: _____

Scheme Completion Date: _____

Tender Total £

Contractor's statement submitted on _____ Due Date _____ Payment

Cumulative Total of payments to Contractor (excluding VAT) £ _____

Less amount previously certified (excluding VAT) £ _____

Amount this certificate (excluding VAT) £

Certificate

We, the Operating Company appointed by the Scottish Ministers hereby certify that the sum of £.....(in words)..... is due to this Works Contractor in accordance with the terms of this Contract.

Signed: _____ Date: _____

Name: _____ (Block Capitals)

For the Operating Company

<i>VAT Guidance</i>		
Amount of Works which are zero rated =	<input type="text"/> £	(1)
Amount of Works liable to VAT at 20% =	<input type="text"/> £	(2)
Total VAT =	<input type="text"/> £	(3)
Total to be paid (1)+(2)+(3)=	<input type="text"/> £	

For Transport Scotland Use Only	
NMD: Payment Recommended	
Signed: _____	Name: _____
For the Director	Date: _____

*Where this Contract contains more than one Scheme ID number the following page shall also be completed.

TRANSPORT SCOTLAND

TRUNK ROAD AND NETWORK MANAGEMENT DIRECTORATE

OPERATING COMPANY

CC1A

Monthly Statement Number _____

Breakdown of Scheme where this Contract contains more than one Scheme Identification number

Scheme Identification Number	Amount of Works 0% VAT £	Amount of Works 20% VAT £	Total Works Value £
	(1)	(2)	(1) + (2)

TOTALS =

£	£	£
----------	----------	----------

TRANSPORT SCOTLAND
TRUNK ROAD AND NETWORK MANAGEMENT DIRECTORATE

CC II No Appendix 1

A. SUMMARY OF CHANGE ORDERS ISSUED AND

B. RETURN OF OTHER CHANGES (MEASUREMENTS) IN EXCESS OF - £2,000 DURING PERIOD COVERED BY CC II NO _____

SCHEME TITLE: _____

SCHEME NO: _____

VO No (1)	Description of changes with quantities and rates where appropriate (2)	Estimated Cost (3)	Source of Funds (4)	Authority (5)
1.	CHANGES FOR WORK NOT INCLUDED IN CONTRACT			
	Total increase from previous return			
	TOTAL INCREASE TO DATE (enter against work carried out against variation orders on CC II)			
2.	INCREASE IN WORK INCLUDED IN CONTRACT			
	Total increase from previous return			
	TOTAL INCREASE TO DATE (enter against section heads of bill of quantities / milestone schedules and the like on CC II)			
3.	DECREASES IN WORK INCLUDED IN CONTRACT			
	TOTAL DECREASE FROM PREVIOUS RETURN			
	TOTAL DECREASE TO DATE (entered against section heads of bill of quantities / milestone schedules and the like on CC II)			

Signed:

Date:

Operating Company

**STATEMENT OF POSITION REGARDING WORKS CONTRACTOR'S REQUEST
 FOR ADDITIONAL PAYMENT OR EXTENSION OF TIME**

SCHEME TITLE: _____

SCHEME IDENTIFICATION NUMBER: _____

Request No (1)	Description and Works Contractor's views (2)	Contract Clause (3)	Amount £ or days (4)	Engineer's observations and decision (5)	Amount Allowed £ or days (6)	Remarks (7)

Total of financial requests allowed to Column 3 of Form CCII £ _____

Signed _____
 Operating Company

Date _____

INSTRUCTIONS FOR COMPLETING FORM: see reverse

**INSTRUCTIONS FOR THE CONTRACT ADMINISTRATOR(S) AS REFERRED TO IN
ANNEX 6.1/D OF THIS PART COMPLETING FORM CCII Appendix 2**

- (1) Requests for additional payment or time shall be entered under two headings:
 - (a) requests notified by the Works Contractor and pending, and
 - (b) requests certified by the Engineer for payment, or extensions of time notified by the Engineer.
- (2) Under each heading give a summary of the current position of requests previously notified, giving details of individual requests only where some development has occurred since the previous report (eg contractor supplies valuation and Engineer certifies for payment).
- (3) Detail requests notified in period covered by return. If the Works Contractor has not valued financial request then the Engineer shall provide an order of magnitude assessment in column (4) marked "E/A" (estimated amount).

TRANSPORT SCOTLAND
TRUNK ROAD AND NETWORK MANAGEMENT DIRECTORATE

CC III

SCHEME TITLE: _____

SCHEME IDENTIFICATION NUMBER: _____

ENGINEERING STATEMENT

(To be submitted Quarterly for Works Contract)

No. _____

1. Operating Company _____

2. Name of Works Contractor _____ Date work Commenced _____

3. Period of Contract _____ Months Completion Date _____

4. Contract time elapsed _____ Months

5. Labour Force (on Site) at date of statement

6. Weather Conditions since last Report

7. Overall Progress

Quarter ended _____

Signed _____
Operating Company

Dated _____

TRANSPORT SCOTLAND
TRUNK ROAD AND NETWORK MANAGEMENT DIRECTORATE

CC III No. ____ Appendix 1

PROGRESS DETAILS

ROAD AND GENERAL WORKS

Description (As in main headings of sections of bill of quantities or milestone schedule)	%Completed during quarter	%Completed to date	Remarks indicating if quantities or costs are likely to be exceeded by more than 10 per cent.
	Insert % of work (not cost)		
	(Based on Current estimate of final quantities or milestone)		
General Preliminaries			
Site Clearance			
Fencing			
Road Restraint Systems			
Drainage			
Earthworks			
Sub-Base and Road Base			
Flexible surfacing			
Footpaths, Paving and Kerbing			
Accommodation Works			
Other headings as relevant			

Note: the headings given above are examples and therefore indicative only

TRANSPORT SCOTLAND
TRUNK ROAD AND NETWORK MANAGEMENT DIRECTORATE

CC III No. ____ Appendix 2

PROGRESS DETAILS

BRIDGE WORKS

Bridge No	Name and Description of Bridge	Stage Reached (Insert % of work (not cost) in appropriate column).				
		Excavation	Foundations	Super Structure	Decking	Complete

This is Annex 6.1/D to Schedule 6 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 1

PROCUREMENT AND MANAGEMENT OF SCHEMES

ANNEX 6.1/D – Lane Rental Form

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 1

PROCUREMENT AND MANAGEMENT OF SCHEMES

Annex 6.1/D – Lane Rental Form

**MONITORING FORM
FOR LANE RENTAL SCHEMES**

GENERAL SCHEME DETAILS – MAINTENANCE SCHEMES

Region	<input type="text"/>	Route	<input type="text"/>
Scheme No.	<input type="text"/>	Contract Type*	<input type="text"/>
Works Type	<input type="text"/>	Title	<input type="text"/>
Contract Start Date	<input type="text"/>	Contractor	<input type="text"/>

CONTRACT DURATION

Contract Period Allowed in Tender Documents	<input type="text"/>	days
Contractor's Stated Contract Period	<input type="text"/>	days
Actual Time Taken	<input type="text"/>	days
Extension of Time Granted due to Weather	<input type="text"/>	days
Extension of Time Granted due to Additional Work	<input type="text"/>	days
Claims for Extension of Time Outstanding due to Weather	<input type="text"/>	days
Claims for Extension of Time Outstanding due to Additional Work	<input type="text"/>	days
Estimated Settlement of Claims Outstanding due to Weather	<input type="text"/>	days
Estimated Settlement of Claims Outstanding due to Additional Work	<input type="text"/>	days

CONTRACTS COSTS (excluding Operating Company design, supervision and procurement fee but including VAT on Works where appropriate)

Pre-Tender Estimate	<input type="text"/>	£
Accepted Tender Price (adjusted price if lane rental)	<input type="text"/>	£
Site Supervision Costs Up to Substantial Completion	<input type="text"/>	£
Sum Paid to Contractor on Substantial Completion (including Bonus/Charge & claims)	<input type="text"/>	£
Retention	<input type="text"/>	£
Total Claims Granted	<input type="text"/>	£
Total Claims Outstanding	<input type="text"/>	£
Estimated Settlement of Total Claims Outstanding	<input type="text"/>	£
Bonus B or Charge C	<input type="text"/>	£
	Daily	
	B	<input type="text"/>
	Total	
	or C	<input type="text"/>
		£

* Conventional
Own Time Limit
Lane Rental

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 2

CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS 2007

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1.1	Definitions	1
1.2	Role of the Operating Company	1

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 2

CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS 2007

1. OVERALL REQUIREMENTS

1.1 Definitions

1.1.1 For the purposes of this Part the terms "client", "construction phase plan", "designer", "Principal Designer", "Principal Contractor" and "contractor" shall have the meanings assigned to them in the *CDM Regulations*.

1.2 Role of the Operating Company

1.2.1 Pursuant to Clause 20.1.2, the Operating Company shall undertake the client's duties in accordance with Regulation 4 of the *CDM Regulations* in respect of all activities under this Contract that shall be covered by the *CDM Regulations*.

1.2.2 The Operating Company may appoint designer(s) and contractor(s), in accordance with Clause 20.1.7 and Clause 20.1.8 of Schedule 1, during the Contract Period. This will require appropriate checks to be carried out on other organisations' competence, resources and suitability in relation to the role for which it is being considered. The Operating Company shall produce a report for the consideration of the Director prior to formal appointment of other organisations.

1.2.3 Where the requirements of the *CDM Regulations* apply to Operations and Works Contracts, the Operating Company shall advise the Director in writing that notification is required in accordance with the *CDM Regulations*.

1.2.4 The Operating Company shall be appointed to be the Principal Contractor when undertaking Operations to which the *CDM Regulations* apply where there is more than one contractor or it is reasonably foreseeable that more than one contractor will be working on a Scheme at any time. This appointment shall be made, in writing, by the Director. The Operating Company must ensure that any appointments made in relation to these Operations are formally recorded in writing.

1.2.5 The Operating Company shall be appointed to be the Principal Designer when undertaking design for Operations or Works Contracts to which the *CDM Regulations* apply. This appointment shall be made, in writing, by the Director. The Operating Company must ensure that any appointments made in relation to these Operations or Works Contracts are formally recorded in writing.

1.2.6 The Operating Company shall have in place a documented procedure for ensuring compliance with the *CDM Regulations* as part of its Management System including the Quality Plan that shall include:

- (i) details of secure storage, in a secure location, of both hard copies and Electronic Copies of all the files and other records required by the *CDM Regulations* including but not limited to:
 - a) appointments made or altered,
 - b) Health and Safety Plans,
 - c) Operations and Maintenance Manuals
 - d) agreements as to who shall provide the health and safety file,

- e) health and safety files,
 - f) the construction phase plan,
 - g) survey and investigation reports,
 - h) notification to Health and Safety Executive (F10 forms),
 - i) information obtained from the client,
 - j) advice given and information transferred to all duty holders, and
 - k) advice received from all duty holders under the *CDM Regulations*.
- (ii) details of methods by which the information required by the *CDM Regulations* will be made available by the Operating Company to duty holders.

1.2.7 The Operating Company shall upload all the files and other records required by the *CDM Regulations* into the Integrated Roads Information System in accordance with the timescales indicated. The files and other records referred to shall include but not be limited to:

- (i) operations and maintenance manuals (on completion)
- (ii) health and safety files (to be uploaded prior to construction and revised till completion)
- (iii) the construction phase plan (uploaded prior to construction phase)
- (iv) survey and investigation reports (as surveys and investigations take place)
- (v) notifications to Health and Safety Executive (F10 forms) (as notified)
- (vi) details of resources and appointments (to be uploaded prior to construction and revised till completion)

Details of welfare provision (to be uploaded prior to construction and revised till completion)

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 3

ROAD SAFETY AUDITS

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 3

ROAD SAFETY AUDITS

1. GENERAL

1.1 Introduction

1.1.1 Road safety audits shall be undertaken in accordance with the *Design Manual for Roads and Bridges* and, where applicable, the *European Community Directive 2008/96/EC*.

1.2 Role of Operating Company

1.2.1 The Operating Company shall organise road safety audits of Schemes for which it will be carrying out the Design and or supervision of the Operations and Works and the associated temporary traffic management.

1.2.2 The Director has the right, at his sole discretion, to instruct a third party to undertake the road safety audit, for example where an Operating Company conflict of interest is identified.

1.2.3 On receipt of an Order, the Operating Company shall be required to carry out road safety audits on Schemes designed or constructed by others.

1.2.4 The requirements of road safety audits shall be managed by the Road Safety Manager.

1.2.5 The Operating Company shall maintain and update the Route Safety File which shall contain details of all Stage 1, 2, 1/2, 3 and 4 road safety audit reports, including audits undertaken by third parties, in relation to that Route.

2. ROAD SAFETY AUDITS UNDERTAKEN BY THE OPERATING COMPANY

2.1 Clarifications and amendments to the Design Manual for Roads and Bridges

2.1.1 For the purposes of paragraphs 2 and 3 of this Part, the following are clarifications of definitions given in the *Design Manual for Roads and Bridges*:

design organisation means the designated Design team responsible for the Scheme within the control of the Operating Company,

Project Sponsor means the Operating Company's Representative except where expressly provided otherwise in this Contract.

2.1.2 The words "Project Sponsor" as referred to in paragraphs 2.48 to 2.51 inclusive of HD19/03 of the *Design Manual for Roads and Bridges* shall be deleted and replaced with "Director" for paragraphs 2 and 3 of this Part.

2.2 Requirements

2.2.1 The Operating Company shall submit its nominated personnel for the roles of the audit team members and audit observers to the Director for written consent.

2.2.2 The Operating Company shall demonstrate the competence of the nominated audit team members by submitting details of their training and experience to the level

required by paragraph 2.57 of HD19/03 of the *Design Manual for Roads and Bridges*, to the Director.

- 2.2.3 The Director must be satisfied that the team has adequate and relevant training, skills and experience for each road safety audit undertaken.
- 2.2.4 The Director shall not give consent to any nominated personnel if he considers that they lack the necessary experience and training or if their independence is in doubt. In such cases the Director shall instruct the Operating Company to submit alternative nominees for consideration.
- 2.2.5 Once consented to by the Director, the nominated individuals may be called upon to take part in road safety audits in the role for which consent has been given.

3. SCOPES AND STAGES OF ROAD SAFETY AUDITS

3.1 Procedures

- 3.1.1 The scopes and stages of road safety audits are stated in HD19/03 of the *Design Manual for Roads and Bridges*.
- 3.1.2 The Operating Company shall ensure that two copies of each road safety audit report, including any attachments, is sent to the Director within five Working Days of being undertaken.
- 3.1.3 The Operating Company shall ensure that all issues raised by the audit team are given due consideration by the design organisation.
- 3.1.4 The Operating Company shall submit to the Director two copies of an exception report, when required, for any stage of a road safety audit where the design organisation considers the comments provided within the road safety audit report are not viable or applicable within the scope of the project. The Operating Company shall ensure the report gives reasons and proposes alternatives in the exception report for the Director's approval.
- 3.1.5 The Operating Company shall submit two copies of the audit brief to the Director for comment.
- 3.1.6 The requirements for road safety audits on Schemes which meet the criteria for audits referred to in this Part are in addition to any other requirements for road safety audits stated in the *Design Manual for Roads and Bridges*.

3.2 Stage 1 – Preliminary Design

- 3.2.1 The preliminary Design for a Scheme shall be subjected to a stage 1 road safety audit.

The Operating Company shall ensure that the design organisation, in addition to meeting the requirements of the *Design Manual for Roads and Bridges*, submits the following information to the road safety audit team where relevant:

- (i) 1:1250 or 1:2500 scale general layout drawings showing horizontal and vertical alignment details together with visibility requirements including details of:
 - (a) junctions,
 - (b) drainage,

- (c) landscaping,
- (d) accesses,
- (e) utilities,
- (f) lay-bys,
- (g) sign gantries,
- (h) traffic signals, and
- (i) street lighting,
- (ii) 1:500 scale plans of special features and interfaces with existing roads,
- (iii) standard details and typical cross sections including road restraint systems,
- (iv) accident data including locations,
- (v) traffic flows including vehicular, pedestrian, cyclist and equestrian movements, and
- (vi) details of relaxations and departures from standards as stated and defined in the *Design Manual for Roads and Bridges*.

3.2.2 The Operating Company shall ensure that the design organisation has addressed all matters raised in the road safety audit report before progressing to the next stage.

3.3 Stage 2 – Detailed Design

3.3.1 The detailed Design shall be subjected to a stage 2 road safety audit.

3.3.2 The Operating Company shall ensure that the design organisation submits to the road safety audit team any information not previously submitted, or information amended from that given at stage 1 and, where applicable, with:

- (i) 1:500 scale Scheme plans of the road layout showing all junctions including verges and extent of side slopes,
- (ii) drawings showing:
 - (a) road restraint systems,
 - (b) pedestrian guard rails,
 - (c) bridge parapets,
 - (d) walls,
 - (e) other Structures,
 - (f) signs including location, poles, arrangements and sign fascia,
 - (g) road markings,
 - (h) lighting, and
 - (i) other features,
- (iii) drawings showing road surface contours, drainage details and carriageway details,
- (iv) traffic signal and integrated traffic systems details, and
- (v) copies of the previous road safety audit and exceptions reports.

3.3.3 The Operating Company shall ensure that all amendments to the Design required as a result of the stage 2 road safety audit shall be incorporated into the Design of a Scheme before the Site Operations, or procurement of Works Contracts, commences.

3.4 Stage 3 – Completion of Construction

3.4.1 The Operating Company shall give the Director at least 14 days' notice in writing when a Scheme, or any part thereof, is ready for a stage 3 road safety audit.

3.4.2 Fourteen days prior to the due date, the Operating Company shall invite representatives of the Director, the design organisation, and the Police to attend all stage 3 road safety audits to offer their views. These representatives do not constitute part of the road safety audit team and the responsibility for the production of the road safety audit report shall remain with the audit team leader.

3.4.3 The audit team leader shall provide immediate feedback to the representative(s) of the Director while on Site in relation to any road safety concerns raised in the stage 3 road safety audit.

3.4.4 The Operating Company shall discuss the findings on Site and any previous exception reports with the Director prior to any additional work being carried out. This feedback and discussion shall be included the stage 3 road safety audit report.

3.4.5 The Operating Company shall ensure that additional work, together with any corrective work, is incorporated into the Scheme. The Director shall issue an Order for any additional work required that has been identified in the stage 3 road safety audit report. In the case of a Works Contract, any additional and or corrective work shall be completed before a Certificate of Completion is issued under the Works Contract.

3.5 Stage 4 – Monitoring

3.5.1 Stage 4 monitoring shall include any Scheme for which construction was completed before the Commencement of Service Date.

The stage 4 monitoring report shall include the accident data logged in the Integrated Roads Information System for 12 months and 36 months after the Scheme becomes operational.

3.5.2 The Operating Company shall notify the Director no later than four weeks before the due date of the 12 month and 36 month stage 4 monitoring reports.

3.5.3 The Operating Company shall submit a stage 4 road safety audit report to the Director that provides an analysis of accidents as stipulated in the *Design Manual for Roads and Bridges* and provides details of any operational issues arising from the works that were not apparent at the stage 3 road safety audit.

3.5.4 Where the Director procures a stage 4 road safety audit from a third party, the Operating Company shall, subject to an Order, provide information required for the analysis of accidents and descriptions of operational difficulties to the third party.

3.5.5 The Operating Company shall discuss the findings of the stage 4 road safety audit report with the Director.

3.5.6 The Director shall issue an Order to the Operating Company to cover any additional work required as a result of the reports.

4. OTHER ROAD SAFETY AUDITS

4.1 Road Safety Audits of Schemes Designed or Constructed by Others

4.1.1 Subject to an Order, the Operating Company shall perform road safety audits on schemes located within the Unit which will be, or were, designed or constructed by others. In such cases, the Operating Company shall perform the relevant road safety audit as required by this Part.

4.2 Road Safety Audits Carried Out by Others

4.2.1 Schemes promoted by others, where the design organisation is outwith the control of the Operating Company, shall be the subject of road safety audits carried out on behalf of the promoters of the schemes and the reports shall be submitted to the Director who will provide them to the Operating Company for review. Subject to an Order, the Operating Company, shall review and comment to the Director on any points of concern contained within such road safety audit reports.

5. CERTIFICATION

5.1 Requirements

5.1.1 The Operating Company shall complete a road safety audit certificate at the completion of each road safety audit and submit such certificate to the Director within five Working Days of the road safety audit being undertaken. The certificate shall be in the form shown in Schedule 6 Part 4.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 4

DESIGN AND CERTIFICATION OF OPERATIONS AND WORKS

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 4

DESIGN AND CERTIFICATION OF OPERATIONS AND WORKS

1. INTRODUCTION

1.1 Overall Requirements

1.1.1 Schemes executed by the Operating Company may require the Operating Company to execute a Design in accordance with the provisions of an Order. For the purposes of this Contract there are three categories of Design that may be the subject of an Order:

- (i) Design for Schemes that are undertaken by the Operating Company as Operations,
- (ii) Design for Works where the Works are undertaken by Works Contractors, or
- (iii) Design for works where the works are undertaken by any other third party.

1.1.2 The Design procedure for the three classifications of Design identified above shall be identical up to the stage at which:

- (i) calculations have been completed,
- (ii) working drawings prepared, and
- (iii) all certification for the said Design has been completed and registered in the Central Office by the Operating Company.

1.1.3 The Design procedure shall not include road safety audits. Road safety audits shall be undertaken in accordance with Schedule 6 Part 3.

1.1.4 For the purpose of this Part, "Record of Determination" means the document prepared on behalf of the Director by Operating Company to record if an environmental impact assessment is required for a Design. The Director shall provide the Operating Company with a copy of the form to be used for preparing the Record of Determination.

1.1.5 For the purposes of this Part, "Checker" means the person or persons appointed by the Operating Company and consented to by the Director to undertake the Design checks required under paragraph 3.2 of this Part.

2. DESIGN

2.1 Design Brief

2.1.1 The Operating Company shall provide the Director with a brief for the Design that includes:

- (i) an outline of the Design requirement,
- (ii) a full and detailed estimate of all costs including the name and grade for each Operating Company employee involved with the Design and the number of hours per staff member for each Design task,
- (iii) a full detailed programme for the Design including all hold points,

- (iv) the Operating Company's method of approach to the Design,
- (v) the estimated costs of Design as a percentage of the overall Scheme costs,
- (vi) development of preliminary and conceptual Design options,
- (vii) recommendation of the preferred Design to the Director with justification,
- (viii) submissions and presentations, and
- (ix) the estimated cost of the Scheme at Design brief stage.

2.1.2 The Director shall consider the brief and at his discretion, request the Operating Company to amend and re-submit it.

2.1.3 The Director shall confirm the brief is acceptable and at his discretion, issue an Order for the Operating Company to execute a Design.

2.2 Design Procedure

2.2.1 The Director shall issue an Order for the Operating Company to execute a Design. The Order issued shall state the requirements for the Design, including, where appropriate, the:

- (i) production of a Design and estimated Scheme cost,
- (ii) confirmation that the brief provided by the Operating Company is acceptable to the Director or that an amended brief is required,
- (iii) programme requirements for the various parts of the procurement procedure for the Scheme including the latest date for commencement of the Design,
- (iv) development of employer's requirements for use with a Work Contractor's Design contract,
- (v) investment appraisal and whole life costings,
- (vi) value management or value engineering workshops and studies,
- (vii) requirements for the preparation of road orders, plans, schedules, environmental impact assessments and environmental statements, and
- (viii) in addition, for all Works Contracts:
 - (a) latest date for commencement of the Works,
 - (b) latest date for completion of the Works,
 - (c) estimated cost of Works,
 - (d) clarification in writing that the Operating Company shall act as the Engineer for the Scheme,
 - (e) clarification in writing to the Operating Company that the Operating Company shall supervise the Works.

2.2.2 The Design shall include:

- (i) preparation of drawings and specifications for a Scheme,
- (ii) engineering calculations for a Scheme,
- (iii) reasons for choice of materials (including replacing with the same or similar materials),

- (iv) reasons for choice of equipment,
- (v) reasons for specifying particular standards or departures therefrom,
- (vi) reasons for extent or scope of a Scheme,
- (vii) reasons for the Design option developed,
- (viii) the Health and Safety Plans in accordance with the CDM Regulations, and
- (ix) any other requirements necessary to be included in the Design to enable the execution and completion of a Scheme.

2.2.3 Subject to an Order, the Operating Company shall undertake additional investigations and studies necessary for the completion of the Design including:

- (i) feasibility and option studies,
- (ii) aesthetic review with Transport Scotland's aesthetic adviser,
- (iii) further investigations,
- (iv) ground investigations,
- (v) route option proposals,
- (vi) road safety audits,
- (vii) business impact studies,
- (viii) traffic impact studies,
- (ix) economic evaluation studies, and
- (x) any other preparation work.

2.2.4 Where a Design of any Scheme carried out by the Operating Company requires the acquisition or procurement of land, the Operating Company shall prepare land plans and schedules in accordance with the requirements of the Director.

When requested by the Director, the Operating Company shall assist the Director in carrying out negotiations for the acquisition, procurement or entry to such land.

2.2.5 The Operating Company shall ensure all Design complies with the *Design Manual for Roads and Bridges*, the *Manual of Contract Documents for Highway Works*, the *Disability Discrimination Act: Good Practice Guide for Roads*, this Contract and any other Design requirements issued by the Director. All Design shall be certified in accordance with the certification procedures specified in this Contract. Compliance with the *Disability Discrimination Act: Good Practice Guide for Roads* shall not absolve the Operating Company from any liability under the *Disability Discrimination Act*.

2.2.6 Where the provisions contained within the *Disability Discrimination Act: Good Practice Guide for Roads* conflict with those of the *Design Manual for Roads and Bridges*, the Operating Company shall inform the Director and make recommendations on which provisions should be used for the Design.

2.2.7 The Operating Company shall require express written consent from the Director to any departure from the *Design Manual for Roads and Bridges*, the *Manual of Contract Documents for Highway Works* or the *Disability Discrimination Act: Good Practice Guide for Roads* prior to any departure being incorporated into the Design.

All departures consented to by the Director shall use the departures from standards Certificate detailed in Annex 6.4/A of this Part.

2.2.8 The Operating Company shall, as part of the Order for the Design, assess all Designs of Schemes to determine if an environmental impact assessment is required and shall notify the Director of the outcome of such assessment in a draft Record of Determination. Depending upon the scope of the Design, the draft Record of Determination shall be supported, where applicable, by either:

- (i) an environmental assessment report, or
- (ii) an environmental review report,

to be held by the Operating Company at the Central Office for all Designs prior to the completion of Design or certification.

2.2.9 The Operating Company shall hold the documents at the Central Office and shall not complete Design or certification until the Director's consent to the draft Record of Determination, draft environmental assessment report or draft environmental review report has been received.

2.2.10 Once consented to, the Record of Determination, environmental assessment report or environmental review report shall be signed by the Director before publication of statutory orders and retained at the Central Office.

2.2.11 When the Director determines that an environmental impact assessment is required, the Operating Company shall ensure that the relevant statutory procedures are followed and the findings of the environmental impact assessment reported in an environmental statement.

2.2.12 Where the Design of any Scheme requires new road orders, variations to existing road orders, environmental impact assessments and subsequent environmental statements, the Operating Company shall, as part of the Design and in accordance with the *Design Manual for Roads and Bridges*:

- (i) prepare the required road orders, plans, schedules, environmental impact assessments and environmental statements, and
- (ii) submit these when required to the Director.

The Director, assisted as required by the Operating Company, shall publish environmental statements and public notices of determination and make the said road orders in accordance with the procedures referred to in the legislation.

2.2.13 The Operating Company shall prepare the pre-tender Health and Safety Plans in accordance with the CDM Regulations as part of any Design.

2.2.14 For each Scheme, the Operating Company shall record the estimated Design costs as a percentage of the overall Scheme costs. The Operating Company shall provide full justification to the Director of any instances where the percentage of estimated Design costs exceeds or is likely to exceed the average percentage of estimated Design costs for all Schemes it has undertaken.

2.2.15 When requested by the Director, the Operating Company shall provide full justification of any instances where its percentage of estimated Design costs exceeds the average percentage of estimated Design costs for all Schemes undertaken across all Units.

3. CERTIFICATION PROCEDURES

3.1 General

- 3.1.1 All Design shall be certified in accordance with the certification procedures specified in this Contract. Such certification shall be undertaken as part of the Order for the Design.
- 3.1.2 Where the Operating Company executes a Design, it shall provide certification to cover the Design or Design Element(s) where the:
- (i) Scheme(s) is subsequently executed by the Operating Company or by a Works Contractor, or
 - (ii) works are executed by others.
- 3.1.3 The certification procedures shall apply to all Operations that constitute Design or any activity that relates to specifying Operations and to the manner in which they are executed.
- 3.1.4 The technical approval of Structures shall be in accordance with the *Design Manual for Roads and Bridges* together with any other relevant Scottish Executive and Transport Scotland addendums. Prior to the Operating Company commencing a Design for:
- (i) Structures (including temporary Structures), or
 - (ii) the strengthening, structural repair or partial renewal of existing Structures,
- a Design proposal shall be submitted to the Director at the preliminary Design stage on form TA1. A copy of form TA1 is provided in Annex 6.4/A of this Part. This shall represent a hold point in the Operating Company's Quality Plan.
- No further Operations in respect of any such Design shall be executed until the Director returns form TA1 granting approval to the Operating Company. The Director's approval may include amendments that are required or conditions that are placed in connection with the approval.
- 3.1.5 The Director shall not accept modifications or qualifications to any of the Certificates and notices provided in Annex 6.4/A of this Part other than those consented to in advance and in writing.
- 3.1.6 The certification procedure associated with a part of a Design or Design Element shall be deemed to cover all aspects and stages of a Design or Design Element.
- 3.1.7 Where the value of the Scheme is less than £100,000 the Operating Company shall use the combined Design and Design check Certificate contained in Annex 6.4/A of this Part in lieu of the other Design and check Certificates.

3.2 Design Certificates and Design Check Certificates

- 3.2.1 The Design check for all Structures shall be carried out by the Operating Company in accordance with the procedures described in *Design Manual for Roads and Bridges*. Prior to executing any Design checks, the Operating Company shall submit the name of the independent Checker to the Director for written consent.
- 3.2.2 Design Certificates and Design check Certificates shall be prepared by the Operating Company for all parts of a Design or Design Element(s) including:
- (i) accommodation works,

- (ii) drainage,
- (iii) earthworks,
- (iv) environment and landscaping,
- (v) fencing and environmental barriers,
- (vi) kerbs footways and paved areas,
- (vii) lighting and electrical work,
- (viii) piling,
- (ix) road layout,
- (x) road pavements,
- (xi) road restraint systems,
- (xii) signs and road markings,
- (xiii) Structures,
- (xiv) departures from standard or aspects not covered by standards, and
- (xv) any other Design element not covered above.

3.2.3 For any part of the Scheme that has a Bid Estimate of Cost of less than or equal to £1,000,000, the Design check for all parts of the Design or all parts of the Design Elements shall be subject to a category II Design check by a Checker. In all circumstances, the Checker shall be technically independent of the Designer in accordance with the *Design Manual for Roads and Bridges*.

3.2.4 The Design check for any Operations, Works or works carried out by others with an estimated value of more than £1,000,000 shall be executed by a Checker. In all circumstances, the Checker shall be technically independent of the Designer, the Operating Company and any associated companies.

3.2.5 The Design check for all Structures Design requiring category III Design checks and for all earthworks Design shall be executed by a Checker. In all circumstances, the Checker shall be technically independent of the Designer's organisation, the Operating Company and their associated companies.

When parts of a Structure are designed by more than one Designer, a Category III Design check for the whole Structure shall be carried out by a single Checker.

3.2.6 Separate Design Certificates and Design check Certificates shall be prepared by the Operating Company for each Structure Design.

3.2.7 Where the value of the Scheme is less than £100,000 the Operating Company shall use the Combined Design and Design check Certificate.

3.2.8 Construction of any part of the Operations, Works or works that requires a Certificate in accordance with requirements of this Part shall not commence until the completed Certificate with all associated information has been recorded and contained within the Design register or Design check register.

3.3 Earthwork Certification

3.3.1 The Operating Company shall comply with the requirements for earthworks certification as stated in the *Design Manual for Roads and Bridges* except where such requirements have been amended or modified as stated within this Contract.

A copy of the factual report as referred to in the *Design Manual for Roads and Bridges* shall be forwarded to the relevant Scottish office of the British Geological Survey on completion of the Design.

3.3.2 All Operations or Works involving earthworks shall be subject to a ground investigation in accordance with the *Design Manual for Roads and Bridges* and the *Manual of Contract Documents for Highway Works*.

Subject to an Order, the Operating Company may procure ground investigations services by either the Scottish Ministers' framework agreement for ground investigation services or as required by the Order. The Scottish Ministers shall remain the Employer for all said agreements. The Director shall decide how the ground investigation services are procured and shall advise the Operating Company of his decision.

3.3.3 Subject to an Order, the Operating Company shall act as Engineer for any such ground investigations. The duties of the Engineer shall include preparing works orders, issuing instructions and supervision as required to permit the particular ground investigation service provider to execute and complete the works.

3.3.4 Prior to an Order being issued and when requested by the Director, the Operating Company shall provide for the Director's consent, a draft Design brief for ground investigations which shall include:

- (i) principal technical details,
- (ii) principal delivery dates and programme,
- (iii) preferred method of procurement for ground investigation services with full justification for the preference including the value for money assessment,
- (iv) schedule of plant and resources including cost estimates,
- (v) conflicts of interest,
- (vi) access to land,
- (vii) details of geotechnical certification route to be followed, and
- (viii) any other information required by the Director.

3.3.5 A geotechnical interpretative report, compiled in accordance with the *Manual of Contract Documents for Highway Works*, shall be prepared and incorporated into the Design by the Designer for all earthworks including piling.

The Design check of the earthworks Design including the design check of the interpretative report shall be carried out by a Checker. Prior to executing any design checks, the Operating Company shall submit the name of the independent Checker to the Director for written consent.

Where, in accordance with *Design Manual for Roads and Bridges* the ground investigation is categorised as category B, the independent check shall be carried out by the Director's appointed independent geotechnical checker. Such

independent check shall be completed prior to completion of a Scheme Design and prior to tendering of a Works Contract.

The Operating Company shall forward a copy of the independent check Certificate to the Director upon receiving sign off from the independent geotechnical checker.

3.4 The Staged Procedure for Design Interim Certificates and Design Check Interim Certificates

3.4.1 The parts of a Design or Design Element(s) that require Design Certificates and Design check Certificates may each be phased in order to:

- (i) accommodate the Operating Company's phasing of the Design or the phasing of the Operations, Works or works, and
- (ii) enable construction of a phased Design or Design Element(s) to proceed.

3.4.2 When a phased method of certification is adopted by the Designer, the following procedure shall apply:

- (i) for each phase of a Design or Design Element, the Operating Company shall produce a schedule of the further divided parts of a Design or Design Element that it proposes to certify. Any such schedules shall have the written consent of the Designer and the Checker before being implemented and incorporated into the Design register,
- (ii) the Operating Company shall provide and maintain within the Design register the status of all Design interim Certificates and Design check interim Certificates for each phase of the Design or Design Element,
- (iii) each Design interim Certificate for each further phase of the Design or Design Element shall be signed and dated by the Designer and the Operating Company. Each Design check interim Certificate shall be signed and dated by the Checker and the Operating Company with original signatures,
- (iv) the Design register shall also contain all required completed interim certificates and include cross-references to locations where all information referred to within the Design interim Certificate is stored,
- (v) construction of any part of the Operations, Works or works for each phase of the Design or Design Element requiring certification shall not commence until the completed Design interim Certificates with all associated information is recorded and contained within the Design register.

3.4.3 Once all Design interim Certificates and Design check interim Certificates for a part of a Design or Design Element have been completed, the Operating Company shall complete a Design Certificate and Design check Certificate.

3.4.4 The Operating Company shall record and maintain in the Design register, the original signed and dated Design Certificates and Design check Certificates for each part of the Design or Design Element with original signatures, along with one copy of all relevant drawings, schedules and numbered appendices.

The Design register shall also contain all:

- (i) Design interim Certificates,
- (ii) Design Certificates,

- (iii) completed Design and Design check Certificates including cross-references to locations where all information referred to within the Certificates is stored, and
- (iv) Records kept and maintained including relevant drawings, schedules and numbers appendices and any other relevant documents.

The Design register shall be stored at the Central Office.

3.5 Information to be provided with Design Certificates, Check Certificates, Design Interim Certificates and Design Check Interim Certificates

3.5.1 The Operating Company shall ensure the scale of any plans, sections and other drawings are relevant to the part of a Design being certified and show the true disposition of all features that may influence a Design or Design Element including:

- (i) for fencing and environmental barriers, road restraint systems, drainage, earthworks, road pavement, kerbs, footways and paved areas, signs and road markings, lighting and electrical works, environmental and landscaping, and accommodation works:
 - (a) plans showing the layout and extent of the certified part of the Design or Design Element,
 - (b) drawings showing typical and or specific cross-sections, and
 - (c) any other schedule or supporting information associated with the part of the Design or Design Element that is listed in the numbered appendices within the specification used in the Works Contract.
- (ii) for road layout:
 - (a) plans of the road layout to a scale of not less than 1:1250 showing road intersections Structures and road interchanges,
 - (b) longitudinal sections of the Trunk Road including but not limited to side roads, and
 - (c) any other schedules or supporting information (including signed off departures) associated with the part of the Design or Design Element that are listed in the numbered appendices within the specification of a Works Contract, Operations Instructions or Site Operations Instructions,
- (iii) for Structures:
 - (a) all drawings issued for construction of the Structures.

3.6 Design Construction Completion Certificates

3.6.1 The Operating Company shall complete and sign each construction Certificate detailed in Annex 6.4/A of this Part within five Working Days of completion of the Site construction of the identified part of the Design or Design Element. For the purposes of this Certificate, completion shall be the completion of the Operations excluding the Defects Correction Period, as relevant for the particular Scheme.

3.7 Construction Completion Certificates

- 3.7.1 The Operating Company shall complete and sign the required construction completion Certificates detailed in Annex 6.4/A of this Part within five Working Days of completion of the Operations or Works.

3.8 Maintenance Certificates

- 3.8.1 The Operating Company shall complete and sign the maintenance Certificate detailed in Annex 6.4/A of this Part within five Working Days of completion of the maintenance period of the Operations or Works Contract.

3.9 Design Defects Correction Certificate

The Operating Company shall complete and sign the Design Defects correction Certificate detailed in Annex 6.4/A of this Part within five Working Days of completion of a correction of a Defect or Non-Conformance relating to a Design or Design Element.

3.10 Consultation Certificate

- 3.10.1 The Operating Company shall consult and comply with the requirements of affected third parties including public bodies, Undertakers, authorities and other relevant companies during the execution of this Contract. Upon obtaining written consent from the relevant third party, the Operating Company shall prepare and sign consultation Certificates countersigned by the appropriate third party.

The Operating Company shall retain all correspondence with such parties confirming such consultations in the Central Office.

- 3.10.2 The Operating Company shall not commence or procure the commencement of any Operations or Works Contracts that could affect the interests of any third party until this consultation procedure has been completed.

3.11 Road Safety Audit Certificate

- 3.11.1 When a road safety audit is required, a Road Safety Audit Certificate as provided in Annex 6.4/A of this Part shall be completed and appended to the Design or combined Design and check Certificate as relevant by the Operating Company.

3.12 Certificate for Departure from Standard or Aspects Not Covered by Standards

- 3.12.1 The Operating Company shall not incorporate any departure from the requirements stated in the *Design Manual for Roads and Bridges*, the *Manual of Contract Documents for Highway Works* and the *Disability Discrimination Act: A Good Practice Guide for Roads* into a Design, Operations, Works Contract or works until:

- (i) written consent has been obtained from the Director, and
- (ii) a signed copy of the departures from standard form in Annex 6.4/A of this Part has been received from the Director.

3.13 Records and Registers

- 3.13.1 The Operating Company shall provide, maintain and store within the Central Office from the date a relevant Scheme has been identified:

- (i) A register of:
 - (a) approval in principle form,

- (b) Design Certificate,
- (c) Design check Certificate,
- (d) Design interim and check Certificate,
- (e) Design construction completion Certificate,
- (f) construction completion Certificate,
- (g) construction completion Certificate for supervision of Works,
- (h) maintenance Certificate,
- (i) maintenance Certificate (supervision of Works),
- (j) Design Defects correction Certificate,
- (k) consultation Certificate,
- (l) variation order/change instruction Certificate,
- (m) road safety audit, and
- (n) departure from standard Certificates.

The register shall record the current status of all Certificates.

- (ii) The original of each certificate as required, signed and dated by the persons referred to therein.
- (iii) All originals of all supporting documents referred to within each register and Certificate required by this Contract.

Such information shall include drawings schedules numbered appendices and any other information required.

3.13.2 The Operating Company shall produce and maintain a register of all Works Contract Instructions in the contract control and management function of the Integrated Roads Information System in accordance with the requirements of Schedule 4 Part 1.

3.13.3 Subject to an Order, for each Works Contract the Operating Company shall execute the following duties and produce the following registers on Site, for inspection at any time by the Director and the Performance Audit Group:

- (i) Site instructions,
- (ii) variation orders,
- (iii) drawings for the Works including updates certified by the Engineer,
- (iv) reinforcement schedules,
- (v) dayworks Records,
- (vi) Certificates,
- (vii) payment Records,
- (viii) measurement progress including but not limited to dipping Records for each pavement layer to demonstrate correct thickness of each bound and unbound layer,
- (ix) extensions of time claimed by the Works Contractor,

- (x) extensions of time granted by the Engineer,
- (xi) claims for payment by the Works Contractor,
- (xii) new Works items and rates and prices,
- (xiii) site diaries and test results including but not limited to:
 - (a) reports on Works Contractor's progress,
 - (b) weather conditions,
 - (c) requests for and results of inspections of workmanship,
 - (d) the Engineer's confirmation of compliance with the relevant specification at each stage of construction, and
 - (e) traffic management inspections,
- (xiv) the presence of the Engineer's representative on the site of the Works for each day that Site Works are in progress,
- (xv) Health and Safety file as required by Schedule 6 Part 2 which shall incorporate any of the above Records on completion of Works on Site, and
- (xvi) any other items relevant to any particular Works Contract.

All such registers shall be verified and signed each month by the Operating Company.

On completion of Works, the on Site Records shall be registered in the Works Contract register as required by this Contract.

3.13.4 The Operating Company shall maintain all Records, including material and workmanship testing Certificates, to ensure that it can demonstrate:

- (i) that the Works Contractor has complied with the requirements of the Works Contract, or
- (ii) that the Operating Company has complied with the requirements of this Contract, for any Scheme carried out as Operations.

3.13.5 Testing certification shall be maintained at the Central Office and shall be available within five Working Days of the test being completed, irrespective of whether it was carried out as Operations or under a Works Contract.

All such testing certification and testing Records shall be maintained in an easily identifiable file separate from other Scheme Records at the Central Office.

Where the testing certification reports a non-conforming product, the Operating Company shall clearly record in the Non-Conformance register within five Working Days of receipt of the Certificate what action has been taken in relation to the non-conforming product.

This is Annex 6.4/A to Schedule 6 Part 4 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 4

DESIGN AND CERTIFICATION OF OPERATIONS AND WORKS

ANNEX 6.4/A – Certificates in Relation to Certification Procedures

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 6 PART 4

DESIGN AND CERTIFICATION OF OPERATIONS AND WORKS

ANNEX 6.4/A – Certificates In Relation To Certification Procedures

CONTENTS

Approval in Principle form and notes	Certificate No: TA1
Design Interim Certificate: Structures	Certificate No: DIC(S)
Design Check Interim Certificate: Structures	Certificate No: DCIC(S)
Design Certificate: Structures	Certificate No: DC(S)
Design Check Certificate: Structures	Certificate No: DCC(S)
Design Interim Certificate: Earthworks	Certificate No: DIC(EW)
Design Check Interim Certificate: Earthworks	Certificate No: DCIC(EW)
Design Certificate: Earthworks	Certificate No: DC(EW)
Design Check Certificate: Earthworks	Certificate No: DCC(EW)
Design Interim Certificate: Road Restraint Systems	Certificate No: DIC(RRS)
Design Check Interim Certificate: Road Restraint Systems	Certificate No: DCIC(RRS)
Design Certificate: Road Restraint Systems	Certificate No: DC(RRS)
Design Check Certificate: Road Restraint Systems	Certificate No: DCC(RRS)
Design Interim Certificate: Other Part of Design or Design Element	Certificate No: DIC(*)
Design Check Interim Certificate: Other Part of Design or Design Element	Certificate No: DCIC(*)
Design Certificate: Other Part of Design or Design Element	Certificate No: DC(*)
Design Check Certificate: Other Part of Design or Design Element	Certificate No: DCC(*)
Combined Design and Design Check Certificate	Certificate No: DC/DCC
Road Safety Audit (as Appendix to DC or DC/CC)	Certificate No: RSAC
Design Construction Completion Certificate	Certificate No: DCCComp
Construction Completion Certificate	Certificate No: CCompC
Construction Completion Certificate for Supervision of Works	Certificate No: CCSupW
Maintenance Certificate	Certificate No: MC
Maintenance Certificate (Supervision of Works)	Certificate No: MCSupW
Design Defects Correction Certificate	Certificate No: DesDCC
Consultation Certificate	Certificate No: ConsultC
Variation Order/Change Instruction Pro-forma	Certificate No: VO/CI
Departure from Standard Templates	Certificate No: DfS(S) Certificate No: DfS(R)

NOTE:

(S) denotes Structures certificate

(EW) denotes Earthworks certificate

(RRS) denotes Road Restraint System certificate

(R) denotes Roads certificate

(*) denotes ability to use certificate as part of phased construction activities

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

APPROVAL IN PRINCIPLE

FORM TA1

Order Reference

Scheme Identifier.....

1. NAME OF SCHEME

1.1 Type of Road (from TD 27)

1.2 Permitted traffic speed (for a bridge give over and/or under).

1.3 Existing restrictions

2. NAME OF STRUCTURE

2.1 Obstacle crossed.

3. PROPOSED STRUCTURE

3.1 Description of Structure

3.2 Structural type)

3.3 Foundation type) Include reasons for choice

3.4 Span arrangements)

3.5 Articulation arrangements)

3.6 Parapet type

3.7 Proposed arrangements for inspection and maintenance / Inspection for Assessment*

3.7.1 Traffic management

3.7.2 Access

3.7.3^A Intrusive or further investigations proposed

3.8 Sustainability issues considered. Materials and finishes/Material strengths assumed and basis of assumptions

3.9 Risks and hazards considered

3.10^{D*} Estimated cost of proposed Structure together with other structural forms considered, including where appropriate manufactured structure, and the reasons for their rejection including comparative whole life costs with date of estimates.

3.11^{D*} Proposed arrangements for construction

3.11.1 Traffic management

3.11.2 Service diversions

3.11.3 Interface with existing structures

3.12^{A*} Tear of construction

3.11^{A*} Reason for assessment

3.12^{A*} Part of structure to be assessed

4. DESIGN/ASSESSMENT CRITERIA

4.1 Live Loading, Headroom

4.1.1 HA loading

4.1.2 HB loading units

4.1.3 Footway or footbridge live loading.

4.1.4 Provision for exceptional abnormal loads.

4.1.4.1 Gross weight tonnes on vehicle No

4.1.4.2 Axle load and spacing

4.1.4.3 Air cushion tonnes overmx.....metres.

4.1.4.4 Location of vehicle track on deck cross-section.

4.1.5 Any special loading not covered above.

4.1.6 Department heavy or high load route requirements and arrangements being made to preserve the route.

4.1.7 Minimum headroom providedmetres.

4.1.8 Relevant Authorities consulted and any special conditions required.

4.2 List of relevant documents from the TAS (dated from Annex B of BD 2).

4.2.1 Additional relevant Design Manual for Roads and Bridges Standards published since the above edition of the TAS including amendments.

4.3 Proposed departures from standards given in 4.2 and 4.2.1

4.4 Proposed methods of dealing with aspects not covered by standards in 4.2 and 4.2.1.

5. STRUCTURAL ANALYSIS

5.1 Methods of analysis proposed for superstructure, substructure and foundations.

5.2 Description and diagram of idealised structure to be used for analysis.

5.3 Assumptions intended for calculation of structural element stiffness.

5.4 Proposed earth pressure coefficients (k_a , k_o and k_p) to be used in Design/Assessment* for earth retaining elements.

6. GROUND CONDITIONS

6.1 Acceptance of interpretative recommendations of the soils report to be used in the Design/Assessment* and reasons for any proposed departures.

- 6.2 Describe foundations fully including the reasons for adoption of allowable and proposed bearing pressures/pile loads, strata in which foundations are located, provision for skin friction effects on piles and for lateral pressures due to compression of underlying strata.
- 6.3 Differential settlement to be allowed for in Design/Assessment* for Structure.
- 6.4 Anticipated ground movements or settlement due to embankment loading, mineral extraction, flowing water, and measures proposed to deal with these effect as far as they affect the Structure.
- 6.5 Results of tests of ground water and any counteracting measures proposed.

7. DESIGN CHECKS

- 7.1 Proposed category of structure.
- 7.2 If Category III, name of proposed Independent Checkers.
- 7.3 Erection proposals or temporary works for which the Contractor shall be required to arrange an independent check listing the parts of the Structure affected with reasons for recommending an independent Design check.

8. DRAWINGS AND DOCUMENTS

- 8.1 List of drawings (and their numbers) and documents including departures accompanying the submission
- 8.2^{A*} List of construction and record drawings (including numbers) to be used in the assessment
- 8.3^{A*} List of pile driving or other construction records
- 8.4^{A*} List of previous inspection and assessment reports

9. THE ABOVE IS SUBMITTED FOR ACCEPTANCE

Signed Firm

Name Date
Designer/Assessment* (Team leader)

Signed Operating Company
(On behalf of the Operating Company)

Name Date
(Block Capitals)

10. THE ABOVE DEPARTURES FROM STANDARDS / ASPECTS FROM STANDARDS ARE REJECTED / AGREED

Signed
Director (Bridges Section)

Name Date
(Block Capitals)

11. THE ABOVE IS ACCEPTED SUBJECT TO THE AMENDMENTS AND CONDITIONS SHOWN BELOW

Signed
Director (Bridges Section)

Name Date
(Block Capitals)

A = Assessment AIP D = Design AIP * = Delete as appropriate

INSTRUCTIONS FOR THE OPERATING COMPANY'S COMPLETION OF APPROVAL IN PRINCIPLE FORM TA1 AND ASSOCIATED DOCUMENTS

- 1.1 The form TA1 shall be completed and submitted in accordance with Standard BD 2 of *Design Manual for Roads and Bridges*, using the form as amended within this schedule.
- 1.2 Annex A, Annexes A2 to A7 within BD2 of the *Design Manual for Roads and Bridges* are not required.
- 1.3 Appendix A, TECHNICAL APPROVAL SCHEDULE, shall include but not be limited to
 - (i) Annex B to BD/02 – model TAS schedule
 - (ii) Annex B1 – schedules of documents relating to design and assessment of highway bridges and structures
 - (iii) Alpha-numerical index as per *Design Manual for Roads and Bridges*
 - (a) BA Series
 - (b) BD Series
 - (c) BE Series
 - (d) Scottish Addenda
 - (e) Scottish Executive Enterprise and Lifelong Learning Department

Interim Amendments

- 1.4 The alpha-numerical index as per *Design Manual for Roads and Bridges Volume 1 Section 0 Part 2* referred to in paragraph 1.4 above shall be reproduced clearly identifying the standards which apply by striking through the standards that do not apply.
- 1.5 Annex B, Annexes B2 to B4 are not required.
- 1.5 Annex B1, add Scottish Addenda to Departmental Standards and Advice Notes to the list contained therein.

MODEL CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DESIGN INTERIM CERTIFICATE: STRUCTURES

CERTIFICATE No: DIC(S).....

Structure No.....

Order Reference.....

Route.....

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers in respect of the design of the following further divided part of the Design or Design Element namely:

..... **(Name of further divided part of Structure)**

..... **(Name of Structure)**

that reasonable professional skill and care has been taken by us with a view to securing that the further divided part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements.
- (ii) has been accurately translated into the construction drawings and bar bending schedules bearing the unique numbers listed below:
- (iii) shall not be detrimental to the whole Design or Design Element and shall not affect the completion of the Design Certificate(s).

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company.

Signed: Firm:

DESIGNER (Team leader for Designer)

Name: Date:

(Block Capitals)

Signed: Firm:

(On behalf of the Operating Company)

Name: Date:

(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DESIGN CHECK INTERIM CERTIFICATE: STRUCTURES

CERTIFICATE NO: DCIC(S).....

Order Reference.....

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers in respect of the check of the following further divided part for the Design or Design Element namely:

..... **(Name of further divided part of Structure)**

..... **(Name of Structure)**

that reasonable professional skill and care has been taken by us in carrying out the independent Design check of the part of the Design or Design Element with a view to securing that the further divided part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements.
- (ii) has been accurately translated into the construction drawings and bar bending schedules bearing the unique numbers listed below:
- (iii) shall not be detrimental to the whole Design or Design Element and shall not affect the completion of the Check Certificate(s).

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company

Signed: Firm:
CHECKER (Team leader for Checker)

Name: Date:
(Block Capitals)

Signed: Firm:
(On behalf of the Operating Company)

Name: Date
(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DESIGN CERTIFICATE : STRUCTURES

CERTIFICATE NO : DC(S).....

Order Reference.....

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers in respect of the design of the following part of the Design or Design Element namely

.....

(Name of Structure)

that reasonable professional skill and care has been taken by us with a view to securing that the part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements.
- (ii) has been accurately translated into the construction drawings and bar bending schedules bearing the unique numbers listed below:
- (iii) shall not be detrimental to the whole Design or Design Element.
- (iv) where required a Safety Audit Certificate for Stage *[2] *[3] is attached

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company

Signed: Firm:

DESIGNER (Team leader for Designer)

Name: Date:

(Block Capitals)

Signed: Firm:

(On behalf of the Operating Company)

Name: Date:

(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DESIGN CHECK CERTIFICATE : STRUCTURES CERTIFICATE NO : DCC(S).....

Order Reference.....

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers in respect of the check of the following part of the Design or Design Element namely

.....

(Name of Structure)

that reasonable professional skill and care has been taken by us in carrying out the independent Design check of the part of the Design or Design Element with a view to securing that the part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements.
- (ii) has been accurately translated into the construction drawings and bar bending schedules bearing the unique numbers listed below:
- (iii) shall not be detrimental to the whole Design or Design Element.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company

Signed: Firm:
CHECKER (Team leader for Checker)

Name: Date:
(Block Capitals)

Signed: Firm:
(On behalf of the Operating Company)

Name: Date:
(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DESIGN INTERIM CERTIFICATE: EARTHWORKS CERTIFICATE NO: DIC(EW).....

Order Reference.....

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers in respect of the design of the following further divided part of the Design or Design Element namely

.....

(Name of further divided part of the Earthworks)

.....

(Name of part of Earthworks or Earthworks Element)

that reasonable professional skill and care has been taken by us with a view to securing that the further divided part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements.
- (ii) has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:
- (iii) shall not be detrimental to the Whole Design or Design Element shall not affect the completion of the Design Certificate(s).
- (iv) has been the subject of an interpretative geotechnical report and that the conclusions of that report have been taken into account in the Design or Design Element.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company

Signed: Firm:

DESIGNER (Team leader for Designer)

Name: Date:

(Block Capitals)

Signed: Firm:

(On behalf of the Operating Company)

Name: Date:

(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DESIGN CHECK INTERIM CERTIFICATE: EARTHWORKS CERTIFICATE NO : DCIC(EW),.....

Order Reference.....

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers in respect of the check of the following further divided part of the Design or Design Element namely

.....

(Name of further divided part of the Earthworks)

.....

(Name of part of Earthworks or Earthworks Element)

that reasonable professional skill and care has been taken by us in carrying out the independent Design check of the Design or Design Element (including the interpretative geotechnical report referred to in (iv) below) with a view to securing that the further divided part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements
- (ii) has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:
- (iii) shall not be detrimental to the whole Design or Design Element and shall not affect the completion of the Check Certificate(s)
- (iv) has been the subject of an interpretative geotechnical report and that the conclusions of that report have been taken into account in the Design or Design Element.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company

Signed: Firm:

CHECKER (Team leader for Checker)

Name: Date:

(Block Capitals)

Signed: Firm:

(On behalf of the Operating Company)

Name: Date:

(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DESIGN CERTIFICATE: EARTHWORKS

CERTIFICATE NO: DC(EW).....

Order Reference.....

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers in respect of the design of the following part of the Design or Design Element namely

.....

(Name of Earthworks or Earthwork's Element)

that reasonable professional skill and care has been taken by us with a view to securing that the part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements.
- (ii) has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:
- (iii) shall not be detrimental to the whole Design or Design Element.
- (iv) has been the subject of an interpretative geotechnical report and that the conclusions of that report have been taken into account in the Design or Design Element.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company

Signed: Firm:

DESIGNER (Team leader for Designer)

Name: Date:

(Block Capitals)

Signed: Firm:

(On behalf of the Operating Company)

Name: Date:

(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DESIGN CHECK CERTIFICATE: EARTHWORKS CERTIFICATE NO: DCC(EW).....

Order Reference

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers in respect of the check of the following part of the Design or Design Element namely

.....

(Name of Earthworks or Earthworks Element)

that reasonable professional skill and care has been taken by us in carrying out the independent Design check of the Design or Design Element (including the interpretative geotechnical report referred to in (iv) below) with a view to securing that the part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements.
- (ii) has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:
- (iii) shall not detrimental to the whole Design or Design Element.
- (iv) has been the subject of an interpretative geotechnical report and that the conclusions of that report have been taken into account in the Design or Design Element.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company

Signed: Firm:

CHECKER (Team leader for Checker)

Name: Date:

(Block Capitals)

Signed: Firm:

(On behalf of the Operating Company)

Name: Date

(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DESIGN INTERIM CERTIFICATE: ROAD RESTRAINT SYSTEMS CERTIFICATE NO: DIC(RRS)...

Order Reference

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers in respect of the design of the following further divided part of the Design or Design Element namely

.....
(Name of further divided part of Safety Road Restraint System or Element)

.....
(Name of part of Road Restraint System or Element)

that reasonable professional skill and care has been taken by us with a view to securing that the further divided part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements.
- (ii) has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:
- (iii) shall not be detrimental to the whole Design or Design Element and shall not affect the completion of the Design Certificate(s).
- (iv) that all aspects of the Design or Design Element of the Road Restraint System on the Contract have been developed by the use of a risk assessment approach.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company

Signed: Firm:
DESIGNER (Team leader for Designer)

Name: Date:
(Block Capitals)

Signed: Firm:
(On behalf of the Operating Company)

Name: Date:
(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

**DESIGN CHECK INTERIM CERTIFICATE: ROAD RESTRAINT SYSTEMS CERTIFICATE NO:
DCIC(RRS).....**

Order Reference

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers in respect of the check of the following further divided part of the Design or Design Element namely

.....
(Name of further divided part of Road Restraint System or Element)

.....
(Name of part of Road Restraint System or Element)

that reasonable professional skill and care has been taken by us in carrying out the independent Design check of the Design or Design Element with a view to securing that the further divided part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements.
- (ii) has been accurately translated into the construction drawings and other design documents bearing the unique numbers listed below:
- (iii) shall not be detrimental to the whole Design or Design Element and shall not affect the completion of the Check Certificate(s).
- (iv) that all aspects of the Design or Design Element of the Road Restraint System on the Contract have been developed by the use of a risk assessment approach.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company

Signed: Firm:
CHECKER (Team leader for Checker)

Name: Date:
(Block Capitals)

Signed: Firm:
(On behalf of the Operating Company)

Name: Date:
(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DESIGN CERTIFICATE: ROAD RESTRAINT SYSTEMS CERTIFICATE NO: DC(RRS).....

Order Reference

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers in respect of the design of the following part of the Design or Design Element namely

.....

(Name of Part of Road Restraint System or Element)

that reasonable professional skill and care has been taken by us with a view to securing that the part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements.
- (ii) has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:
- (iii) shall not be detrimental to the whole Design or Design Element and shall not affect the completion of the Design Certificate(s).
- (iv) that all aspects of the Design or Design Element of the Road Restraint System on the Contract have been developed by the use of a risk assessment approach.

iv) where required a Safety Audit Certificate for Stage *[2] *[3] is attached

** delete as appropriate*

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company

Signed: Firm:

DESIGNER (Team leader for Designer)

Name: Date:

(Block Capitals)

Signed: Firm:

(On behalf of the Operating Company)

Name: Date:

(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

**DESIGN CHECK CERTIFICATE: ROAD RESTRAINT SYSTEMS CERTIFICATE NO:
DCC(RRS)..**

Order Reference

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers in respect of the check of the following part of the Design or Design Element namely

.....

(Name of Part of the Road Restraint System or Element)

that reasonable professional skill and care has been taken by us in carrying out the independent Design check of the part of the Design or Design Element with a view to securing that the part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements.
- (ii) has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:
- (iii) shall not be detrimental to the whole Design or Design Element
- (iv) that all aspects of the Design or Design Element of the Road Restraint System on the Contract have been developed by the use of a risk assessment approach.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company

Signed: Firm:

CHECKER (Team leader for Checker)

Name: Date:

(Block Capitals)

Signed: Firm:

(On behalf of the Operating Company)

Name..... Date

(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DESIGN INTERIM CERTIFICATE:

CERTIFICATE NO: DIC(*).....

OTHER PART OF DESIGN OR DESIGN ELEMENT

Order Reference

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers in respect of the design of the following part of the Design or Design Element namely:

.....

(Name of further divided part of Design or Design Element)

.....

(Name of Part of the Design or Design Element)

that reasonable professional skill and care has been taken by us with a view to securing that the further divided part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements.
- (ii) has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:
- (iii) shall not be detrimental to the whole Design or Design Element and shall not affect the completion of the Design Certificate.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company

Signed: Firm:

DESIGNER (Team leader for Designer)

Name: Date:

(Block Capitals)

Signed: Firm:

(Operating Company)

Name: Date:

(Block Capitals)

* Insert Description of part of Design or Design Element:

Accommodation Works	(A)	Lighting and Electrical Works	(L)
Drainage	(D)	Road Pavements	(P)
Environmental and Landscaping	(E)	Road Layout	(RL)
Earthworks	(EW)	Signs and Road Markings	(SRM)
Fencing and Environmental Barriers	(F)	Piling	(X)
Kerbs, Footways and Paved Areas	(K)	Any other relevant parts of Design or Design Element	(Y)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DESIGN CHECK INTERIM CERTIFICATE:

CERTIFICATE NO: DCIC(*).....

OTHER PART OF DESIGN OR DESIGN ELEMENT

Order Reference

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers in respect of the check of the following further divided part of the Design or Design Element namely:

.....

(Name of further divided part of Design or Design Element)

.....

(Name of Part of the Design or Design Element)

that reasonable professional skill and care has been taken by us in carrying out the independent Design check of the further divided part of the Design or Design Element with a view to securing that the further divided part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements.
- (ii) has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:
- (iii) shall not be detrimental to the whole Design or Design Element and shall not affect the completion of the Design Certificate.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company

Signed: Firm:

CHECKER (Team leader for Checker)

Name: Date:

(Block Capitals)

Signed: Firm:

(Operating Company)

Name: Date:

(Block Capitals)

* Insert Description of part of Design or Design Element:

Accommodation Works	(A)	Lighting and Electrical Works	(L)
Drainage	(D)	Road Pavements	(P)
Environmental and Landscaping	(E)	Road Layout	(RL)
Earthworks	(EW)	Signs and Road Markings	(SRM)
Fencing and Environmental Barriers	(F)	Piling	(X)
Kerbs, Footways and Paved Areas	(K)	Any other relevant parts of Design or Design Element	(Y)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DESIGN CERTIFICATE:

CERTIFICATE NO: DC(*).....

OTHER PART OF DESIGN OR DESIGN ELEMENT

Order Reference

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers in respect of the design of the following part of the Design or Design Element namely:

.....

(Name of Part of the Design or Design Element)

that reasonable professional skill and care has been taken by us with a view to securing that the part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements.
- (ii) has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:
- (iii) shall not be detrimental to the whole Design or Design Element.
- (iv) where required a Safety Audit Certificate for Stage ****[2] **[3]** is attached

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company

Signed: Firm:

DESIGNER (Team leader for Designer)

Name: Date:

(Block Capitals)

Signed: Firm:

(Operating Company)

Name: Date:

(Block Capitals)

** Insert Description of part of Design or Design Element.*

*** delete as appropriate*

Accommodation Works	(A)	Lighting and Electrical Works	(L)
Drainage	(D)	Road Pavements	(P)
Environmental and Landscaping	(E)	Road Layout	(RL)
Earthworks	(EW)	Signs and Road Markings	(SRM)
Fencing and Environmental Barriers	(F)	Piling	(X)
Kerbs, Footways and Paved Areas	(K)	Any other relevant parts of Design or Design Element	(Y)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DESIGN CHECK CERTIFICATE:

CERTIFICATE NO: DCC(*).....

OTHER PART OF DESIGN OR DESIGN ELEMENT

Order Reference

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers' in respect of the check of the following part of the Design or Design Element namely:

.....

(Name of Design Element)

that reasonable professional skill and care has been taken by us in carrying out the independent Design check of the part of the Design or Design Element with a view to securing that the part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements.
- (ii) has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:
- (iii) shall not be detrimental to the whole Design or Design Element.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company

Signed: Firm:

CHECKER (Team leader for Checker)

Name: Date:

(Block Capitals)

Signed: Firm:

(Operating Company)

Name: Date:

(Block Capitals)

* Insert Description of part of Design or Design Element:

Accommodation Works	(A)	Lighting and Electrical Works	(L)
Drainage	(D)	Road Pavements	(P)
Environmental and Landscaping	(E)	Road Layout	(RL)
Earthworks	(EW)	Signs and Road Markings	(SRM)
Fencing and Environmental Barriers	(F)	Piling	(X)
Kerbs, Footways and Paved Areas	(K)	Any other relevant parts of Design or Design Element	(Y)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

COMBINED DESIGN AND DESIGN CHECK CERTIFICATE: CERTIFICATE NO: DC/DCC....

Scheme:.....

Order Reference.....

Scheme Identifier.....

1. We hereby certify to the Scottish Ministers in respect of the design and design check of the following part of the Design or Design Element namely:

- | | | |
|--------------------------|------------------------------------|-------|
| <input type="checkbox"/> | Accommodation Works | (A) |
| <input type="checkbox"/> | Road Restraint Systems | (B) |
| <input type="checkbox"/> | Drainage | (D) |
| <input type="checkbox"/> | Environmental and Landscaping | (E) |
| <input type="checkbox"/> | Earthworks | (EW) |
| <input type="checkbox"/> | Fencing and Environmental Barriers | (F) |
| <input type="checkbox"/> | Kerb, Footways and Paved Areas | (K) |
| <input type="checkbox"/> | Lighting and Electrical Works | (L) |
| <input type="checkbox"/> | Road Pavements | (P) |
| <input type="checkbox"/> | Road Layout | (RL) |
| <input type="checkbox"/> | Signs and Road Markings | (SRM) |
| <input type="checkbox"/> | Piling | (X) |
| <input type="checkbox"/> | Other | (Y) |

that reasonable professional skill and care has been taken by us with a view to securing that the part of the Design or Design Element:

- (i) complies with the Scottish Ministers' Requirements.
- (ii) has been accurately translated into the construction drawings and other Design documents, where applicable, bearing the unique number contained in the certificate number above.
- (iii) is not detrimental to the whole Design or Design Element.
- (iv) where applicable to earthworks (EW), has been the subject of an interpretative geotechnical report and that the conclusions of that report have been taken into account in the Design or Design Element.
- (v) where applicable to road restraint systems (B), that all aspects of the Design or Design Element of the road restraint system on the Contract have been developed by the use of a risk assessment approach.
- (vi) where required a Safety Audit Certificate for Stage *[2] *[3] is attached

** delete as appropriate*

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company.

Signed: Firm:
CHECKER (Team leader for Checker)

Name: Date:
(Block Capitals)

Signed: Firm:
(Operating Company)

Name: Date:
(Block Capitals)

To be inserted as Appendix to:

Design Certificate or the Combined Design and the Design Check Certificate

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

ROAD SAFETY AUDIT CERTIFICATE

CERTIFICATE NO: RSAC.....

Scheme:

Order Reference

Scheme Identifier.....

Form of certificate to be used by the Designer for certifying that a Safety Audit has been carried out in accordance with Schedule 1.

The Design for the Scheme has been the subject of a Road Safety Audit in accordance with Stage *[2] *[3] of the Design Manual for Roads and Bridges Standard HD 19 or equivalent and we certify that all recommendations agreed or recommended by the road safety auditors have been incorporated in the Design.

** delete as appropriate*

Signed: Firm:

CHECKER (Team leader for Checker)

Name: Date:

(Block Capitals)

Signed: Firm:

(Operating Company)

Name: Date:

(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DESIGN CONSTRUCTION COMPLETION CERTIFICATE

CERTIFICATE No: DCComp.....

(For Works Contracts and Operations executed by Operating Company)

(Issued upon completion of identified stage/element of the operations/works)

Order Reference

Scheme Identifier

We hereby certify to the Scottish Ministers in respect of the construction of the following part of the Design or Design Element:

.....

(Name of Design or Design Element)

that reasonable professional skill and care has been taken by us in supervising the construction and completion of the Design or Design Element with a view to securing that the part of the Design or Design Element:

- (i) complies with the Scottish Ministers requirements
- (ii) has been constructed in accordance with the Design or Design Element.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company.

Signed: Firm:
(Operating Company)

Name: Date:
(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

CONSTRUCTION COMPLETION CERTIFICATE

CERTIFICATE No: CCompC

(For Operations executed by Operating Company)

(Issued upon substantial completion of the operations)

Order Reference

Scheme Identifier

Scheme Name:

For Operating Company Orders

We hereby certify to the Scottish Ministers we have completed our obligations in respect of the above referenced Scheme and have executed Operations as required by the Order referenced above.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company.

Signed: Firm:

(Operating Company)

Name: Date:

(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

CONSTRUCTION COMPLETION CERTIFICATE FOR SUPERVISION OF WORKS

CERTIFICATE No: CCSupW

(Issued on substantial completion of the Works)

Order Reference.....

Scheme Identifier.....

Scheme Title:

1. We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company.
2. We hereby certify to the Scottish Ministers that we have supervised the construction and completion of the Works as defined in the Works Contract to which this Certificate relates and that we have exercised reasonable professional skill and care with a view to securing that such Works have been constructed in accordance with the requirements of the Design as set out in such Works Contract

In our opinion the Works Contractor completed the Works under the Works Contract to which this certificate relates on

<date>

Signed: Firm.....

(On behalf of the Operating Company)

Name: Date:

MAINTENANCE CERTIFICATE

(For Operations executed by Operating Company)

(Issued upon completion maintenance period of the Operations)

CERTIFICATE No : MC

Order Reference

Scheme Identifier

For Operations

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company.

In our opinion we have completed our obligations to construct, complete and maintain the Operations under the Order to which this certificate relates

Signed: Firm:
(Operating Company)

Name: Date:
(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

MAINTENANCE CERTIFICATE (SUPERVISION OF WORKS)

(Issued at end of maintenance period)

CERTIFICATE No: MCSupW.....

Order Reference.....

Scheme Identifier.....

Scheme Title:

1. We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company.

We hereby certify to the Scottish Ministers that we have supervised the works as defined in the Works Contract during the Period(s) of Maintenance for such Works Contract to which this certificate relates and that we have exercised reasonable professional skill and care with a view to securing that such works have been completed in accordance with such Works Contract.

In our opinion the Works Contractor completed his obligations to construct complete and maintain the Works under the Works Contract to which this certificate relates on

<date>

Signed: Firm.....

(On behalf of the Operating Company)

Name: Date:

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DESIGN DEFECTS CORRECTION CERTIFICATE

CERTIFICATE No : DesDCC

Order Reference

Scheme Identifier

Scheme Title:

We hereby certify to the Scottish Ministers in respect of the defects and non-conformances to the following part of the Design or Design Element:

.....

(Name of Design or Design Element)

that reasonable professional skill and care has been taken by us in supervising the correction of the Defects and Non-conformances to that part of the Design or Design Element with a view to securing that the Defects and Non-conformances have been corrected and that part of the Design or Design Element now complies with the Scottish Ministers' Requirements and has now been constructed in accordance with the Design or Design Element.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Scottish Ministers and the Operating Company.

Signed: Firm:
(Operating Company)

Name: Date:
(Block Capitals)

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

CONSULTATION CERTIFICATE

CERTIFICATE NO :- ConsultC.....

Order Reference.....

Scheme Identifier.....

Scheme Title

Route

CONSULTATION WITH (Name of Consultee)

1. We hereby certify to the Scottish Ministers in respect of :

.....
(Name of part of Design or Design Element)

that we have consulted with(Name of Consultee) and have ascertained that they have no objections to the part of Design or Design Element as described on the construction drawings listed in an attachment.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in this Contract between the Scottish Ministers and the Operating Company.

Signed:

Firm.
(On behalf of Operating Company)

Name:
(Block Capitals)

Date:

1. LIST OF CONSTRUCTION DOCUMENTS

.....

2. DECLARATION BY (Name of Consultee)

On behalf of (Name of Consultee) I confirm that
(i) consultations referred to above have been completed as indicated above.

(ii) (Name of Consultee) has no objections to the Design or Design Element as described on the drawings and documents listed in part 2 of this Consultation Certificate, and

(iii) the drawings and documents listed in part 2 of this Consultation Certificate meet all known requirements of the Consultee.

Signed

Name
(Block Capitals)

duly authorised to sign on behalf of (Name of Consultee)

Date:

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

DEPARTURE FROM STANDARDS (Bridges and other Highway Structures)

CERTIFICATE No: DfS(S).....

APPLICANT:

PROJECT TITLE:

DEPARTURE NO:

STRUCTURE REF:

SUBMISSION DATE:

1. List of Supporting Documentation

Standards:

Drawings:

Other:

2. Description of Proposed Departure

(include details of DMRB Standards and clause numbers which are being departed from)

Proposed Departure:

Clauses Being Departed From:

- Contract Version of Manual Contract for Highway Works
- Contract Version of Design Manual for Roads and Bridges
- Contract Employers' Requirements
- Other

3. Designer / Assessor justification

(include reasons why existing DMRB Standards are inappropriate)

4. Cost Implications:

(include an estimate of cost savings to the Scottish Executive as well as the effect on future maintenance costs)

5. Applicant Design Team Leader Declaration:

I declare that reasonable professional skill and care have been exercised in the preparation of this departure submission.

Signed:

Firm:

Name:

(Block Capitals with Engineering Qualifications)

Date:

6. Transport Scotland Bridges Branch - comments and recommendations:

.....
.....
.....
.....
.....
.....
.....
.....

Signed:

Name:

(Block Capitals with Engineering Qualifications)

Date:

7. Transport Scotland Chief Bridge Engineer recommendation:

The above Departure is **approved / rejected** (*Delete as appropriate*)

Signed:

Name:

(Block Capitals with Engineering Qualifications)

Date:

MODEL OF CERTIFICATE TO BE USED BY THE OPERATING COMPANY

**DEPARTURE FROM STANDARDS
(Roads & Highways)**

CERTIFICATE No: DfS(R).....

APPLICANT:

PROJECT TITLE:

DEPARTURE NO:

SUBMISSION DATE:

PROJECT DETAILS	
General description of project	<i>[Realignment, new road, value added maintenance etc.]</i>
Route Strategy	<i>[Details of the Scottish Executive's current strategy with respect to the route affected by the proposed Departure from Standard. Applicants should seek guidance from the relevant Scottish Executive Project Manager where necessary]</i>
Road Category & Type	<i>[Refer to TD9]</i>
Proposed Carriageway Cross Section	<i>[Carriageway, lane, verge, central reserve, footpath widths etc.]</i>
Design Speed Proposed	<i>[Add Design Speed identified in accordance with TD9/93]</i>
Future Traffic Flows & Composition	<i>[Project Details for requirements]</i>

DESCRIPTION OF DEPARTURE	
Location and Chainage	<i>[e.g. Junction of A8000/B8000, CH 1000 to CH 1050]</i>
Departure Type	<i>[e.g. Stopping Sight Distance]</i>
DMRB Reference	<i>[Volume. Section. Part paragraph No.]</i>
Required Standard	<i>[Identify Desirable Minimum Standard]</i>
Standard Provided	<i>[Identify Standard being provided and how it relates to the Desirable Minimum Standard]</i>
Associated Departures or Relaxations	<i>[Identify any other Departures or Relaxations included within the proposed project that interact with the Departure being considered]</i>
Drawing Nos.	<i>[Add Drawing Reference Numbers. Refer to Table 2.3.1 for the minimum No./scale of Drawings to be provided]</i>

JUSTIFICATION	
Detailed Justification	<i>[Justification for requirements]</i>
Safety Implications	<i>[Safety Implications for requirements]</i>
Structural Integrity	<i>[Structural Integrity for requirements]</i>

ESSENTIAL COMPENSATORY MEASURES	
Compensatory Measures	<i>[Essential Compensatory Measures for requirements]</i>

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 1

MANAGEMENT, INSPECTION AND MAINTENANCE

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 1

MANAGEMENT, INSPECTION AND MAINTENANCE

1. MANAGEMENT, INSPECTION AND MAINTENANCE

1.1 Introduction

- 1.1.1 This Schedule details the management, inspection and maintenance requirements to be delivered by the Operating Company as Core Operations. These requirements also apply to non-structural elements of Structures.
- 1.1.2 These requirements do not cover major structural maintenance for the replacement or renewal of worn-out road pavements although the procedural requirements may assist in pavement management.
- 1.1.3 There may be instances where the Operating Company is required to carry out additional inspections, Safety Patrols and maintenance requirements to take account of local conditions. Details of such local requirements are provided in Annex 7.1/A of this Part.
- 1.1.4 At the Commencement of Service Date there will be items of constructional Plant and equipment on the Unit that require maintenance. Such items shall normally be related to safety and include temporary safety barriers, temporary supports to Structures, temporary electrical works and temporary traffic management equipment and related equipment to make safe Category 1 Defects. During the Mobilisation Period, the Operating Company shall agree the requirements and availability of all such items of constructional Plant and equipment after the Commencement of Service Date with the outgoing operating company.
- 1.1.5 The management, inspection and maintenance requirements with regard to roadside electrical equipment, lighting and power supplies are detailed in paragraph 4.29 of this Part.
- 1.1.6 Category 1 and Category 2 Defects are defined in Schedule 1 Part 1.
- 1.1.7 Wherever practicable, the Operating Company shall minimise the environmental impacts and disruption to road users arising from inspections and maintenance by undertaking multiple activities concurrently.

1.2 Routine Maintenance and Management Function of the Integrated Roads Information System

- 1.2.1 The requirements for the use of the routine maintenance and management function of the Director's Integrated Roads Information System are detailed in Schedule 4 Part 2.
- 1.2.2 The Operating Company shall use the routine maintenance and management function of the Integrated Roads Information System provided during the Mobilisation Period to implement, monitor and record all inspections, patrols, Category 1 and Category 2 Defects, maintenance Operations required by this Part and works undertaken.
- 1.2.3 A Data Capture Device shall be used to capture data during inspections and patrols and to record all Defects identified. Inspection and patrol data shall be uploaded to

and downloaded from the routine maintenance and management function of the Integrated Roads Information System.

1.2.4 The routine maintenance and management function of the Integrated Roads Information System shall include the dates of the last inspections, maintenance Operations required by this Part and works undertaken by the previous operating company.

1.2.5 Where the dates of the last inspections or maintenance Operations required by this Part are not available during the Mobilisation Period, the inspections and maintenance shall be deemed to be due immediately.

1.3 Inspections and Patrols

1.3.1 The Operating Company shall carry out Safety Inspections, Safety Patrols, night time Safety Patrols, ad-hoc inspections and Detailed Inspections and record these in the routine maintenance and management function of the Integrated Roads Information System. This work shall be planned and executed to:

- (i) identify Category 1 and Category 2 Defects, and
- (ii) identify and note any new accessibility barriers which are not recorded in the routine maintenance and management function of the Integrated Roads Information System.

The Operating Company shall add such barriers to the routine maintenance and management function of the Integrated Roads Information System within 24 hours of completion of the inspection or patrol during which they were noted.

1.3.2 During inspections and patrols, the Operating Company shall collect, collate and make available to the Director if requested, information relating to wildlife road-kill incidents involving the following:

- (i) otter, badger, deer (red, roe and fallow), red squirrel and raptor species.

1.3.3 The Operating Company shall undertake additional inspections and patrols and any other necessary actions relating to Severe Weather identified from using its expert weather forecasting service events in accordance with the requirements of Schedule 7 Part 8.

1.3.4 Annex 7.1/A of this Part lists additional local requirements which shall be accommodated within inspections.

1.3.5 Annex 7.1/B of this Part specifies the Trunk Roads on which Safety Patrols shall be undertaken.

1.3.6 All vehicles involved in inspection and maintenance shall be fitted with a global positioning tracking system. The Operating Company shall supply the Director and the Performance Audit Group with remote access to map based software showing locations, dates and times and movements of vehicles.

1.4 Safety Inspections

1.4.1 Safety Inspections shall be carried out at frequencies not exceeding seven days on all Trunk Roads including slip roads. Safety Inspections shall be designed primarily to identify Category 1 Defects. Where possible, Safety Inspections shall be carried out during off-peak traffic periods in order to minimise traffic disruption.

- 1.4.2 In each Annual Period, at least two Safety Inspections shall be carried out either during, or immediately following, a period of wet weather to identify areas prone to flooding. There shall be a minimum period of three months between wet weather Safety Inspections.
- 1.4.3 Safety Inspections shall inspect all that can be seen from a slow moving vehicle within the boundary of the Trunk Road. The Operating Company shall include documented procedures in its Management System for determining the appropriate inspection speeds for Safety Inspections.
- 1.4.4 Safety Inspections shall be recorded against the network referencing and include the date and time each link and section was completed. All Safety Inspection data, including inspection route and Defect data, shall be uploaded into the routine maintenance and management function of the Integrated Roads Information System within 24 hours of the Safety Inspection commencing.

1.5 Safety Patrols

- 1.5.1 Safety Patrols shall be carried out on the Trunk Roads described in Annex 7.1/B of this Part. Safety Patrols shall be carried out such that a Safety Inspection or Safety Patrol shall be carried out at intervals not exceeding four days.
- 1.5.2 Safety Patrols shall be designed primarily to identify Category 1 Defects. Where possible, Safety Patrols shall be carried out during off-peak traffic periods in order to minimise traffic disruption. The Operating Company shall include documented procedures in its Management System for determining the appropriate inspection speeds for Safety Patrols.
- 1.5.3 Safety Patrols shall be recorded against the network referencing and include the date and time each link and section was completed. All Safety Patrol data, including inspection route and Defect data, shall be uploaded into the routine maintenance and management function of the Integrated Roads Information System within 24 hours of the Safety Patrol commencing.

1.6 Night Time Safety Patrols

- 1.6.1 Night time Safety Patrols of illuminated signs, illuminated bollards and lighting points (including road lighting, flood lighting, underpass lighting, architectural lighting, navigational lighting and pedestrian lighting) shall be carried out in accordance with the requirements of the *Design Manual for Roads and Bridges* except that they shall be carried out at intervals not exceeding 14 days from 1 October to 31 March and at intervals not exceeding 28 days from 1 April to 30 September.

1.7 Ad hoc Inspections

- 1.7.1 Ad hoc inspections shall be carried out as necessary in response to reports of Defects or Incidents on the network from Operating Company staff or any third party. The Operating Company may use Incident Response Resources or other Operating Company resources to carry out ad hoc inspections and investigate reported Defects or incidents.
- 1.7.2 All confirmed Category 1 and Category 2 Defects identified by ad hoc inspections shall be uploaded into the routine maintenance and management function of the Integrated Roads Information System within 24 hours of identification.

1.8 Detailed Inspections

- 1.8.1 Detailed Inspections shall be deemed to include for all activities identified in paragraph 1.8 of this Part.
- 1.8.2 Detailed Inspections shall generally be walking inspections which involve comprehensive scrutiny of the assets.
- 1.8.3 Detailed Inspections shall normally be carried out from the footway, hardshoulder or grass verge as appropriate. Where inventory items are within or adjacent to a central reserve on a motorway or dual carriageway, a separate Detailed Inspection of such items shall be undertaken.
- 1.8.4 Detailed Inspections shall identify Defects as described in the *Transport Scotland Trunk Road Inspection Manual*.
- 1.8.5 Detailed Inspections shall further identify the condition of ancillary assets as described in the *Trunk Road Condition Manual*.
- 1.8.6 Defects shall be recorded in accordance with the provisions of *the Transport Scotland Trunk Road Inspection Manual*. Where required by the *Transport Scotland Trunk Road Inspection Manual*, associated data shall also be recorded in the routine maintenance and management function of the Integrated Roads Information System.
- 1.8.7 The condition of ancillary assets shall be recorded in accordance with the provisions of the *Trunk Road Condition Manual*. Where required by the *Trunk Road Condition Manual*, associated data shall also be recorded in the routine maintenance and management function of the Integrated Roads Information System.
- 1.8.8 All Detailed Inspection Defect data and ancillary asset condition data shall be uploaded into the routine maintenance and management function of the Integrated Roads Information System within four days of the data being gathered.
- 1.8.9 Unless otherwise stated, the Operating Company shall carry out Detailed Inspections at the frequencies stated in this Part.
- 1.8.10 The Operating Company shall arrange Detailed Inspections to minimise disruption to traffic, other road users and the public, while ensuring adequate access is available to allow proper inspection and provide a safe working environment for the inspection personnel involved.
- 1.8.11 Whenever practicable, Detailed Inspections which necessitate Lane Occupations shall be carried out in conjunction with other Operations. Where separate Lane Occupations are necessary, Detailed Inspections shall be undertaken in off-peak traffic conditions.
- 1.8.12 The Operating Company shall plan its schedule of Detailed Inspections requiring a Lane Occupation to ensure that as far as is practical, all Detailed Inspections are carried out and completed during that Lane Occupation.
- 1.8.13 The Operating Company shall validate the accuracy of inventory during Detailed Inspections. Any errors shall be recorded as a Defect and corrected within four days. Such errors shall also be processed and corrected in accordance with the documented procedures in the Operating Company's Management System.
- 1.8.14 Within 12 months of the Commencement of Service Date, unless a shorter period is stated elsewhere, the Operating Company shall validate and ensure that all

inventory items have a corresponding inventory record recorded in the routine maintenance and management function of the Integrated Roads Information System and that all attributes as defined in the Trunk Road Inventory Manual are fully populated.

1.9 Maintenance

- 1.9.1 The Operating Company shall carry out maintenance in accordance with the intervals referred to in this Part and the routine maintenance and management function of the Integrated Roads Information System.
- 1.9.2 The Operating Company may review the intervals recorded in the routine maintenance and management function of the Integrated Roads Information System and propose changes to the intervals for required maintenance of individual inventory items or groups of items to the Director for his consent to ensure that continued asset operation and condition are maintained.
- 1.9.3 The intervals recorded in the routine maintenance and management function of the Integrated Roads Information System shall not exceed those referred to in this Part.
- 1.9.4 Unless stated otherwise within this Part, all maintenance data shall be recorded against inventory items. Where required by this Part and the *Trunk Roads Condition Manual*, other data associated with maintenance shall also be recorded in the routine maintenance and management function of the Integrated Roads Information System such as condition ratings, checklists, reports, photographs and Certificates.
- 1.9.5 All Category 1 and Category 2 Defects identified during Operations shall be uploaded into the routine maintenance and management function of the Integrated Roads Information System within 24 hours of identification. All other maintenance data and data associated with maintenance shall be uploaded into the routine maintenance and management function of the Integrated Roads Information System within four days of the activity being completed on each inventory item.

1.10 Management System Requirements

- 1.10.1 In addition to specific requirements stated elsewhere in this Part, the Operating Company's Management System shall also contain documented processes and procedures for:
- (i) the use of the routine maintenance and management function of the Integrated Roads Information System supplied,
 - (ii) Operations carried out by inspection and patrol teams to make Category 1 Defects safe at the time of inspection,
 - (iii) storage and retrieval of all Records using either the routine maintenance and management function of the Integrated Roads Information System or other storage facilities available remotely to the Director and the Performance Audit Group,
 - (iv) checklists used for all types of inspections and maintenance,
 - (v) method statements to be developed and used for all types of roadside electrical apparatus in accordance with guidelines within Transport Scotland guidance document *LDS8023_09* and requirements in the Specification,

- (vi) Records maintained to support the robustness of all types of inspections and maintenance,
- (vii) how staff and employees report any Category 1 Defects which they observe when travelling within the Unit,
- (viii) how it monitors, receives, distributes, replies to and addresses all Hazard Notices and Observations Resulting from Inspection,
- (ix) the validation of all data for correctness and completeness before it is incorporated into the routine maintenance and management function of the Integrated Roads Information System, and
- (x) planning, executing, monitoring and managing its Operations and the demonstration of the accuracy and rigorousness of its inspections and maintenance regime.

1.10.2 The procedures for Safety Inspections and Safety Patrols shall include:

- (i) how the Operating Company carries out its Safety Inspection and Safety Patrol duties,
- (ii) the vehicles to be utilised and the equipment to be carried by them, and
- (iii) details covering inspection and Safety Patrol routes such as programmes, resources, estimated inspection speeds and average durations.

1.10.3 The procedures for Detailed Inspections shall include how the Operating Company carries out its Detailed Inspection duties, the equipment to be used by Detailed Inspection teams, programmes, resources and method statements.

1.10.4 The procedures for maintenance shall include how the Operating Company carries out its maintenance and how the required timescales will be achieved.

1.10.5 The procedures for managing Category 2 Defects shall include how the Operating Company groups Category 2 Defects together, prioritises the repairs and prepares and submits programmes and Bids for the repairs to the Director.

2. DEFECT CATEGORIES AND RESPONSE TIMES

2.1 Classification of Category 1 and Category 2 Defects

2.1.1 When classifying Category 1 and Category 2 Defects, the Operating Company shall give consideration to the potential impact on all road users including motorists, pedestrians, cyclists, motorcyclists, equestrians and disabled users.

2.1.2 The Operating Company shall comply with the provisions of the *Transport Scotland Trunk Road Inspection Manual* regarding classification of Defects.

2.1.3 The *Transport Scotland Trunk Road Inspection Manual* is deemed not to contain an exhaustive compendium of Defects. In the absence of a description of a Defect in the *Transport Scotland Trunk Road Inspection Manual*, the Operating Company shall make the classification from first principles.

2.1.4 Defect repair dates for all Category 1 and Category 2 Defects completed by the Operating Company or any third party shall be entered into the routine maintenance and management function of the Integrated Roads Information System by the Operating Company within four days of completion.

2.2 Category 1 Defects Response Times

- 2.2.1 Unless stated otherwise in this Part, Category 1 Defects shall be dealt with by the Operating Company in priority order as stated in paragraph 2.2 of this Part.
- 2.2.2 The Operating Company's inspection team or initial Incident Response Resources shall make the Category 1 Defect safe when identified. This shall be through executing immediate repairs, removing the hazard or by taking any other measures necessary to protect the public and other users of the Unit.
- 2.2.3 Where a Category 1 Defect renders a Trunk Road unsafe for road users, the Operating Company shall, under Police instruction or on receipt of an appropriate Order, close the relevant part of the Trunk Road for as short a period as possible while remedial action is undertaken.
- 2.2.4 Where a Category 1 Defect cannot be repaired immediately or the hazard cannot be removed, the Operating Company shall take action to make the area safe until the required temporary or permanent repairs have been completed.
- 2.2.5 The temporary or permanent repairs shall be undertaken as soon as possible and no later than:
- (i) 06:00 on the day following identification for Category 1 Defects on carriageways, and
 - (ii) within 24 hours of identification for all other Category 1 Defects.
- 2.2.6 Where a temporary repair has been carried out, the deferred permanent repair period for the following Defect types shall be:
- (i) 28 days for carriageway surface, and
 - (ii) 56 days for Bridge parapets.
- 2.2.7 All other Category 1 Defects shall be repaired permanently within the specific period referred to in this Part, or no later than 28 days after identification where no specific period is stated.
- 2.2.8 Where Category 1 Defects have been made safe by means of temporary signing or repair, the Operating Company shall make arrangements to ensure that the continued integrity of the signing or repair is maintained until a permanent repair can be made.
- 2.2.9 For Category 1 Defects associated with missing warning or mandatory traffic signs, temporary repairs must include for the provision of adequate substitute signing.
- 2.2.10 Within 24 hours of identification, the Operating Company shall attach a photograph of each Category 1 Defect to the corresponding routine maintenance and management function of the Integrated Roads Information System record. A photograph of each temporary and permanent repair shall also be attached to the routine maintenance and management function of the Integrated Roads Information System record within four days of completion of each repair.

2.3 Repairs to Category 1 Defects of Value Not More Than £10,000

- 2.3.1 The Operating Company shall undertake all repairs to Category 1 Defects where the value of repair is not more than £10,000.

2.4 Repairs to Category 1 Defects of Value More than £10,000

2.4.1 Subject to an Order, the Operating Company shall undertake repairs to Category 1 Defects where the value of repair is more than £10,000. The Director shall issue a retrospective Order when necessary.

2.5 Category 2 Defects

2.5.1 The Operating Company shall log, group together and prioritise the repair of all Category 2 Defects. The Operating Company shall prepare and submit programmes and Bids for these repairs to the Director.

2.5.2 Category 2 Defects may also be used by the Director to inform asset management decisions, budget allocations and justify future spending requirements.

3. HAZARD NOTICES AND OBSERVATIONS IDENTIFIED BY THE PERFORMANCE AUDIT GROUP

3.1 General

3.1.1 The Performance Audit Group may observe situations within the Unit that present an immediate hazard. In such circumstances, the Performance Audit Group is authorised to issue a Hazard Notice immediately to the Operating Company, which shall be copied to the Director.

3.1.2 The Performance Audit Group may also identify other circumstances where its observations require an action by the Operating Company. In such circumstances, the Performance Audit Group is authorised to issue an Observation Resulting from Inspection immediately to the Operating Company, which shall be copied to the Director.

3.1.3 Hazard Notices and Observations Resulting from Inspection are not instructions from the Performance Audit Group or the Director to the Operating Company. They are a method of formally identifying issues on the Trunk Road network and requesting responses from the Operating Company. Hazard Notices and Observations Resulting from Inspection are intended to improve and speed up the flow of information from the Performance Audit Group to the Operating Company and the Director and ensure this is provided as quickly as possible.

3.1.4 The Operating Company shall address and respond to any Hazard Notice or Observation Resulting from Inspection without delay in accordance with the other provisions of this Contract.

3.1.5 Hazard Notices and Observations Resulting from Inspections may refer to any topic relating to the management and operation of the Unit and Trunk Road Network.

3.1.6 The Operating Company shall supply one e-mail address to the Performance Audit Group to which all Hazard Notices and Observations Resulting from Inspection shall be addressed.

3.1.7 The Operating Company shall maintain a register of all Hazard Notices and Observations Resulting from Inspection issued and responded to, actions due and actions completed, any Defect repair required and provide the Director with monthly reports.

3.2 Hazard Notices

3.2.1 If the hazardous situation is related to traffic management and the Operating Company is responsible for the Operations, an oral report may be given by the Performance Audit Group to personnel on Site and to the Operating Company at the Central Office.

If the hazardous situation is related to traffic management and the Operating Company is not directly responsible for the works, an oral report may be made by the Performance Audit Group to the Operating Company at the Central Office.

In all other cases which do not involve traffic management, an oral report may be made by the Performance Audit Group made to the Central Office.

3.2.2 A Hazard Notice giving written confirmation of the hazard shall be issued by the Performance Audit Group. This shall be sent by e-mail to the Operating Company and copied to the Director.

3.2.3 The Operating Company shall reply to the Performance Audit Group by telephone call, confirmed via e-mail, within 24 hours of the oral report being issued. The reply shall give details of the actions taken by the Operating Company to deal with the hazard. The Operating Company shall copy its reply to the Director.

3.3 Observations Resulting From Inspection

3.3.1 Observations Resulting from inspection may be issued when:

- (i) non-compliant maintenance, non-compliant workmanship or any other contractual non-compliance issues are observed,
- (ii) Category 1 Defects or Category 2 Defects of concern are identified, or
- (iii) other events of concern are observed which may include unexpected road closures, unusual traffic congestion or other occurrence that may affect the maintenance and management of the Trunk Road network.

3.3.2 When the Operating Company has received an Observation Resulting from Inspection, it shall reply directly to the Performance Audit Group by e-mail, copied to the Director, within the timescale referred to in the Observation Resulting from Inspection. The reply shall either give details of the Operating Company's proposals to rectify the issue or state that the issue shall be dealt with at a future date as part of the maintenance programme, as appropriate.

3.3.3 The time for reply by the Operating Company shall generally be five Working Days although this may vary depending on the nature of the Observation Resulting from Inspection.

4. INSPECTION AND MAINTENANCE REQUIREMENTS

4.1 Carriageway

4.1.1 Carriageway requirements relate to the surface of carriageways, hardshoulders, crossovers, lay-bys, central islands and central reserves and include hardstrips and hardshoulders provided on some carriageways outwith the edge marking. They do not include the replacement or renewal of those parts of the Trunk Road which have become unserviceable and which require structural pavement maintenance Operations.

4.1.2 Detailed Inspections of carriageways shall be carried out at intervals not exceeding 12 months.

4.1.3 Detailed Inspections of carriageways within or adjacent to a central reserve on motorways and dual carriageways shall be carried out from the offside lane using a lane closure, at intervals not exceeding 24 months.

4.1.4 Maintenance of carriageways shall include weed control in accordance with clause 3002 of the Specification.

4.2 Pedestrian and Cycle Facilities

4.2.1 Pedestrian facilities include paved areas for pedestrians, usually within the Trunk Road boundary. Cycle facilities include paved areas with or without a pedestrian facility.

4.2.2 Schedule 7 Part 2 defines categories for pedestrian and cycle facilities as Category A, B or C. The Operating Company shall ensure that the category attribute for footway and cycleway inventory in the routine maintenance and management function of the Integrated Roads Information System matches these defined categories at all times.

4.2.3 Detailed Inspections of pedestrian and cycle facilities shall be carried out at the following frequencies:

- (i) Category A areas at intervals not exceeding one month,
- (ii) Category B areas at intervals not exceeding three months, and
- (iii) all other areas at intervals not exceeding 12 months.

4.2.4 Maintenance of pedestrian and cycle facilities shall include weed control in accordance with clause 3002 of the Specification.

4.3 Covers, Gratings and Frames

4.3.1 Covers, gratings and frames include all covers, gratings and frames within the Trunk Road network, including those that fall under the responsibility of Undertakers and other parties. The *New Roads and Street Works Act 1991* requires an Undertaker to maintain its apparatus in the street to the reasonable satisfaction of the roads authority. Covers, grating or frames associated with the motorway communications duct and chamber network are the property of the Scottish Ministers and the responsibility to maintain this apparatus falls to the Operating Company.

4.3.2 Where an inspection by the Operating Company identifies a cover, grating or frame with a Category 1 Defect, it shall be made safe by the Operating Company in accordance with the requirements of this Part.

4.3.3 Where the cover, grating or frame is the property of an Undertaker or third party, the Operating Company shall immediately give notice to the Undertaker or third party to carry out permanent repairs within the time period provided in this Part for the repair of Category 1 Defects. Covers, grating or frames associated with the motorway communications duct and chamber network are the property of the Scottish Ministers and the Operating Company shall carry out permanent repairs within the time period provided in this Part for the repair of Category 1 Defects.

4.3.4 Records of Category 1 Defects in Undertakers' covers, gratings and frames and the actions taken by the Operating Company shall be entered into the routine

maintenance and management function of the Integrated Roads Information System. The Category 1 Defects shall remain recorded as not repaired until the Operating Company has identified that a permanent repair has been completed. The performance of the Undertakers shall be monitored by the Operating Company using the routine maintenance and management function of the Integrated Roads Information System and reported to the Director within 25 Working Days of the end of each Annual Period.

4.3.5 Detailed Inspections of covers, gratings and frames shall be carried out at intervals not exceeding 12 months.

4.3.6 Detailed Inspections of covers, gratings and frames within or adjacent to a central reserve on motorways and dual carriageways shall be carried out from the offside lane using a lane closure, at intervals not exceeding 24 months.

4.3.7 Maintenance of covers, gratings and frames shall include weed control in accordance with clause 3002 of the Specification.

4.4 Kerbs, Channels, Edgings and Quadrants

4.4.1 Kerbs, channels, edgings and quadrants including all types of kerbs, channels, edgings and quadrants and areas between edgings and quadrants.

4.4.2 Detailed Inspections of kerbs, channels, edgings and quadrants shall be carried out by the Operating Company at intervals not exceeding 12 months.

4.4.3 Detailed Inspections of kerbs, channels, edgings and quadrants within or adjacent to a central reserve on motorways and dual carriageways shall be carried out from the offside lane using a lane closure, at intervals not exceeding 24 months.

4.4.4 Maintenance of kerbs, channels, edgings and quadrants shall include weed control in accordance with clause 3002 of the Specification.

4.5 Linear Drainage Systems

4.5.1 Linear drainage systems include piped drains, slot drains, kerb block drains, combined drainage and kerb systems, feeder pipes, linear drainage channel systems, kerb or channel offset pipes, channels through chambers and piped grips.

4.5.2 The Operating Company shall use information from gully, catchpit and interceptor emptying and cleansing Operations as well as inspection procedures to verify that linear drainage systems are operating in compliance with the requirements of this Contract.

4.5.3 The Operating Company shall determine the ownership of linear drainage systems outwith the Unit before any work is carried out.

4.5.4 Detailed Inspections of linear drainage systems shall be carried out at intervals not exceeding 12 months. All surface features and each end of each section of each length of the linear drainage system shall be inspected to determine general structural condition and any signs of silting or blockage.

4.5.5 Linear drainage systems excluding slot drains and kerb block drains shall be maintained in accordance with the clause 6104AR of Specification when necessary.

4.5.6 Slot drains and kerb block drains are often located at known sensitive drainage points and therefore require more regular attention by the Operating Company. The Operating Company shall reduce the time between maintenance intervals recorded

in the routine maintenance and management function of the Integrated Roads Information System for inventory items that require more frequent maintenance to prevent significant reductions in capacity occurring.

- 4.5.7 Slot drains and kerb block drains shall be maintained in accordance with clause 6104AR of the Specification as necessary and at intervals not exceeding those stated for each inventory item in the routine maintenance and management function of the Integrated Roads Information System. The maintenance interval shall not exceed 12 months.

4.6 Gullies, Catchpits, Interceptors, Soakaways, Manholes and Oil Separators

- 4.6.1 Gullies, catchpits, interceptors, soakaways, manholes and oil separators include all types of gullies, catchpits, interceptors, soakaways, manholes and oil separators.

- 4.6.2 Detailed Inspections of gullies, catchpits, interceptors, soakaways, manholes and oil separators shall be carried out at intervals not exceeding 12 months.

- 4.6.3 Detailed Inspections of gullies, catchpits, interceptors, soakaways, manholes and oil separators within or adjacent to a central reserve on motorways and dual carriageways shall be carried out from the offside lane using a lane closure, at intervals not exceeding 24 months.

- 4.6.4 Gullies, catchpits, interceptors, soakaways, manholes and oil separators shall be cleaned, marked and recorded in accordance with clause 6102AR of Specification as necessary and at intervals not exceeding those stated for each inventory item in the routine maintenance and management function of the Integrated Roads Information System.

- 4.6.5 Gullies, catchpits, interceptors, soakaways, manholes and oil separators are often located at known sensitive drainage points and therefore require more regular attention by the Operating Company. The Operating Company shall adjust the maintenance intervals recorded in the routine maintenance and management function of the Integrated Roads Information System for inventory items that require more frequent maintenance to prevent significant reductions in capacity. The maintenance interval shall not exceed 12 months.

4.7 Drainage Grips

- 4.7.1 Drainage grips are open channels cut across verges which lead to ditches or linear drainage systems.

- 4.7.2 Detailed Inspections of drainage grips shall be carried out at intervals not exceeding 12 months.

- 4.7.3 Detailed Inspections of drainage grips within or adjacent to a central reserve on motorways and dual carriageways shall be carried out from the offside lane using a lane closure, at intervals not exceeding 24 months.

- 4.7.4 Drainage grips shall be maintained in accordance with clause 6103AR of the Specification as necessary and at intervals not exceeding those stated for each inventory item in the routine maintenance and management function of the Integrated Roads Information System. The maintenance interval shall not exceed 12 months.

- 4.7.5 Drainage grips are often located at known sensitive drainage points and therefore require more regular attention by the Operating Company. The Operating Company

shall adjust the maintenance intervals recorded in the routine maintenance and management function of the Integrated Roads Information System for inventory items that require more frequent maintenance to prevent significant reductions in capacity.

4.8 Ditches

- 4.8.1 Detailed Inspections of all ditches shall be carried out at intervals not exceeding 12 months.
- 4.8.2 Maintenance of ditches shall include weed control in accordance with clause 3002 of the Specification.

4.9 Filter Material

- 4.9.1 Filter material refers to filter material associated with filter drains, counterfort drains, drains and soakaways which may incorporate a properly formed invert or collection pipe. These requirements do not apply to pipes associated with filter drains or chambers associated with soakaways.
- 4.9.2 Detailed Inspections of filter material shall be carried out at intervals not exceeding 12 months.
- 4.9.3 Detailed Inspections of filter material within or adjacent to central reserves on motorways and dual carriageways shall be carried out from the offside lane using a lane closure, at intervals not exceeding 24 months.
- 4.9.4 Filter drains shall be maintained in accordance with clause 6105AR of the Specification at the following minimum frequencies:
 - (i) at intervals not exceeding three years in verges and central reserves, and
 - (ii) at intervals not exceeding five years in all other areas.
- 4.9.5 Maintenance of filter material shall include weed control in accordance with clause 3002 of the Specification.

4.10 Drainage Structures

- 4.10.1 Drainage structures include culverts, enclosed channels and large pipes. They do not include Structures and linear drainage systems. During inspections, attention should be given to fittings across the ends of some culverts as these are particularly prone to blockage, restricting the free flow of water through the culvert.
- 4.10.2 Detailed Inspections of every drainage structure shall be carried out twice yearly during February or March and September or October.
- 4.10.3 Drainage structures shall be maintained in accordance with clause 6106AR of the Specification as necessary to maintain capacity and the free flow of water.

4.11 Balancing Ponds

- 4.11.1 Balancing ponds and associated feeder pipes or ditches are provided for flood control and anti-pollution purposes and are sometimes situated some distance from Trunk Roads.
- 4.11.2 Requirements in relation to balancing ponds exclude any associated feeder pipes or ditches.

4.11.3 The Operating Company shall pay particular attention during inspections to the following issues:

- (i) silting in the pond causing a loss of storage capacity,
- (ii) damage or erosion to the pond banks, walls or bunds,
- (iii) damage or obstruction to the pond outlet which affects or may affect the controlled rate of discharge, and
- (iv) safety aspects, including the maintenance of fences to prevent public access.

4.11.4 Balancing ponds can become important sites for nature conservation. Prior to any maintenance of a balancing pond, the Operating Company shall consult the Director to ascertain whether specialist environmental advice is required.

4.11.5 Detailed Inspections of balancing ponds shall be carried out at intervals not exceeding six months.

4.11.6 Maintenance of balancing ponds shall include weed control in accordance with clause 3002 of the Specification.

4.12 Ancillary Drainage Items

4.12.1 Ancillary drainage items include headwalls, aprons, spillways, trash screens, watergates, grilles, sluices, tidal flaps, penstocks, valves, pumps and other specialist equipment.

4.12.2 Detailed Inspections of headwalls, aprons and spillways shall be carried out at intervals not exceeding one year.

4.12.3 Detailed Inspections of trash screens, watergates and grilles shall be carried out annually during February or March and September or October.

4.12.4 Detailed Inspection of sluices, tidal flaps, penstocks, valves, pumps and other specialised equipment shall be carried out at intervals not exceeding six months or in accordance with the intervals stated in the manufacturers' recommendations or instructions where these are more frequent.

4.12.5 Detailed Inspections of all electrical ancillary drainage items shall be carried out in accordance with paragraph 4.29 of this Part.

4.12.6 Ancillary drainage items shall be maintained in accordance with clause 6107AR of the Specification as necessary.

4.13 Communications and Miscellaneous Equipment

4.13.1 Communications and miscellaneous equipment includes emergency telephones, hazard warning signals, matrix signals, variable message signs, equipment cabinets, closed circuit television cameras (except for those relating to "Weather Stations" which are dealt with in paragraph 4.30 of this Part), ramp metering sites and sub-surface and overhead traffic detection equipment. Maintenance of the specialist technology elements of these items is undertaken by authorised specialist contractors under separate contracts managed directly by the Director. The Operating Company's responsibilities for the elements at sites where communications and miscellaneous equipment is located are detailed in paragraph 4.13 of this Part.

- 4.13.2 The Operating Company shall be responsible for the repair and maintenance of the soft and hard landscaping at sites where communications and miscellaneous equipment is located. This activity shall ensure that any infrastructure intended to provide access to the communications and miscellaneous equipment provides a safe and unhindered method of working for the specialist maintenance contractor. This activity shall include:
- (i) grass cutting and clearing of a swathe one metre wide around all communications and miscellaneous equipment and access paths and maintaining this clear swathe throughout the growing season,
 - (ii) removal of any undergrowth immediately adjacent to communications and miscellaneous equipment,
 - (iii) clearing of all paths and slabbed areas of weeds and grass cuttings,
 - (iv) repair and maintenance of broken or otherwise damaged or uneven paving slabs,
 - (v) repair and maintenance of broken or otherwise damaged or uneven access steps, stairs, handrails, gates, ladders and the like,
 - (vi) removal of litter, refuse and debris from around the communications and miscellaneous equipment site,
 - (vii) maintenance of clear access to vehicle hard standing areas, and
 - (viii) removal of graffiti in accordance with paragraph 4.36 of this Part.
- 4.13.3 The Operating Company shall be responsible for the repair and maintenance of those items of infrastructure that support communications and miscellaneous equipment that is deemed to be a Structure. This activity shall ensure that the foundation and, the post substructure and superstructure with sign enclosure are maintained in a safe and watertight condition. In this context Structure means:
- (i) sign and signal gantries, including all associated cladding, that are Structures that display fixed or variable driver information over or adjacent to a Trunk Road or at a specified location over or adjacent to a local road where it is the Scottish Ministers' responsibility,
 - (ii) masts for supporting closed circuit television cameras,
 - (iii) service ducts that are Structures within the structures management function of the Integrated Roads Information System, and
 - (iv) retaining walls that are Structures constructed as a component of a Trunk Road that retain heights of infill material or natural ground level greater than 1.5 metres (ground level to ground level).
- 4.13.4 The Operating Company shall report to the Director, faults and Defects that it observes for which the specialist maintenance contractor is responsible.
- 4.13.5 Where access is required by any of the parties to an electrical equipment cabinet that provides electrical energy to both an Operating Company maintained device and communications and miscellaneous equipment maintained by others, it shall be undertaken in accordance with the access procedure set out in Annex 7.1/E of this Part. The maintenance, inspection and testing regime for such electrical equipment cabinets is set out in Annex 7.1/E of this Part.

- 4.13.6 Major maintenance Schemes may involve the resurfacing or reconstruction of the existing carriageway or major strengthening or reconstruction of bridges and other Structures. This will often have a significant impact on the existing motorway communications infrastructure, the extent of this impact will depend on the scope of the civil engineering works.
- 4.13.7 Communications equipment, particularly buried cables, is vulnerable to damage during any of the following operations:
- (i) tree planting,
 - (ii) provision of noise barrier fencing,
 - (iii) reconstruction of carriageways,
 - (iv) resurfacing to a greater thickness "overlay",
 - (v) recabling contracts,
 - (vi) drainage alterations, and
 - (vii) provision of safety fencing.
- 4.13.8 Where the Operating Company has:
- (i) undertaken resurfacing or patching works, or other works that have caused the sub-surface traffic detection loops to become inoperable, or
 - (ii) inadvertently caused such damage to sub-surface traffic detection loops through any other of its Core Operations or Operations,
- the Operating Company shall reinstate the traffic detection loops or feeder cables in accordance with the *Specification for Highway Works MCH1540 specification for the Installation of Detector Loops*.
- 4.13.9 The Operating Company shall give special consideration during the planning stages of any work to avoiding damage to existing services and cables.
- 4.13.10 Before commencing any work or moving heavy plant or equipment in the vicinity of communications and miscellaneous equipment, the Operating Company shall, in accordance with the *Special Requirements in Relation to Traffic Scotland*, confirm details of the communications and miscellaneous equipment installed within the area with Transport Scotland's Network Operations Branch.
- 4.13.11 The Operating Company shall locate the actual position of all communications and miscellaneous equipment and shall mark the locations prior to any work commencing in the vicinity of such equipment. The manner of such marking shall be dependent on the surface under which the equipment lies and such marking shall at all times be clearly visible to all parties working on the Site. The Operating Company shall notify all operatives, including sub-contractors, of the presence of communications and miscellaneous equipment, particularly cabling, together with the need to exercise extreme care and attention to ensure the prevention of any damage.
- 4.13.12 The Operating Company shall ensure that communications and miscellaneous equipment is protected from damage throughout the period of the works. The method of protection shall allow access to all communications and miscellaneous equipment for the repair or inspection of any damage within two hours of its notification. Depending on the extent of damage or the fault being repaired, access

for vehicles, winches, cable drums and any further equipment may be required by the Traffic Scotland Operator. Access to all chambers and cabinets forming part of the communications and miscellaneous equipment shall be kept clear and unobstructed at all times. The Operating Company shall particularly note that surface mounted cabling should not under any circumstances be aurally suspended without the prior consent of, and then only in the manner specified by, the Traffic Scotland Operator.

- 4.13.13 It is essential that the existing motorway communications system remains operational at all times during the Contract Period. The longitudinal cable may be part of the national carrier network in addition to its function of carrying local data from signals, telephones and the like.
- 4.13.14 Any disconnections or connections to operational systems shall be made by the specialist contractor appointed by the Director.
- 4.13.15 The Operating Company shall not interfere with any equipment inside cabinets. The Operating Company shall not open any communications and miscellaneous equipment cabinet or isolate any communications and miscellaneous equipment electrical supply, other than to make a situation safe, without the consent of the authority. Any disconnection or reconnection of communications and miscellaneous equipment shall be undertaken by the authority or the specialist contractor appointed by the Director.
- 4.13.16 If the Operating Company discovers any problems with the communications and miscellaneous equipment, these shall be reported to the Traffic Scotland Operator within 24 hours.
- 4.13.17 Maintenance of areas adjacent to communications and miscellaneous equipment shall include weed control and be carried out as necessary in accordance with clause 3002 of the Specification. Maintenance shall include the hard and soft landscape maintenance detailed in paragraph 4 of this Part. The maintenance Record entered in the routine maintenance and management function of the Integrated Roads Information System shall include details of the main cut, strimming, the percentage of area not cut, reasons for incomplete cutting and any other problems encountered.
- 4.13.18 Maintenance of those items associated with communications and miscellaneous equipment and identified as Structures shall include weed control in accordance with clause 3002 of the Specification.

4.14 Geotechnical Assets

- 4.14.1 Geotechnical assets include cuttings and embankments and a wide range of natural geological strata and man-made materials, many of which may have been reworked, mixed or modified. These materials may also be supported, strengthened or drained to aid stability or reduce subsidence.
- 4.14.2 Geotechnical assets may be in the ownership of the adjacent land owner. Where they are not the responsibility of the Director, it is the landowner's responsibility to maintain the stability of the assets to prevent them from affecting the Trunk Roads within the Unit adversely. The Operating Company shall notify adjacent landowners, in writing, of any potential geotechnical problems on their land which could affect the Trunk Roads within the Unit and liaise with the landowner regarding the necessary remedial action. Copies of all correspondence shall be forwarded to the Director.

The Operating Company shall report any recommendations regarding remedial action and any failures of the landowners in fulfilling their responsibilities to the Director.

- 4.14.3 Guidance on inspections by the Operating Company and on geotechnical features, their identification and the procedures for repairs shall be as detailed in the *Design Manual for Roads and Bridges*.
- 4.14.4 Detailed Inspections of geotechnical assets shall be carried out at intervals not exceeding 12 months.
- 4.14.5 Detailed Inspections of specific areas shall be carried out at the intervals referred to in Annex 7.1/C of this Part.
- 4.14.6 Maintenance of geotechnical assets shall be carried out as necessary in accordance with clause 6130AR of the Specification and shall include the removal of debris from behind netting, in rock traps and from behind rock fences.

4.15 Grassed Areas

- 4.15.1 Grassed areas include verges, central reserves, cuttings, embankments and other areas.
- 4.15.2 The Operating Company shall submit a grass cutting programme to the litter authority no later than 75 Working Days prior to the start of each Annual Period and no later than 25 Working Days prior to grass cutting Operations. The Operating Company shall liaise with the litter authority to coordinate litter picking Operations prior to grass cutting Operations.
- 4.15.3 Detailed Inspections of grassed areas shall be carried out seasonally during their growing period at intervals not exceeding 12 months.
- 4.15.4 During Detailed Inspections, the accuracy of inventory areas, locations and attributes shall be checked and any necessary amendments made to the relevant inventory item in the routine maintenance and management function of the Integrated Roads Information System.
- 4.15.5 Maintenance of grassed areas shall be carried out in accordance with clause 3007 and appendix 30/7 of the Specification and the categories stated in the routine maintenance and management function of the Integrated Roads Information System. Maintenance shall include cutting and edging. The maintenance Record entered in the routine maintenance and management function of the Integrated Roads Information System shall also include details of the main cut, strimming, the percentage of area not cut, reasons for incomplete cutting and any other problems encountered.
- 4.15.6 Maintenance of grassed areas shall include weed control in accordance with clause 3002 of the Specification.

4.16 Bulb and Wildflower Areas

- 4.16.1 Bulb and wildflower areas are areas of naturalised or planted flowers.
- 4.16.2 Detailed Inspections of bulb and wildflower areas shall be carried out during their flowering season at intervals not exceeding 12 months.
- 4.16.3 During Detailed Inspections, the accuracy of inventory areas, locations and attributes shall be checked and any necessary amendments made to the relevant

inventory item in the routine maintenance and management function of the Integrated Roads Information System.

4.16.4 Maintenance of bulb and wildflower areas shall be carried out in accordance with clause 3007 of the Specification and at the frequencies referred to in the Specification.

4.16.5 Maintenance of bulb and wildflower areas shall include weed control in accordance with clause 3002 of the Specification.

4.17 Woodland Areas and Trees

4.17.1 Detailed Inspections of all woodland areas and trees shall be carried out at intervals not exceeding 12 months.

4.17.2 During Detailed Inspections, the accuracy of inventory areas, locations and attributes shall be checked and any necessary amendments made to the relevant inventory item in the routine maintenance and management function of the Integrated Roads Information System.

4.17.3 Detailed Inspections of all mature woodland areas and trees shall be carried out by a qualified arboriculturalist, approved in writing by the Director, at intervals not exceeding five years. A report detailing the condition and any recommended actions shall be completed within 25 Working Days of the inspection of each area or individual tree and shall be attached to the relevant routine maintenance and management function of the Integrated Roads Information System inspection and inventory Record.

4.17.4 Maintenance of woodland areas and trees shall be carried out in accordance with clause 3010 of the Specification and at the frequencies referred to in the Specification.

4.17.5 Maintenance of woodland areas and trees shall include weed control in accordance with clause 3002 of the Specification.

4.18 Scrub Areas, Shrub Areas and Hedges

4.18.1 Detailed Inspections of scrub areas, shrub areas and hedges shall be carried out during their growing season at intervals not exceeding 12 months.

4.18.2 During Detailed Inspections, the accuracy of inventory areas, locations and attributes shall be checked and any necessary amendments made to the relevant inventory item in the routine maintenance and management function of the Integrated Roads Information System.

4.18.3 Maintenance of scrub areas, shrub areas and hedges shall be carried out in accordance with clause 3010 of the Specification.

4.18.4 Maintenance of scrub areas, shrub areas and hedges shall include weed control in accordance with clause 3002 of the Specification.

4.19 Wetland Areas

4.19.1 Wetland areas include waterbodies such as lagoons, balancing ponds, attenuation Structures and associated inlets, outlets, reed beds and marginal plants.

4.19.2 Detailed Inspections of wetland areas shall be carried out at intervals not exceeding 12 months.

- 4.19.3 During Detailed Inspections, the accuracy of inventory areas, locations and attributes shall be checked and any necessary amendments made to the relevant inventory item in the routine maintenance and management function of the Integrated Roads Information System.
- 4.19.4 Maintenance of wetland areas shall be carried out in accordance with clause 3011 of the Specification and at the frequencies referred to in the Specification.
- 4.19.5 Maintenance of wetland areas shall include weed control in accordance with clause 3002 of the Specification.

4.20 Special Ecological Measures

- 4.20.1 Detailed Inspections of all special ecological measures such as fencing, tunnels, underpasses and all other provisions for wildlife shall be carried out at intervals not exceeding 24 months.
- 4.20.2 During Detailed Inspections, the accuracy of inventory areas, locations and attributes shall be checked and any necessary amendments made to the relevant inventory item in the routine maintenance and management function of the Integrated Roads Information System.
- 4.20.3 Maintenance of special ecological measures shall be in accordance with clause 3012 of the Specification and at the frequencies referred to in the Specification.
- 4.20.4 Maintenance of special ecological measures shall include weed control in accordance with clause 3002 of the Specification.

4.21 Invasive Species

- 4.21.1 Invasive species include:
 - (i) broad leafed dock,
 - (ii) curled dock,
 - (iii) common ragwort,
 - (iv) creeping thistle,
 - (v) spear thistle,
 - (vi) Himalayan balsam,
 - (vii) Japanese knotweed,
 - (viii) giant hogweed,
 - (ix) rhododendron ponticum,
 - (x) rosebay willow herb,
 - (xi) horsetail,
 - (xii) oil seed rape, and
 - (xiii) rabbits.
- 4.21.2 Detailed Inspections of all invasive species shall be carried out at intervals not exceeding 12 months and for plant based invasive species this shall be during their growing season.
- 4.21.3 During Detailed Inspections, the accuracy of inventory areas, locations and attributes shall be checked and any necessary amendments made to the relevant

inventory item in the routine maintenance and management function of the Integrated Roads Information System.

- 4.21.4 Maintenance of plant based invasive species shall include weed control in accordance with clause 3002 of the Specification.

4.22 Vehicle Restraint Systems

4.22.1 Vehicle restraint systems include tensioned and untensioned corrugated beam safety fence, open box beam safety fence, tensioned rectangular hollow section safety fence, wire rope safety fence, concrete barriers and crash cushions. The following requirements do not relate to parapets on Structures.

4.22.2 The Operating Company shall carry out Detailed Inspections of all vehicle restraint systems (including tensioning devices) at intervals not exceeding two years. The Operating Company shall complete Detailed Inspection forms in accordance with British Standard 7669 Part 3:1994 for each inventory item and attach the completed form to the relevant inventory item in the routine maintenance and management function of the Integrated Roads Information System within four days of the inspection being carried out. Re-tensioning shall not be carried out as part of Detailed Inspections.

4.22.3 Within 25 Working Days of completion of each Detailed Inspection, the Operating Company shall prepare an inventory for re-tensioning of the vehicle restraint systems which have been inspected (including the replacement of any components necessary) and attach this to the routine maintenance and management function of the Integrated Roads Information System.

4.22.4 On receipt of the Director's written consent (and within four months of carrying out the Detailed Inspections) the Operating Company shall undertake the re-tensioning of vehicle restraint systems in accordance with the manufacturers' maintenance guidelines and the requirements of clause 472AR of the Specification. Whenever practical, the Operating Company shall carry out re-tensioning exercises under warm ambient conditions, when the stipulated tensions in the components are significantly lowered.

4.23 Pedestrian Restraint Systems

4.23.1 Detailed Inspections of all pedestrian restraint systems shall be carried out at intervals not exceeding 12 months.

4.24 Fences, Walls, Screens and Noise Barriers

4.24.1 Fences, walls, screens and noise barriers include walls, screen fences, snow fences and noise barriers which are the responsibility of the Scottish Ministers. The following requirements do not relate to retaining walls which shall be regarded as Structures.

4.24.2 Fences, walls, screens and noise barriers along the boundaries of the Unit, other than motorways, are generally the responsibility of the adjoining landowner.

4.24.3 Walls which retain Trunk Roads are generally the responsibility of the Scottish Ministers. Boundary walls which retain land above Trunk Roads are generally the responsibility of the landowner.

4.24.4 Detailed Inspections of fences, walls, screen fences, snow fences and noise barriers shall be carried out by the Operating Company at intervals not exceeding 12 months.

4.25 Road Markings

4.25.1 Undertaking permanent repairs to Defects shall be carried out in accordance with the requirements detailed in the *Design Manual for Roads and Bridges*.

4.25.2 Detailed Inspections of road markings shall be carried out in accordance with the methods of inspection and frequencies detailed in the *Design Manual for Roads and Bridges*.

4.25.3 As part of each Detailed Inspection, the Operating Company shall summarise the findings of the road marking surveys, inspections and measurements and include as part of the Bid submission process.

4.25.4 Results of handheld retroreflectivity and skid resistance measurements shall be attached to the appropriate inventory items in the routine maintenance and management function of the Integrated Roads Information System.

4.26 Road Studs

4.26.1 Road studs include retro reflective and non reflective road studs of all types and colours.

4.26.2 Undertaking permanent repairs to Defects shall be carried out in accordance with the requirements detailed in the *Design Manual for Roads and Bridges*.

4.26.3 Detailed Inspections of road studs shall be carried out in accordance with the inspection methods and frequencies detailed in the *Design Manual for Roads and Bridges*, except that routine visual inspections shall be carried out at intervals not exceeding six months during daylight and inspections for reflective capability shall be carried out at intervals not exceeding six months during the hours of darkness.

4.26.4 Detailed Inspections of intelligent road studs shall be carried out in accordance with the manufacturer's recommendations.

4.26.5 Maintenance of intelligent road studs shall be carried out in accordance with the manufacturer's recommendations.

4.27 Road Traffic Signs

4.27.1 Road traffic signs shall include all permanent road traffic signs, all permanent bollards, all permanent marker posts, telephone hoods, refuge beacons and the surfaces of vehicle road restraint systems which have been painted for road safety purposes. Road traffic signs shall also include all authorised signs owned by third parties including tourist signs, boundary signs, roadside services signs, motoring organisation signs, Ministry of Defence signs, or any other authorised signs.

4.27.2 Detailed Inspections of road traffic signs shall be carried out in accordance with the types of inspection and frequencies referred to in the *Design Manual for Roads and Bridges* with the exception of inspections of electrical apparatus which shall be carried out in accordance with paragraph 4.29 of this Part.

4.27.3 The measured coefficient of retroreflectivity results shall be recorded against each relevant inventory item in the routine maintenance and management function of the Integrated Roads Information System.

4.27.4 Maintenance of road traffic signs shall be carried out in accordance with clause 6119AR of the Specification and the frequencies referred to in clause 5.1 of TD 25/01 of the *Design Manual for Roads and Bridges* with the exception of maintenance of electrical apparatus which shall be carried out in accordance with paragraph 4.29 of this Part.

4.28 Traffic Signals

4.28.1 Traffic signals include all automated traffic signals, pedestrian controlled signals and their associated equipment.

4.28.2 Where traffic signals are monitored remotely by a local roads authority, the maintenance and operation of such traffic signals shall remain the responsibility of the local roads authority. The Operating Company shall maintain the outstation and its associated equipment including the communications line.

4.28.3 The inspection and maintenance of traffic signals which are the responsibility of the local roads authority shall be undertaken by the Operating Company in liaison with the local roads authority. The Operating Company shall give the local roads authority a minimum of 10 Working Days' notice of any inspection or planned maintenance activity that may require the signals to be off central control, switched off or which is likely to have a significant impact on the normal flow of traffic. Where the inspection is to include an operational review of the performance of the traffic signals, the Operating Company shall consult with the local roads authority to identify any operational issues of which the local roads authority may be aware that should be considered within the review.

4.28.4 No later than 12 months after the Commencement of Service Date, the Operating Company shall undertake a full review of the signal equipment for which it is responsible to establish a detailed inventory of the existing equipment, facilities and special provisions and plans in use on the network. This information shall be used to provide and maintain the following records for each installation:

- (i) installation drawing,
- (ii) electrical supply and distribution details,
- (iii) designer's *Specification for Traffic Signal Controller TR2500*, (or equivalent),
- (iv) final *Specification for Traffic Signal Controller TR2500* (or equivalent),
- (v) communications details,
- (vi) detector location plans,
- (vii) operational strategy,
- (viii) valid electrical test certificate,
- (ix) valid detector test certificate,
- (x) outstation transmission unit and or remote equipment wiring schedule, and
- (xi) Site maintenance log book.

4.28.5 All Site information shall be maintained in a central repository and in the controller cabinet, with the exception of the Site maintenance log book which shall be retained only within the controller cabinet and updated on every visit.

- 4.28.6 Site information and drawings shall be amended by the Operating Company within 10 Working Days of any change being effected.
- 4.28.7 The Operating Company shall provide any missing Records during the first Annual Period.
- 4.28.8 Using the information arising from the equipment review required by paragraph 4.28.4 of this Part, the Operating Company shall develop and maintain a network operational strategy covering all traffic signal equipment within the Unit. This will consist of two elements:
- (i) a high level strategy detailing:
 - (a) control strategies to be used, such as MOVA or SCOOT control systems and the like, and locations where these are currently in use,
 - (ii) a low level strategy to address the operational issues for each individual installation including:
 - (a) control strategy hierarchy,
 - (b) operational plans,
 - (c) vehicle priority actions, and
 - (d) any maintenance restrictions.
- 4.28.9 The network operational strategy shall be submitted to the Director for consent no later than six months after the Commencement of Service Date. The Director shall notify the Operating Company of his consent, or otherwise, including reasons, within six weeks of such submission.
- 4.28.10 The consented to network operational strategy shall be reviewed at intervals not exceeding 12 months from the date of consent. Any amendments required, or confirmation that no changes are necessary, arising from the review shall be submitted to the Director for consent no later than 25 Working Days prior to the due date.
- 4.28.11 The following Category 1 traffic signals Defects shall be attended within three hours, be restored to operation within two hours of first attendance and shall be repaired fully within 24 hours of first attendance:
- (i) all signals unlit,
 - (ii) signals failing to change,
 - (iii) signals giving conflicting indications,
 - (iv) audible or tactile warnings not working,
 - (v) red or amber lamp unlit,
 - (vi) equipment damaged or in a dangerous condition, and
 - (vii) Defects likely to cause a hazard or abnormal and excessive delay.
- 4.28.12 The following response times shall apply to Category 1 Defects for dark lamps excluding red and amber:
- (i) attendance within six hours,

- (ii) restore within two hours of first attendance, and
 - (iii) full repair within 24 hours of first attendance.
- 4.28.13 The following response times shall apply to Category 1 Defects resulting from failed or damaged below ground detection equipment:
- (i) attendance within six hours, and
 - (ii) full repair within 10 Working Days of first attendance.
- 4.28.14 Where a Defect is found to be caused by a fault with the electrical supply, the Operating Company shall report this fault to the relevant electricity supply company and liaise with them on Site where necessary. Any costs incurred for an avoidable visit on Site by the electricity supply company shall be borne by the Operating Company.
- 4.28.15 Where a Defect is found to be caused by a fault with the communications line, the Operating Company shall report this fault to the relevant telephone company and liaise with them on Site where necessary. Any costs incurred for an avoidable visit on Site by the telephone company shall be borne by the Operating Company.
- 4.28.16 All Records relating to inspection and maintenance activities shall be attached to the relevant inventory or inspection item in the routine maintenance and management function of the Integrated Roads Information System.
- 4.28.17 Detailed Inspections of traffic signals shall be carried out in accordance with TD 24/97 of the *Design Manual for Roads and Bridges*, except that items 1 to 12 of table 2.2 of TD 24/97 shall be carried out at intervals not exceeding one month.
- 4.28.18 Detailed Inspections to ensure the correct labelling of protective devices, protective enclosures and earthing and or bonding points shall be carried out at intervals not exceeding one month.
- 4.28.19 Detailed Inspections and testing for electrical safety of electrical apparatus associated with any traffic signals shall be carried out at intervals not exceeding five years and on approximately 20 percent of the network in each Annual Period. Testing shall include the testing of inductive loops in accordance with Annex A of TD24/97 of the *Design Manual for Roads and Bridges*. The results of electrical testing shall be recorded on an in-service report form as detailed in *Local Transport Note 1/98, Appendix B* and attached to the relevant inspection Record in the routine maintenance and management function of the Integrated Roads Information System. A method statement for electrical testing shall be submitted to the Director for approval no later than 25 Working Days after the Commencement of Service Date.
- 4.28.20 Detailed Inspections to review the operation of the traffic signal settings shall be carried out at intervals not exceeding 12 months. No later than 25 Working Days after the Commencement of Service Date, the Operating Company shall submit a procedural manual for the undertaking of operational reviews to the Director for consent.
- 4.28.21 The annual operational review shall be carried out by suitably experienced persons and shall include the following:
- (i) operation of the traffic signal settings for control of traffic, including any additional control systems,

- (ii) on-street assessment including measurement of queue lengths,
- (iii) updating traffic models, using LINSIG or TRANSYT as specified,
- (iv) updating controller settings,
- (v) validation of SCOOT and MOVA control systems as specified, and
- (vi) production of the performance report in accordance with paragraph 4.28.23 of this Part.

4.28.22 Where traffic signals are monitored remotely or controlled by a local roads authority, the Operating Company shall consult with the local roads authority to identify any additional operational issues that should be considered within the annual operational review.

4.28.23 On completion of the annual operational review, the Operating Company shall submit a performance report to the Director summarising the performance of each installation including the methodology adopted, issues identified and the actions taken.

4.28.24 The Operating Company shall validate SCOOT and MOVA control systems during the first Annual Period and shall then revalidate at intervals not exceeding three years. In the event of a significant change to the road layout occurring outwith the specified validation periods for SCOOT and MOVA, the Operating Company shall revalidate the control system at the affected junctions as required. Where the urban traffic control facility is provided by a local roads authority, the Operating Company shall give a minimum of 10 Working Days' notice of any validation works and comply with the local roads authority's requirements for access to the urban traffic control facility.

4.28.25 Maintenance of traffic signals shall be carried out in accordance with clause 6121AR of the Specification and TD 24/97 of the *Design Manual for Roads and Bridges*.

4.29 Roadside Electrical Apparatus, Road Lighting and Power Supplies

4.29.1 In compliance with the requirements of this Part, the Operating Company shall submit method statements and maintenance procedures in relation to the Detailed Inspection and maintenance of roadside electrical apparatus, road lighting and power supplies to the Director for consent. Roadside electrical apparatus is listed in Schedule 4 Part 3.

4.29.2 Detailed Inspections and testing shall be carried out by the Operating Company in accordance with the requirements and timescales of Transport Scotland guidance document *LDS8023_09 – Electrical Maintenance Guidelines*.

4.29.3 Detailed Inspections shall be carried out by the Operating Company on lighting and associated road side electrical apparatus in accordance with the initial verification, periodic inspection and testing and minor works certification requirements of Transport Scotland guidance document *LDS8005 – Electrical Inspection and Testing of Lighting and associated electrical apparatus and installations with Model Forms*. The Operating Company shall carry out periodic inspection and testing on approximately of twenty percent of the electrical apparatus in each Annual Period. All electrical apparatus shall be tested at least once every five years. The Operating Company shall produce a programme of works for periodic inspection and testing, coinciding where possible with the Detailed Inspections.

- 4.29.4 Detailed Inspections shall be carried out by the Operating Company on non lighting roadside electrical apparatus in accordance with the initial verification, periodic inspection and testing and minor works certification requirements of British Standard 7671:2008 and associated *Guidance Note 3 (Inspection & Testing)* together with the manufacturer's requirements for such apparatus. The Operating Company shall carry out periodic inspection and testing on approximately of twenty percent of the electrical apparatus in each Annual Period. All electrical apparatus shall be tested at least once every five years. The Operating Company shall produce a programme of works for periodic inspection and testing, coinciding where possible with the Detailed Inspections.
- 4.29.5 At the end of each quarter, the Operating Company shall submit to the Director the periodic inspection and testing certification, including periodic inspection reports, schedules of inspections, schedules of circuit details and test results.
- 4.29.6 Detailed Inspections shall be carried out by the Operating Company on portable and transportable equipment which forms part of the electrical installation in compliance with the *Electricity at Work Regulations 1989*.
- 4.29.7 The Operating Company shall identify the portable or transportable equipment for the inclusion in or exclusion from the electrical installation periodic testing. The details of the tests shall be agreed with the Director, and approved as 'extent and limitations' section in accordance with the requirements of British Standard 7671:2008 and associated *Guidance Note 3 (Inspection & Testing)*.
- 4.29.8 The Operating Company shall obtain consent from the Director prior to carrying out structural works, such as repairs, adjustments, re-riveting, part replacement, modifications and re-welding.
- 4.29.9 Maintenance shall be carried out by the Operating Company in accordance with the requirements of Transport Scotland guidance document *LDS8023_09 – Electrical Maintenance Guidelines* and clauses 6120AR, 6122AR and 6124AR of the Specification.
- 4.29.10 Bulk lamp changes shall be carried out by the Operating Company at the intervals given in Table 4.29.10.A. This table replaces tables 4 and 5 in TD 23/99 of the *Design Manual for Roads and Bridges*.

Table 4.29.10.A – Maximum Intervals for Bulk Lamp Changes

Lamp Type	Nomenclature as TD 23	Bulk Change Interval For Dusk to Dawn Operation	Bulk Change Interval For 24 Hour Per Day Operation
Low pressure Sodium	SOX	24 months	12 months
High pressure Mercury	MBFU		
High pressure fluorescent	MCFE SL PL		
High pressure sodium	SON SON-T	36 months	18 months
Low pressure sodium	SOX-E		
Ceramic Metal Halide	CMH		

4.29.11 The following response times shall apply to Category 1 Defects:

- (i) permanent repair within 24 hours.

4.29.12 The Operating Company shall comply with the procedures for shared access to the electrical apparatus as detailed in Annex 7.1/E of this Part when operating at such sites.

4.29.13 Where electrical apparatus is located adjacent to the Trunk Road boundary, the Operating Company shall comply with Transport Scotland guidance document *LDS8022_09 – Guidance on the Definition of Electrical Maintenance Responsibilities and Boundaries in relation to Roadside Electrical Equipment and Lighting*.

4.29.14 The Operating Company may, if necessary, seek the assistance of the relevant local authority to meet the requirements of this Part.

4.29.15 The Operating Company shall liaise with local authorities in accordance with Transport Scotland guidance document *LDS8017_09 - Special Requirements for Local Authority Roadside Electrical Apparatus*.

4.29.16 The Operating Company shall remove any redundant electrical apparatus in accordance with Transport Scotland guidance document *LDS8013_09 – Guidance on making roadside Electrical Apparatus obsolete, redundant and derelict*.

4.29.17 The Operating Company shall report any failure of air or sea navigational aids to the relevant authority and respond to the Defect in accordance with the requirements of this Part.

4.29.18 The Operating Company shall make reference to Transport Scotland guidance document *LDS8025_09 – Typical Drawings for Roadside Electrical Apparatus*.

4.30 Weather Stations

4.30.1 For the purposes of this Part, Weather Stations means weather monitoring stations, ice prediction, road temperature sensors and weather cameras.

- 4.30.2 Detailed Inspections and calibration checks on Weather Stations shall be carried out in accordance with the manufacturers' recommendations during August to September and December to February in each Annual Period except for closed circuit television equipment which shall have maintenance carried out as necessary throughout each Annual Period.
- 4.30.3 These Detailed Inspections and calibration checks shall be carried out by suitably qualified personnel consented to in writing by the Director. Calibration and test certificates shall be attached to the relevant inventory Records in the routine maintenance and management function of the Integrated Roads Information System.
- 4.30.4 The following response and repair times shall apply to Category 1 Defects:
- (i) closed circuit television equipment except for the image server and video link:
 - (a) Winter Service Period – 12 hours, and
 - (b) non Winter Service Period – 24 hours,
 - (ii) closed circuit television image server and video link:
 - (a) throughout each Annual Period – two hours response with a repair within four hours,
 - (iii) all other Weather Station equipment in accordance with paragraph 4.29 of this Part.
- 4.30.5 The Operating Company shall be responsible for reporting all Defects, liaising with specialist contractors and providing Defect status reports to the Traffic Scotland Operator.
- 4.30.6 The Operating Company shall maintain, in accordance with the requirements of Schedule 5 Part 2, a written Record pertaining to all the actions it undertakes in connection with paragraph 4.30.5 of this Part.
- 4.30.7 Maintenance for Weather Stations shall be carried out in accordance with paragraph 4.29 of this Part.

4.31 Arrester Beds

- 4.31.1 Detailed Inspections of arrester beds shall be carried out at intervals not exceeding six months.
- 4.31.2 As part of the Detailed Inspection, the Operating Company shall prepare a report on the condition of arrester beds which shall be attached to the relevant inventory item in the routine maintenance and management function of the Integrated Roads Information System.
- 4.31.3 The Operating Company's Detailed Inspection regime for the arrester beds shall ensure that the inspection identifies any deficiencies in the ability of the arrester bed to stop a heavy vehicle leaving the road.
- 4.31.4 Maintenance of arrester beds shall be in accordance with clause 712 of the Specification.

4.32 Snow Poles, Snow Gates, Snow Fences and Snow and Ice Hidden Message Signs

- 4.32.1 Detailed Inspections of snow poles, snow gates, snow fences and snow and ice hidden message signs shall be carried out during June or July in each Annual Period. Electrical inspection shall be carried out in accordance with paragraph 4.29 of this Part.
- 4.32.2 No later than 7 August in each Annual Period, the Operating Company shall deliver Bids to the Director for the repair of Category 2 Defects in snow poles, snow gates, snow fences and snow and ice hidden message signs.
- 4.32.3 Subject to an Order, repairs of Category 2 Defects shall be carried out by the Operating Company prior to the commencement of the Winter Service Period.

4.33 Traffic Control Barriers

- 4.33.1 Detailed Inspections of traffic control barriers to determine their structural condition and integrity shall be carried out at intervals not exceeding one year.
- 4.33.2 Detailed Inspections of mechanically and electrically operated traffic control barriers shall be carried out at intervals not exceeding one year or in accordance with the intervals stated in their maintenance manuals and manufacturers' instructions, where these are more frequent.
- 4.33.3 Detailed Inspections of electrically operated traffic control barriers shall be carried out in accordance with paragraph 4.29 of this Part.
- 4.33.4 Maintenance of electrically operated traffic control barriers shall be carried out in accordance with paragraph 4.29 of this Part.

4.34 Litter and Refuse

- 4.34.1 The benefits of collaborative working with litter authorities shall be examined by the Operating Company in accordance with the requirements of Schedule 3 Part 9.
- 4.34.2 The Operating Company shall liaise with the responsible litter authority when planned traffic management will allow safe access for litter and refuse clearance activities in the central reserve of roads with speed limits of 50 miles per hour or greater.
- 4.34.3 The following litter and refuse requirements relate to the Scottish Ministers' duty under the *Environmental Protection Act 1990* to keep the motorways and special roads identified in Schedule 3 Part 2 clear of litter and refuse and to keep them clean.
- 4.34.4 In carrying out these requirements, the Operating Company shall comply with the *Code of Practice on Litter and Refuse*.
- 4.34.5 Seasonal variations of accumulations shall be taken into consideration when formulating cleaning regimes.
- 4.34.6 References to grassed areas in the *Code of Practice for Litter and Refuse* include all areas of Trunk Roads within the Unit other than hard surfaced areas.
- 4.34.7 On Trunk Roads within the Unit, other than motorways and special roads, the local authority shall be responsible for the clearance of litter and refuse and keeping them clean in compliance with the *Environmental Protection Act 1990*.

- 4.34.8 Local authority compliance with the *Environmental Protection Act 1990* does not relieve the Director of his responsibility to keep all categories of Trunk Road within the Unit safe for the travelling public. Any litter or refuse that becomes a Category 1 Defect on the Unit shall be made safe by the Operating Company in accordance with this the requirements of this Part. The Operating Company shall notify the local authority in writing, with a copy to the Director, if the standard of cleanliness falls below that required by the *Code of Practice for Litter and Refuse*.
- 4.34.9 Where a local authority does not carry out its statutory duty, the Operating Company shall provide a detailed report to the Director within 25 Working Days of becoming aware.
- 4.34.10 All Grade C and D litter areas, as defined by the *Code of Practice for Litter and Refuse*, shall be identified and recorded in the routine maintenance and management function of the Integrated Roads Information System. Grade A and B litter areas, as defined by the *Code of Practice for Litter and Refuse*, shall also be recorded when it is necessary to record the condition of the network.
- 4.34.11 A minimum of one before and one after photograph shall be attached to each Grade C and D litter Record in the routine maintenance and management function of the Integrated Roads Information System.
- 4.34.12 Detailed Inspections shall be carried out as necessary to ensure the Scottish Ministers comply at all times with the *Code of Practice on Litter and Refuse*.
- 4.34.13 The Operating Company may use Safety Inspections and Safety Patrols to identify litter areas but shall ensure areas not normally visible from the road and areas where litter is known to be a particular problem are inspected as necessary.
- 4.34.14 Maintenance in respect of litter and refuse shall be in accordance with clause 6108AR of the Specification.

4.35 Dead Animals

- 4.35.1 Dead animals shall be removed from the network immediately.
- 4.35.2 If the animal is a domestic pet, any identification tags shall be removed and delivered to the Police, together with a brief description of the animal. The Operating Company shall attempt to contact the owner of the dead animal and shall keep the carcass of any domestic animal for a period of two weeks in case the owner wishes to claim back the carcass. After this period, the Operating Company shall dispose of the carcass in accordance with the requirements of the local authority.
- 4.35.3 There shall be no requirement to keep the carcass of any non-domestic animal which shall be disposed of in accordance with the requirements of the local authority.

4.36 Removal of Graffiti

- 4.36.1 Removal of graffiti shall include for painting where appropriate to return the asset to an appearance which is acceptable to the Director.
- 4.36.2 Graffiti includes paint, posters and encrusted deposits.
- 4.36.3 Detailed Inspections shall be undertaken as necessary to identify areas of graffiti on the network.

4.36.4 The following response times shall apply:

- (i) offensive graffiti which is racist, religiously bigoted, inflammatory, sexually explicit or obscene shall be removed within two days of identification, and
- (ii) all other graffiti shall be removed within 25 Working Days of identification.

4.37 Node Markers

4.37.1 Detailed Inspections of node markers shall be carried out by the Operating Company at intervals not exceeding 12 months and as necessary to ensure that all node markers on the Trunk Road network shall be accurately located and visible at all times.

4.37.2 During inspections, the node marker location shall be checked against the location coordinates and documents stored in the Integrated Roads Information System.

4.37.3 Any node markers that are found to be missing or defective shall be replaced by the Operating Company within 25 Working Days of their identification to the location described in the node marker location document.

4.37.4 Where the node marker location documents are no longer accurate due to changes such as moved speed limits, changed junction geometry or any other reference points, the Operating Company shall provide revised node marker location documents for approval by the Director and replace the node markers within 25 Working Days of receiving approval.

4.37.5 During the first Annual Period the Operating Company shall create node marker locations for all node markers, to the format shown in Annex 4.2/E of Schedule 4 Part 2, and submit them to the Director for consent.

4.37.6 The Director shall maintain a copy of all node marker location documents he has consented to in the Integrated Roads Information System.

4.37.7 In all cases, node studs shall be installed in accordance with the Scottish Executive Advice Note *Node Marker Standards*.

4.38 Network Referencing

4.38.1 Detailed Inspections of all the network referencing shall be carried out at intervals not exceeding three years and on approximately one third of the network in each Annual Period.

4.38.2 During the Detailed Inspection, the Operating Company shall review all network referencing attributes held against each link or section record in the Integrated Roads Information System. The section length shall be measured during each inspection. Any discrepancies in the network referencing attributes shall be recorded in the routine maintenance and management function of the Integrated Roads Information System and shall be notified in writing to the Director within 25 Working Days of identification.

4.39 Flooding

4.39.1 The Operating Company shall ensure that the drainage systems and associated Structures referred to in this Part are maintained in accordance with the requirements of paragraphs 4.5 to 4.12 of this Part to be structurally sound and able to remove water from trafficked surfaces and sub-layers without causing pollution and flooding and that the effects of any flooding are mitigated.

- 4.39.2 Flooding shall be defined as a sufficient amount of water lying on the network which:
- (i) represents a hazard to road users,
 - (ii) may interrupt the free flow of traffic, or
 - (iii) causes damage to other Structures or the carriageway.
- 4.39.3 Flooding may arise from a blockage or some other fault identified as a result of an inspection, patrol, report from an Emergency Service, report or complaint from the public or complaint from any other source. Flooding may also arise from a blockage or some other fault in drainage systems on adjoining properties or land which interfaces with the Trunk Road network drainage systems.
- 4.39.4 Where immediate repairs do not remove the flooding, the Operating Company shall erect flood warning signs where any or all of the situations referred to in paragraph 4.39.2 of this Part occur.
- 4.39.5 A flooding report in the format shown in Annex 7.1/D of this Part shall be completed for each occurrence of flooding and attached to the relevant Defect Record in the routine maintenance and management function of the Integrated Roads Information System within four days. Additional documentation such as photographs, reports and the results of further investigation shall also be attached.
- 4.39.6 The Operating Company shall carry out Detailed Inspections during periods of wet weather:
- (i) at known flooding Disruption Risk Sites, and
 - (ii) to identify other areas of flooding or evidence of flooding.

The Operating Company shall also carry out Detailed Inspections as necessary to identify any flooding reported as a result of an inspection, patrol, report from an Emergency Service, report or complaint from the public or complaint from any other source.

This is Annex 7.1/A to Schedule 7 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 1

MANAGEMENT, INSPECTION AND MAINTENANCE

ANNEX 7.1/A – Additional Local Requirements

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 1

MANAGEMENT, INSPECTION AND MAINTENANCE

ANNEX 7.1/A – Additional Local Requirements

All Safety Inspections and Detailed Inspections of geotechnical assets shall pay particular attention to the rock faces and slopes at the following locations:

A82 Invermoriston to Drumnadrochit – Sections 10885/80, 10885/60, 10885/30 and 10885/05,

A87 Dornie to Sheil Bridge – Sections 17405/00 and 17406/75,

A87 south of Kyle of Lochalsh – Section 17410/40,

A87 Druim nan Clohd – Section 17450/05.

This is Annex 7.1/B to Schedule 7 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 1

MANAGEMENT, INSPECTION AND MAINTENANCE

ANNEX 7.1/B – Trunk Roads Requiring Safety Patrols

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 1

MANAGEMENT, INSPECTION AND MAINTENANCE

ANNEX 7.1/B – Trunk Roads Requiring Safety Patrols

None

This is Annex 7.1/C to Schedule 7 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 1

MANAGEMENT, INSPECTION AND MAINTENANCE

ANNEX 7.1/C – Earthwork Monitoring Requirements

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 1

MANAGEMENT, INSPECTION AND MAINTENANCE

ANNEX 7.1/C – Earthwork Monitoring Requirements

Location	Frequency
A82 Loch Lochy	6-month visual/photographic survey to check gullies and preparation of annual report.
A83 Ardgarten to Rest and be Thankful	Monitoring of piezometers, tilt meters and debris fence and rainfall readings. Quarterly visual/photographic survey and preparation of annual report.
A83 Loch Shira (East of Inveraray)	Annual walkover and brief report.
A83 Cairndow	Annual walkover and brief report.
A85 Glen Ogle	6-month visual/photographic survey to check gullies and preparation of annual report.
A87 East Glen Shiel	6-month visual/photographic monitoring with Report as required.

This is Annex 7.1/D to Schedule 7 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 1

MANAGEMENT, INSPECTION AND MAINTENANCE

ANNEX 7.1/D – Flooding Report Sample

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 1

MANAGEMENT, INSPECTION AND MAINTENANCE

ANNEX 7.1/D – Flooding Report Sample

Flood report	
RMMS defect ID	12345-6789
CCMS OI No. (if applicable)	OI 55568
Emergency call Log ref (if applicable)	890123
Date: 20 December 2007	Approx Time of Incident: 16.30
Route: A101	
Link/Section/Chainage: 12345/67 Ch 1234	
Location: 600m north of junction with A123, northbound carriageway.	
Grid Ref or Link/Section/Chainage: 123456,123456	
Description of flood: Ponding over entire northbound carriageway.	
Cause of flood: Following heavy rain gullies 3 to 5 became choked with debris	
Sketch/ Photos:	
Immediate Action Taken: Flood signs erected on approach. Debris removed by hand.	
Proposed Action: Clean out gullies 3 to 5 and remove any further debris from vicinity.	
Proposed further investigations required: 3rd incident at same location in last 2 years. Carry out more frequency cyclic maintenance.	
Date of record:	Signed:

This is Annex 7.1/E to Schedule 7 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 1

MANAGEMENT, INSPECTION AND MAINTENANCE

ANNEX 7.1/E – Procedures for Accessing, Maintaining, Inspecting and Testing of Shared Electrical Apparatus

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 1

MANAGEMENT, INSPECTION AND MAINTENANCE

ANNEX 7.1/E – Procedures for Accessing, Maintaining, Inspecting and Testing of Shared Electrical Apparatus

1. Access and Isolation of Supply in Shared Electrical Equipment Cabinets

1.1 Where access to shared electrical equipment is required by any of the parties, it shall be undertaken in accordance with the following access procedure.

1.1.1 Access to any shared enclosure shall be only by the use of a standard triangular key. Under no circumstances shall additional locks be added other than to prevent danger. Should such additional locks be fitted, this must be a temporary arrangement and in this situation:

- (i) all parties shall be correctly and immediately informed as to the reason,
- (ii) agreed emergency attendance procedures to carry out isolation must be in place, and
- (iii) warning labels with contact details shall be affixed to the external door of the enclosure.

1.1.2 Should one of the parties sharing the equipment enclosure require access to a shared enclosure to undertake work on a circuit served from that cabinet or pillar, that party shall firstly ensure that the circuit can be isolated for the expected period of the work without any detrimental effect on other parties. Once this has been ascertained, the circuit shall be isolated by the party using a correctly rated isolating device such as an in-circuit switch-disconnector or other suitably rated protective device such as a double-pole miniature circuit breaker. The device chosen shall then be physically locked in the off (open) position using a unique key, held only by the part responsible, in such a way as to prevent inadvertent re-energisation of the isolated circuit.

NOTE: The method of disconnection and prevention of inadvertent re-energisation shall satisfy the requirements of Regulations 12 and 13 of the *Electricity at Work Regulations 1989*. The Health and Safety Executive publication *HSG85 'Safe working Practices'* gives further relevant guidance.

1.1.3 Circuits that are taken out of service under paragraph 1.1.2 shall have a warning label attached to the relevant circuit isolating device indicating 'caution'. At the point of work, further notices shall be displayed adjacent to the isolated circuit. Where adjacent circuits remain energised at the point of work, a 'danger' notice at the point of work shall be displayed on those live circuits. All notices shall clearly state the work being done on the circuit, the person carrying out the work, contact details, telephone number, employing organisation and the like.

1.1.4 Only the circuits isolated and being worked on should be labelled within the cabinet. Where a complete cabinet is isolated, this shall be indicated by means of warning labels attached to both the exterior and interior of the cabinet. Unless isolation is to

prevent immediate danger, full agreement must be obtained by all the sharing parties. All notices shall clearly state the work being done on the circuit, the person carrying out the work, contact details, telephone number, employing organisation and the like.

- 1.1.5 In the event that the party working on the circuit is unable to complete the work and this results in the continued isolation of a specific circuit or circuits, a laminated message board shall be left in the cabinet or pillar indicating that under no circumstances should these circuits be re-energised without first contacting that party, whose telephone number shall be shown on the message board. Additionally, the party working on the circuit shall inform the contact person of the other party as quickly as possible of the situation and provide an indication of the work required to be undertaken and the likely time for completion.

2. Maintenance, Inspection and Testing of Shared Electrical Equipment

2.1 Responsibility for Maintenance

- 2.1.1 Where shared electrical equipment is situated outwith the Unit, the local roads authority is responsible for remedial and cyclic maintenance except where the equipment is located on a road section on which new works by others is in progress or the road section is covered by previous maintenance arrangements arising from such works.

At junctions in remote areas where there is no local roads authority lighting, maintenance of the Trunk Road lighting network shall be extended into the local road by the Operating Company to ensure a safe level of illumination at the junction.

2.2 Inspection

- 2.2.1 Any of the sharing parties can undertake visual inspections of shared electrical equipment at any time, irrespective of the location of such equipment and without notification. This inspection shall not involve operation of any shared disconnection or protection devices relating other parties' equipment. Under the terms of British Standard 7671, this shall be considered as the non-intervention part of Routine Checks – see British Standard 7671:2008 and associated *Guidance Note 3*.
- 2.2.2 Where such an inspection identifies defective equipment located within the area of responsibility of the party undertaking the inspection, that party shall undertake any appropriate repairs, having informed the responsible party in writing of the nature, extent and timing of such repairs.
- 2.2.3 Where such an inspection identifies defective equipment located outwith the area of responsibility of the party undertaking the inspection, that party shall inform the responsible party in writing of the nature of the Defect. The party responsible for maintenance of the equipment shall then undertake any appropriate repairs, informing the other party of the nature, extent and timing of such repairs.

2.3 Testing

- 2.3.1 Electrical testing as described in Annex C to TD23/99 of the *Design Manual for Roads and Bridges* shall be undertaken jointly by both the local authority and the Operating Company.

2.3.2 The timing of such testing shall follow the existing timetables used by the local authority. The Operating Company shall be responsible for liaising with the local authority regarding the timing of such tests.

SCOTTISH MINISTERS' REQUIREMENTS

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

1. WINTER SERVICE GENERAL

1.1 General

1.1.1 The Winter Service Period commences on 1 October and finishes on 15 May in each Annual Period.

During the Winter Service Period, the Operating Company shall prevent snow or ice from remaining on Trunk Roads in accordance with the requirements of this Part.

1.1.2 The Operating Company shall provide all resources, including depots (except where stated elsewhere in this Contract), materials, labour and Winter Service Plant to meet all winter weather conditions and deliver the level of Winter Service required to fulfil its obligations under this Contract.

1.1.3 The resources identified in Annex 7.2/J of this Part are the minimum provisions and shall not be construed as representing all resources required by the Operating Company to fulfil its obligations for the Winter Service.

1.1.4 The Operating Company shall ensure resources are available to provide and maintain the Winter Service if winter conditions occur outwith the Winter Service Period.

1.1.5 The Operating Company shall assist the Director in the preparation of an annual Winter Service publicity leaflet. Distribution in the first instance will be via Transport Scotland's website. However, the Operating Company shall carry out its distribution to:

- (i) filling stations,
- (ii) motorist service centres,
- (iii) motoring organisations,
- (iv) libraries, and
- (v) other public and private distribution outlets,

as required within the Unit.

1.1.6 Subject to an Order, the Operating Company shall execute Winter Service Operations in support of the Mutual Aid arrangements.

1.2 Winter Service Plan

1.2.1 The Operating Company's Winter Service Plan shall comprise the Operating Company's proposals and approach for delivering the Winter Service in any Winter Service Period to meet the requirements of this Contract.

1.2.2 The Operating Company's Winter Service Plan shall comply with the requirements of Transport Scotland's *Manual for the Management of the Risk of Unplanned Network Disruption* and be included within the Operating Company's Disruption Risk Management Plan as stated in Schedule 7 Part 3.

- 1.2.3 The Operating Company shall prepare its Winter Service Plan in accordance with the structure in Annex 7.2/A and include the details required by Annex 7.2/J of this Part.
- 1.2.4 The Operating Company shall also include the following details in its Winter Service Plan:
- (i) liaison arrangements to ensure the coordination of Winter Service Operations at the boundaries of the Unit,
 - (ii) arrangements for the management of strategic salt supplies,
 - (iii) Mutual Aid arrangements with other operating companies or local authorities,
 - (iv) its response times for mobilising Winter Service Plant and such other resources as shall be required to meet the requirements of this Part,
 - (v) rosters detailing the availability of all Operating Company staff required to provide the Winter Service throughout the Winter Service Period. The rosters shall include names, addresses and telephone numbers of the staff listed,
 - (vi) proposed arrangements for safe clearing of all roads within the Unit when they are covered in snow or ice,
 - (vii) the type, location and procedures for the operation of snow gates in each Winter Service Plan,
 - (viii) the arrangements for re-opening roads and snow gates within its Winter Service Plan, and
 - (ix) processes and procedures for deciding when it is unsafe to continue with, or commence, clearing Operations.
- 1.2.5 When preparing its Winter Service Plan, the Operating Company shall consult the Emergency Services, adjacent local authorities and their agents, other operating companies and other interested parties.
- 1.2.6 Not later than 30 days prior to the end of the Mobilisation Period, the Operating Company shall prepare and submit to the Director for his written consent, its Winter Service Plan for the period between the Commencement of Service Date and midnight on 15 May in the first Annual Period.
- 1.2.7 Prior to 31 July of each Annual Period, the Operating Company shall prepare and submit to the Director for written consent its Winter Service Plan for the forthcoming Winter Service Period.
- 1.2.8 Once consented to by the Director, the Operating Company's Winter Service Plan shall be incorporated into the Operating Company's Management System.
- 1.2.9 The Operating Company shall ensure its Winter Service Plan is kept under review prior to and during the Winter Service Period and any amendments required to accommodate changes in resource levels and the like shall be made. The Operating Company shall submit its amended Winter Service Plan to the Director for written consent. When consented to, the Operating Company's amended Winter Service Plan shall be incorporated into its Management System.

- 1.2.10 Prior to the commencement of each Winter Service Period, the Operating Company shall provide one controlled Electronic Copy of each approved Winter Service Plan to:
- (i) the Director,
 - (ii) the Performance Audit Group,
 - (iii) the Emergency Services,
 - (iv) adjacent local authorities and their agents, and
 - (v) other operating companies.

1.3 Monitoring and Reporting

- 1.3.1 The Operating Company shall support the Director in the operation of the Scottish Salt Group as required. For the purposes of this Part, the "Scottish Salt Group" includes representatives from the Society of Local Authority Chief Executives (SOLACE), the Society of Chief Officers of Transportation in Scotland (SCOTS), Convention of Scottish local Authorities (COSLA) and Transport Scotland. Its function is to monitor local authority and Trunk Road operator's salt returns, identify pressure points, arrange Mutual Aid, input to the United Kingdom Salt Cell, liaise with salt suppliers, provide salt conservation guidance, identify alternative salt suppliers and identify alternative de-icers.
- 1.3.2 The Operating Company shall provide the Director when requested with daily or weekly salt stock monitoring reports. Monthly salt stock monitoring reports shall be produced and submitted to the Director on the first Working Day of each month during the Winter Service Period.
- Such reports shall detail salt stocks held, supply arrangement within the Unit, salt usage and include a position statement on salt stocks, actual and imminent salt orders and a forecast of forward usage. The salt stock monitoring report shall be in accordance with the structure shown in Annex 7.2/L of this Part.
- 1.3.3 No later than 31 May in each Annual Period, the Operating Company shall prepare a Winter Service Report on the Winter Service Plan and Winter Service Operations for the previous Winter Service Period, for review by the Director and the Performance Audit Group. The Winter Service Report shall help to inform the Director and the Operating Company about the improvements required for the next Winter Service Plan. The Winter Service Report shall be in accordance with the structure shown in Annex 7.2/B of this Part.
- 1.3.4 Prior to 31 May of the first Annual Period, the Operating Company shall prepare a Winter Service Report and submit it to the Director for the Winter Service Period ending 15 May in the first Annual Period.
- 1.3.5 To assist in the preparation of this Winter Service Report, prior to the Commencement of Service Date the Director shall provide the Operating Company with the Winter Service Plan prepared by the previous operating company and details of the Winter Service provided by it.
- 1.3.6 An annual review meeting between the Operating Company and the Director shall take place 10 Working Days after each annual Winter Service Report has been submitted to the Director, to consider the findings.

- 1.3.7 Prior to 31 May of the Final Annual Period, the outgoing Operating Company shall provide its Winter Service Plan and Winter Service Report for the final Winter Service Period to the Director to be passed to the incoming operating company.
- 1.3.8 During the Winter Service Period, the Operating Company shall produce daily reports on planned and actual treatments for each precautionary treatment route and each Winter Service Patrol route. These reports shall be recorded in an electronic format and shall include:
- (i) summary forecast and actual weather data,
 - (ii) planned and actual spread rates,
 - (iii) planned and actual commencement times,
 - (iv) completion times,
 - (v) amount of de-icing material spread and the cumulative amount spread during the current Winter Service Period,
 - (vi) plough usage,
 - (vii) number of treatment days (capability) of de-icing material available for each depot based on six treatments per route per day at 20 grammes per square metre,
 - (viii) the weather forecast accuracy, and
 - (ix) any other relevant information.

The Operating Company shall upload its daily report on planned treatments onto the Traffic Scotland website by 15:00 hours each day during the Winter Service Period.

For each operative, a log of hours spent on "call out" or "standby" shall be kept in accordance with the documented procedures in the Operating Company's Management System.

- 1.3.9 Throughout the Winter Service Period, a daily report shall be produced by the Operating Company. Such report shall be in an electronic format, agreed with the Director, based on information taken directly from the spreading vehicles' data logging and reporting system. The Operating Company shall upload the information onto the Traffic Scotland website by 15:00 hours each day.

1.4 Basic Facility

- 1.4.1 Operatives of Winter Service Plant shall hold current recognised qualifications and shall have the skills and experience to operate such Plant safely.
- 1.4.2 The Operating Company shall ensure that sufficient operatives shall be available at all times to provide the Winter Service Operations and to meet the required response times.
- 1.4.3 The Operating Company shall ensure that, throughout each Winter Service Period, sufficient trained operatives are available for each item of front line and reserve Winter Service Plant and each item of loading Winter Service Plant such that up to 24 hours per day working can be carried out.
- 1.4.4 The Operating Company shall ensure that, throughout the Winter Service Period, sufficient resources are available to minimise disruption to Winter Service

Operations caused by breakdown or any other similar circumstance and that Winter Service Operations are not delayed.

- 1.4.5 The Operating Company shall arrange for the necessary repairs to be carried out without delay unless such repair compromises delivery of the Winter Service, in which case the Operating Company shall mobilise the reserve Winter Service Plant to meet the required response times. The Operating Company shall ensure that repairs are carried out to main fleet vehicles without delay while the reserve fleet is operational.
- 1.4.6 A system that allows spoken communication with other Winter Service Plant operatives and the Winter Service Duty Officer shall be fitted in all Winter Service Plant. Such system shall be effective at all times and within all parts of the Unit including the location of the Winter Service Duty Officer.
- 1.4.7 Prior to 1 October in each Annual Period, the Operating Company shall:
- (i) drive the whole length of each precautionary treatment route in the Winter Service Plant to be used for the precautionary treatment of such route at speeds not exceeding those required for such precautionary treatment, and
 - (ii) fit and remove the plough to all Winter Service Plant so equipped,
- in order to ensure its operatives are familiar with the route and plant to be used.
- 1.4.8 Records of the requirements of paragraph 1.4.7 including details of:
- (i) time taken from depot to start of treatment route,
 - (ii) time taken to travel the route,
 - (iii) time taken to travel the treated route,
 - (iv) time taken to fit the plough,
 - (v) any problems encountered and actions taken to resolve them,
 - (vi) proposed longer term solutions to prevent recurrence of such problems, and
 - (vii) any other relevant information,
- shall be held electronically by the Operating Company in accordance with the documented procedures in its Management System.

2. WINTER SERVICE MANAGEMENT

2.1 Equipment and Services

- 2.1.1 The Operating Company shall provide the following to assist with its decision making process:
- (i) an expert weather forecasting service,
 - (ii) a computerised road weather information system including hardware, software and telecommunication links required to obtain, interpret and display as a minimum:
 - (a) road sensor data (forecast and actual),

- (b) historical thermal maps (where these are available, they shall be provided to the Operating Company by the Director but these will not be up to date),
- (c) weather data,
- (d) weather camera images, and
- (e) other relevant information,

in a manner that predicts trends in weather and road conditions.

2.1.2 The computerised road weather information system ("the system") shall be accessible to the expert weather forecasting service and shall be able to accept road sensors, mobile road sensors, alarms and action logs additional to those listed in Annex 7.2/G of this Part.

The Operating Company shall be responsible for the provision of everything within the system with the exception of road sensors, weather cameras and historical thermal maps.

No later than 30 days prior to the end of the Mobilisation Period, the Operating Company shall submit its proposed system to the Director for his written consent. If consent is not given, the Operating Company shall submit a revised system for approval within 10 Working Days of consent being refused.

2.1.3 The system shall have suitable computer terminals and software for the display of weather related radar information from the expert weather forecasting service. Such information shall be accessible to the Operating Company at all times during the Winter Service Period to assist in the Winter Service decision making process.

2.2 Other Provisions

2.2.1 The Operating Company shall provide and maintain all telecommunication links to meet the requirements of this Schedule.

2.2.2 All road sensors and weather prediction equipment shall use an open protocol based upon the Department for Transport *TR2020C* protocol.

Updated protocols may be used, but only where open access of the protocol is available to the Director to enable access to such protocol to other providers of equipment or service.

For new and replacement weather stations, open protocol shall be provided at outstation level to ensure full functionality is available to other providers of equipment or service.

2.2.3 To obtain regular updates of road conditions, road sensors shall be polled by the Operating Company at intervals of 20 minutes between 1 October and 15 May and hourly at all other times. All collected weather station data shall be delivered to the Traffic Scotland Service website in a format agreed with the Director.

2.2.4 The Operating Company shall ensure that all cameras are operational throughout each Annual Period and as a minimum weather camera images shall be updated every 10 minutes. These images shall be delivered to the Traffic Scotland website in a format agreed with the Director.

2.2.5 The Operating Company shall hold welfare kits and shall distribute these in the event of a Critical Incident as defined in Schedule 7 Part 3 which involves stranded

vehicles. The welfare kits shall be carried by all frontline and reserve Winter Service Plant and shall as minimum include 24 space blankets, 24 bottles of water and 24 energy bars.

2.3 Winter Service Duty Officer

2.3.1 The Winter Service Duty Officer shall be authorised by the Operating Company to take decisions and to issue instructions on behalf of the Operating Company for implementing and directing the Winter Service and shall take such decisions and issue such instructions as are required. The Winter Service Duty Officer shall be on duty in the control room whenever Winter Service Operations are planned. The Winter Service Duty Officer shall keep all Records relating to each decision made.

2.4 Decision Making Processes

2.4.1 During the Mobilisation Period, the Director shall provide road sensor data and historical thermal maps where available to the Operating Company.

2.4.2 During the Winter Service Period, the Operating Company shall monitor and interpret:

- (i) weather forecasts,
- (ii) Trunk Road conditions,
- (iii) data from road and mobile road sensors,
- (iv) the computerised road weather information system,
- (v) weather and Traffic Scotland cameras, and
- (vi) historical thermal maps when provided by the Director,

to ensure that the Winter Service Duty Officer receives and monitors climatic and road information to assist in the decision making process and in taking appropriate actions.

2.4.3 When snow or ice is forecast, action shall be taken by the Operating Company to keep the Trunk Roads in safe condition based, on its Winter Service Plan.

2.4.4 Following any precautionary treatment undertaken by the Operating Company, the Winter Service Duty Officer shall continue to monitor the weather forecasts and the actual weather conditions, including reports from Winter Service Patrols and data from the computerised road weather information system, to determine the ongoing effectiveness of the treatment and to instruct further treatment when this shall be required.

This shall be particularly important in situations where:

- (i) precipitation is forecast or has occurred that may reduce the effectiveness of a treatment, or
- (ii) the trend data from the computerised road weather information system changes from that predicted.

Where the information available to the Winter Service Duty Officer requires a review of the ongoing effectiveness of any precautionary treatment that has been undertaken, in terms of the ability of residual levels of de-icing material remaining on any pavement surface to deal with forecast or actual weather conditions, the Winter

Service Duty Officer shall arrange for further precautionary treatment to be carried out.

2.5 Winter Service Exercises

2.5.1 The Operating Company shall carry out Winter Service "snow desk" exercises prior to 1 November of each Winter Service Period. Such exercises shall be based on scenarios provided by the Director and shall serve to test the effectiveness of the Operating Company's proposed Winter Service personnel.

2.5.2 The Operating Company shall assess its own performance and it shall also be assessed by the Director and the Performance Audit Group. In the event that the performance is deemed unsatisfactory by any party, the Operating Company shall be required to take remedial action to improve demonstrably the effectiveness of the Winter Service personnel.

2.6 Liaison and Communication

2.6.1 During the Winter Service Period, the Operating Company shall report the known effects of such conditions to the Traffic Scotland Operator. The Operating Company shall liaise closely with:

- (i) Transport Scotland,
- (ii) the Police,
- (iii) the Traffic Scotland Operator,
- (iv) adjacent local road and road authorities, and
- (v) adjacent Trunk Road operators,

to monitor adverse winter weather and travelling conditions and ensure that its Winter Service Plan for provision of Winter Service at boundary interfaces is implemented.

2.6.2 When Winter Service Operations are planned, the Operating Company shall notify electronically, the organisations referred to in paragraph 2.6.1 of this Part, to inform them of such Operations and, when appropriate, to request that messages be displayed on all relevant electronic warning systems and variable message signs.

2.6.3 The Police may supply information to the media regarding Trunk Road travelling conditions during periods of Severe Weather.

2.7 Winter Service Patrols

2.7.1 From 1 November to 31 March inclusive, the Operating Company shall carry out Winter Service Patrols on those sections of Trunk Roads identified in Annex 7.2/C of this Part.

2.7.2 Category A and Category B Winter Service Patrols are identified in Annex 7.2/C of this Part.

2.7.3 All Winter Service Patrol vehicles shall comprise a pre-wet spreader with a minimum capacity of six cubic metres and with full functionality that meets the requirements of the Specification.

2.7.4 When the road surface temperature for any climatic area within a Winter Service Patrol route is forecast at any time to be less than, or equal to, three degrees centigrade, a Winter Service Patrol shall be enacted.

2.7.5 Winter Service Patrols shall:

- (i) patrol all carriageways of Trunk Roads, excluding slip roads,
- (ii) report on road conditions encountered to, and take instruction on treatments from, the Winter Service Duty Officer,
- (iii) provide an immediate response when instructed to carry out treatments or other de-icing Operations by the Winter Service Duty Officer,
- (iv) deal with any situation on the Winter Service Patrol route requiring immediate attention,
- (v) pay particular attention to the areas identified in Annex 7.2/F of this Part,
- (vi) undertake short stops for minor maintenance such as clearing grips and removing debris, and
- (vii) provide daily reports in the format indicated in Table 7.2.J.3 of Appendix WSP1 to Annex 7.2/J of this Part.

Where any situation on the Winter Service Patrol route cannot be resolved by any of the actions described in this paragraph, the Operating Company shall deploy additional resources to resolve the situation. Where any Incident occurs within the Unit, but outwith the Winter Service Patrol route, the Operating Company shall deploy additional resources to manage the Incident.

2.7.6 When, during a patrol, ice is found to have formed on a major Structure, the Operating Company shall use salt at the minimum rate specified in Table 7.2.K.4 of this Part as a spot treatment. If additional treatment is required, potassium acetate shall be used.

2.7.7 The Operating Company shall monitor the operation of Winter Service Patrols and take any action necessary to ensure that they comply with the requirements of this Part.

2.7.8 Winter Service Plant for Winter Service Patrols shall be fully loaded with de-icing material at the commencement of the Winter Service Patrol.

2.7.9 Category A Winter Service Patrols shall operate from 02:00hrs to 10:00hrs at two hourly intervals as described in paragraph 2.7.10 of this Part and shall be designed such that each Winter Service Patrol alternates between a one hour patrol and a one hour stand by on each route. All patrol routes shall be completed within one hour of commencement.

The routes for a mix of dual and single carriageways shall be further designed so that the patrol vehicle, when working, is able to attend any location on its route within 45 minutes of receiving a call from the Winter Service Duty Officer.

2.7.10 Operating periods for Category A Winter Service Patrols shall be between 02:00hrs and 04:00hrs, 04:00hrs and 06:00hrs, 06:00hrs and 08:00hrs and 08:00hrs and 10:00hrs.

2.7.11 Category B Winter Service Patrols shall operate from 00:00hrs to 09:00hrs at three hourly intervals. Operating periods for Category B Winter Service Patrols shall be between 00:00hrs and 03:00hrs, 03:00hrs and 06:00hrs and 06:00hrs and 09:00hrs.

- 2.7.12 Winter Service Patrols shall allow for rest periods, patrolling both sides of dual carriageways and motorways and all actions required in accordance with paragraph 2.7.5 of this Part.
- 2.7.13 Winter Service Plant for Winter Service Patrols shall not be used by the Operating Company for undertaking precautionary treatments.
- 2.7.14 Winter Service Plant for Winter Service Patrols shall be used by the Operating Company for the clearance of snow or ice. Such usage shall only take place where it does not conflict with its primary function, or when the extent of the snowfall requires it to be used for snow clearing on the patrol route.

2.8 Airwave Communications

- 2.8.1 Category A and Category B Winter Service Patrols shall use an encrypted digital radio communications system known as Airwave. The Operating Company shall utilise this equipment as a dedicated communication system between Category A and Category B Winter Service Patrol personnel, the Traffic Scotland Control Centre, the Winter Service Duty Officer and the police.
- 2.8.2 In order to carry out the services required, the Operating Company shall be required to apply for, acquire and operate a TETRA Encryption Algorithm 2 sub-user licence for use with this communication system. The Operating Company shall be solely responsible for the procurement of, and conforming to any conditions of, this licence.
- 2.8.3 The Operating Company shall comply with the various codes of practice that apply to this type of licence. These codes, guidance on the Airwave sharers list and TETRA Encryption Algorithm 2 licensing are available from the Ofcom website at <http://licensing.ofcom.org.uk/radiocommunication-licences/business-radio/guidance-for-licensees/airwave-emergency-services/airwave/>.
- 2.8.4 The Operating Company shall develop an approved code of practice for the use of Airwave in compliance with Traffic Scotland Airwave Users Guide/Operating Protocols and Procedures.
- 2.8.5 The Operating Company shall indemnify the Director against any claims arising as a result of negligence or any other action on its part, relating to the use, storage and compliance of Airwave equipment and the Operating Company's TETRA Encryption Algorithm 2 sub-user licence.

2.9 Areas Requiring Special Attention

- 2.9.1 Areas requiring special attention are described in Annex 7.2/F of this Part and are areas where frost or ice is prone to occur, where water run-off is likely to happen or where the gradient is likely to affect the traction of vehicles.
- 2.9.2 The Operating Company shall review the areas requiring special attention referred to in Annex 7.2/F of this Part at least once in each Annual Period and amend the list as it considers necessary.

2.10 Road Closures

- 2.10.1 The Police are responsible for taking decisions to close roads during periods of adverse weather or road conditions.

When the Police, in consultation with the Operating Company, consider that the road is unsafe for vehicular traffic, the Operating Company shall arrange with the Police

to close the road(s) and, if applicable, snow gates listed in Annex 7.2/G of this Part as considered necessary following such consultation.

2.10.2 The Operating Company shall liaise with the Police to establish and carry out procedures for the operation of snow gates, including checking that no vehicles or pedestrians are trapped on sections of Trunk Road between closed snow gates.

The procedures shall include:

- (i) manning the gates until a Police search of the road between the gates has been undertaken,
- (ii) securing the gates, having ascertained that no-one has been trapped between them,
- (iii) withdrawing all Operating Company personnel except those involved in the clearance of snow, and

agreeing the method of securing snow gates.

The Operating Company shall discuss and agree with the Police a standard type of padlock and suitable number of keys for the snow gates within the Unit. The Operating Company shall also agree with the Police on the number of keys to be held by each organisation. Two of the Operating Company's keys shall be held at the depot nearest to each snow gate. The Winter Service Duty Officer shall ensure that the keys are kept safely at all times and that they are returned to the depot in the event that they are taken out by the Operating Company in the course of its Winter Service Operations.

The Operating Company shall include the type, location and procedures for the operation of snow gates in each Winter Service Plan.

The Operating Company shall advise the Police when it considers that the road can be re-opened safely and shall arrange with the Police to re-open the road. The Operating Company shall document the arrangements for re-opening roads and snow gates within its Winter Service Plan.

2.10.3 When the Operating Company intends to close a snow gate, it shall immediately notify the Traffic Scotland Operator by telephone.

2.10.4 The Operating Company shall immediately notify the Traffic Scotland Operator by telephone following a Critical Incident which has caused or will cause significant disruption to traffic flow.

2.10.5 The Operating Company shall comply with the requirements of Schedule 7 Part 3 regarding notification of Critical Incidents to the Director and Performance Audit Group.

2.10.6 A written report shall be submitted to the Director by email within 12 hours of snow gates being closed due to snow or other adverse weather, giving details of:

- (i) the reason for closing the gates,
- (ii) the time that the gates were closed,
- (iii) the time that the gates were re-opened or are likely to be re-opened,
- (iv) any action to be taken prior to re-opening the gates,
- (v) stranded motorists, if any, and

(vi) any other relevant information.

2.10.7 Following the closure of snow gates, snow clearing Operations shall continue on the section of Trunk Road between the gates as weather conditions permit, to allow the earliest possible re-opening of the Trunk Road.

2.10.8 The Operating Company shall inspect snow gates annually prior to the commencement of the Winter Service Period and shall, subject to an Order, undertake Operations to ensure they are functional and of effective appearance throughout the Winter Service Period.

2.11 Snow Fences, Shelter Belts and Snow Poles

2.11.1 The locations of existing snow fences and snow poles are provided in Annex 7.2/G of this Part.

2.11.2 During the first Annual Period, the Operating Company shall review the need for snow fences, shelter belts and snow poles on the Unit and, where it considers that alterations to existing provisions are necessary, the Operating Company shall make recommendations in writing for the Director's consent.

2.11.3 The Operating Company's recommendations for erection of additional snow fences, creation of additional shelter belts and erection of additional snow poles shall be included in each Winter Service Report.

2.11.4 On receipt of an Order, the Operating Company shall design and erect snow fences in accordance with the recommendations set out in Transport and Road Research Laboratory *Report LR 362 "Snow Fences"* by L E Hogbin dated January 1970, unless otherwise consented to in writing by the Director.

2.11.5 On receipt of an Order, the Operating Company shall supply and erect snow poles.

2.11.6 The Operating Company shall inspect snow fences and snow poles annually prior to the commencement of the Winter Service Period and shall, subject to an Order, undertake Operations to ensure they are functional and of effective appearance throughout the Winter Service Period.

2.12 Salt Bins

2.12.1 During each Winter Service Period, the Operating Company shall maintain as a minimum the salt bins at the locations stated in Annex 7.2/G of this Part.

2.12.2 The Operating Company shall review the current locations of salt bins and consider provision of additional locations to improve the Winter Service. It shall make appropriate recommendations in each Winter Service Report.

2.12.3 By 30 September each year, salt bins shall be provided and placed by the Operating Company at the locations identified in Annex 7.2/G of this Part. Throughout the Winter Service Period the Operating Company shall:

(i) replenish the salt bins with salt to ensure that a sufficient supply is always available for public use,

(ii) replace damaged, vandalised or missing salt bins within 48 hours of the damage, vandalism or absence becoming known by the Operating Company, and

(iii) at the end of each Winter Service Period, collect and take all salt bins to the Operating Company's depots for storage.

Before storage, the Operating Company shall empty and wash the salt bins and grease their hinges.

2.13 Hidden Message Signs

2.13.1 Hidden message signs are provided at the locations referred to in Annex 7.2/G of this Part.

2.13.2 The Operating Company shall open, or erect and open, snow or ice hidden message signs before the start of each Winter Service Period, or as conditions require, to provide information for weather and road conditions during the Winter Service Period.

2.13.3 The Operating Company shall liaise with the Police to coordinate the activation of relevant signs when closing roads.

2.14 Records

2.14.1 The Operating Company shall complete and keep daily Records for Winter Service requirements as referred to in Annex 7.2/H of this Part. The Records shall be held electronically and have a remote access facility available to both the Director and the Performance Audit Group. The format of these Records shall be in accordance with the documented procedure in the Operating Company's Management System as it relates to the Winter Service. Data transmitted from the Winter Service Plant shall be received and stored in accordance with clause 2804AR of the Specification.

3. WINTER SERVICE TREATMENTS

3.1 Precautionary Treatment

3.1.1 The Operating Company shall undertake such precautionary treatment as is required.

3.1.2 The Winter Service Duty Officer shall instruct the commencement time and the spread rates for precautionary treatment Operations.

3.1.3 The total width of carriageway areas including:

- (i) slip roads,
- (ii) hardshoulders,
- (iii) hard strips,
- (iv) turning Lanes,
- (v) central reserve crossovers,
- (vi) contiguous lay-bys,
- (vii) bus bays,
- (viii) cycle Lanes, and
- (ix) hatched areas,

shall receive precautionary treatments.

3.1.4 The Operating Company shall ensure that precautionary treatments for carriageways with negative texture surfaces shall be applied as close as is practical to the time road surface temperatures are forecast to be at less than, or equal to, plus one degree centigrade.

- 3.1.5 The Operating Company shall provide precautionary treatment for carriageways in the Unit when road surface temperatures fall, or are forecast to fall, to less than, or equal to, plus one degree centigrade or when snow conditions are forecast.
- 3.1.6 During precautionary treatments, all Winter Service Plant shall be driven in a manner appropriate to the prevailing weather conditions, and within the speed limit, but not exceeding 40 miles per hour.
- 3.1.7 On single carriageways, de-icing material shall be spread across the full width of the carriageway in a single pass.
- 3.1.8 A spreading vehicle shall not be used to treat a carriageway of more than three Lanes in a single pass. If the width of carriageway to receive de-icing treatment is greater than three Lanes, de-icing treatment shall be carried out either with two passes of the spreading vehicle or by the use of a second spreading vehicle.
- Spread patterns shall be adjusted to suit the carriageway width and the Lane in which the spreading vehicle is travelling.
- The completion times shall be in accordance with the required response times and shall be deemed to apply to the whole width of the carriageway.
- 3.1.9 Trunk Roads with temporary traffic management, including contra-flow running, may require the Operating Company to amend a treatment route.
- Particular care shall be taken by the Operating Company to ensure that all Lanes and contra-flow crossovers are adequately treated with de-icing material prior to removal of temporary traffic management and reopening to traffic.
- 3.1.10 Potassium acetate may be used as a precautionary treatment in specific circumstances, for example where Structures are susceptible to corrosion or when salt treatments are not fully effective (such as during extremely cold conditions).
- 3.1.11 Potassium acetate shall be applied at the locations specified in Annex 7.2/I of this Part including those parts of the Trunk Road 200 metres beyond the ends of each bridge.
- 3.1.12 The Operating Company shall monitor and manage variable road and weather conditions that may occur after precautionary treatments have been completed.
- 3.1.13 Precautionary treatment routes shall be designed to enable completion of treatment routes within two hours of commencement of the treatment in a single pass, except where the requirements detailed in paragraph 3.1.9 of this Part apply.
- 3.1.14 Precautionary treatments shall be carried out on Category A footways at locations identified in Annex 7.2/E of this Part when road surface temperatures are forecast to fall to less than, or equal to, plus one degree centigrade or when snow conditions are expected.
- 3.1.15 Precautionary treatment for footways, footbridges and cycling facilities shall be carried out as a separate Operation from carriageway precautionary treatments, utilising equipment suitable for the purpose.
- 3.1.16 The minimum spread rate for anti-icing materials for precautionary treatments to footways, footbridges and cycling facilities shall be 20 millilitres per square metre of brine with a minimum concentration of 20 percent. Actual treatment levels shall be discussed and agreed with the relevant local authorities.

- 3.1.17 The total width of footways, footbridges and cycling facilities shall be treated.
- 3.1.18 The Operating Company shall use pre-wetted salt in accordance with the Specification for precautionary de-icing treatments on all carriageway treatment routes in the Unit. Details of the Operating Company's proposals for such use shall be provided as shown in Table 7.2.J.4 of Appendix WSP2 to Annex 7.2/J of this Part and in each Winter Service Plan.

The Operating Company may, within its Winter Service Plan, propose the use of dry salt in accordance with the requirements of Table 7.2.K.2 of this Part to enable the effective de-icing of carriageway and footway treatment routes during certain weather conditions.

3.2 Response Times

- 3.2.1 Notwithstanding the requirements of paragraph 2.7 of this Part, when an immediate response is required for snow or ice clearance or other de-icing Operations, the Operating Company shall mobilise and commence its treatment within one hour of the Winter Service Duty Officer's decision.
- 3.2.2 When a planned response is required for precautionary treatment, the Operating Company shall mobilise and commence precautionary treatments to ensure completion before snow or ice conditions are predicted to occur, as indicated by the expert weather forecasting service.
- 3.2.3 For immediate or planned responses, the Operating Company shall complete treatment within two hours from the commencement of the treatment. Where normal access is prevented due to weather related or other Incidents, the Operating Company shall mobilise within one hour of becoming aware of the Incident and shall complete the precautionary treatment within three hours.
- 3.2.4 Cycling facilities within urban areas shall be considered Category C footways. The Operating Company shall identify such cycling facilities in each Winter Service Plan.
- 3.2.5 Category D footways, footbridges and cycleways are those not listed as being in Category A, B or C and shall receive treatment when required by the Director. The Operating Company shall identify Category D facilities in each Winter Service Plan.

3.3 Snow and Ice Clearance

- 3.3.1 Design of the ploughing route shall be in accordance with the requirements of Annex 7.2/D of this Part.
- 3.3.2 The Operating Company shall provide details in its Winter Service Plan of its ploughing routes in the form shown in Table 7.2.J.5 of Appendix WSP2 to Annex 7.2/J of this Part.
- 3.3.3 Spreading of de-icing materials during ploughing of carriageway areas shall be at the rate of spread instructed by the Winter Service Duty Officer.
- 3.3.4 The plough blade shall be set as close to the road surface as is consistent with the removal of the maximum amount of snow. The Operating Company shall ensure that the design of the plough blade allows for such use while preventing damage to the road surface, other equipment on the road surface and the plough blade.
- 3.3.5 The total width of carriageway as described in paragraph 3.1.3 of this Part shall be cleared of snow or ice.

3.3.6 In the event that treatment is required to lay-bys which are remote from the carriageway, this shall be the subject of an Order.

3.3.7 When planning and carrying out snow or ice clearance, the Operating Company shall pay particular attention to the layout of the carriageway in terms of the overall number of Lanes and the location of entrance and exit slip Lanes.

Snow or ice clearance of slip roads shall be coordinated with main carriageway clearance.

A clear path shall be kept open between those entry and exit points where frequent Lane changes are necessary.

3.3.8 On dual carriageway and multi-Lane motorway Trunk Roads:

- (i) the Operating Company shall use echelon ploughing to clear the carriageway when required,
- (ii) echelon ploughing shall be undertaken by two or more vehicles, a minimum of one of which shall be front line Winter Service Plant, all moving in the same direction, one behind each other, on adjacent Lanes,
- (iii) only the right hand Lane may be ploughed towards the central reservation,
- (iv) irregular windrows caused by ploughing passes, especially those which weave from one Lane to another, shall be avoided,
- (v) Lanes shall be completely cleared and the windrows of snow remaining shall form a smooth and continuous line without sudden encroachments into the cleared path,
- (vi) windrows may be temporarily left on hard shoulders but these shall be cleared as soon as road surface conditions on running Lanes are safe, and
- (vii) clearance work shall proceed continuously until no snow remains on the carriageway.

During and after prolonged falls of snow, ploughing shall be used continuously from the onset of snow to prevent snow build up and compaction by traffic and to ensure the snow clearance of all Trunk Roads.

Such ploughing shall be supplemented by simultaneous de-icing treatment at a minimum spread rate of 20 grammes per square metre.

3.3.9 If the road surface temperature continues to fall and the need for ploughing continues, or hard packed snow or ice has formed, the spread rate shall be increased as necessary to a maximum rate of 40 grammes per square metre in accordance with the requirements in Table 7.2.K.2 of Annex 7.2/K of this Part.

3.3.10 Where conventional ploughing is not possible, for example:

- (i) in built up areas,
- (ii) in exceptional circumstances when the snow on the road is deep and cannot be removed,
- (iii) when de-icing treatment over packed snow is likely to provide an unacceptable surface,
- (iv) when the traffic is insufficient to disperse the snow, or

(v) through certain traffic management conditions,

the Operating Company shall carry out Operations to lift, remove and dispose of snow or ice, or utilise snow blowers with the snow being directed onto adjacent land where the Operating Company has obtained the prior agreement of the landowner and the Scottish Environmental Protection Agency.

Such Operations shall be followed by de-icing treatment.

3.3.11 Where there is a formation of hard packed snow or ice not exceeding 20 millimetres thickness and the air temperature is above minus five degrees centigrade, removal shall be achieved by using successive spreading of de-icing material in accordance with Table 7.2.K.2 in Annex 7.2/K of this Part.

3.3.12 Where there is a formation of hard packed snow or ice:

(i) not exceeding 20 millimetres thickness and air temperature is less than, or equal to, minus five degrees centigrade, or

(ii) exceeding 20 millimetres thickness,

the addition of abrasive aggregates shall be considered in accordance with paragraph 5.5 of this Part. Application of the initial treatment technique should be resumed as soon as possible since abrasives contribute little to the removal of snow or ice and may block drains and gullies upon thawing. Abrasives shall not be used on Structures where there is any danger of blockage to drains.

Abrasive aggregates may be used by the Operating Company as a supplement in urban areas where de-icing material alone would provide an unacceptably slippery surface.

3.3.13 Footway, footbridge and cycleway categories and the response times and clearance requirements for each category are provided in Tables 7.2.E.1 and 7.2.E.2 in Annex 7.2/E of this Part. Table 7.2.E.3 provides details of such Structures within the Unit. The Operating Company shall ensure Table 7.2.E.3 is kept up to date during the Contract Period and shall make written proposals for the inclusion and treatment of additional footways, footbridges and cycleways for the Director's consent.

3.3.14 Following clearance of snow or ice from footways, footbridges and cycling facilities, de-icing material shall be spread in accordance with paragraph 3.1.17. Where snow or ice remains on footways, footbridges and cycling facilities after treatment, de-icing material shall be spread at a minimum spread rate of 20 grammes per square metre, or as specified in Table 7.2.K.2 of Annex 7.2/K of this Part as appropriate, to prevent ice formation on the cleared surfaces.

The full width of the footways, footbridges and cycling facilities shall be treated.

3.3.15 The Operating Company shall, in discussion with Network Rail or any successor organisation, ensure that appropriate safety precautions are taken when snow ploughing vehicles are negotiating railway level crossings.

When snowploughing or snow blowing Operations are undertaken, the Operating Company shall ensure that snow or ice does not build up across or against:

(i) railway tracks,

(ii) gates,

(iii) bridge parapets,

- (iv) fences,
- (v) walls, and
- (vi) other boundaries.

Where snow or ice clearance is carried out adjacent to railway overhead electricity cables, the Operating Company shall take special care to ensure snow does not cause electrical short circuits or other damage.

3.3.16 During prolonged periods of snow fall at locations where the use of salt for de-icing is prohibited, ploughing shall be continuous followed by repeated applications of de-icing chemical.

3.3.17 Lifting and removal of snow or ice from multi-level and grade separated interchanges and other locations shall be undertaken where necessary.

Sites for the disposal of snow or ice arising from such Operations shall comply with the requirement of the Scottish Environmental Protection Agency.

The Operating Company shall provide temporary traffic management, including road closures, where required for these Operations.

3.3.18 When ploughing to the nearside, other vehicles (unless stationary or on the hard-shoulder) shall not be overtaken. Snow or ice shall not be thrown over bridge parapets onto the road beneath. When ploughing to the central reservation, the speed used shall prevent the throwing of snow or ice into the path of traffic on the opposite carriageway.

3.3.19 In the event of significant snow falls, where snow ploughing being carried out by the front line and reserve Winter Service Plant is not sufficient, the Operating Company shall deploy additional Winter Service Plant for snow clearance to ensure delays caused by the weather conditions are kept to a minimum.

3.3.20 When machine snow clearance is not suitable (including clearance around carriageway obstructions) hand snow clearance and salting shall be carried out.

3.3.21 Snow or ice shall be cleared in a manner that prevents it from landing on adjacent or underlying paved surfaces.

4. OPERATING COMPANY'S WINTER SERVICE PLANT

4.1 General

4.1.1 Annex 7.2/J of this Part details the minimum Winter Service Plant to be used in connection with the Winter Service. The Operating Company shall provide and ensure that the Winter Service Plant listed in Annex 7.2/J of this Part is available as necessary for the Winter Service.

4.1.2 The Operating Company shall ensure that its Winter Service Plant is maintained in accordance with manufacturers' recommendations.

In the event of a breakdown on any of the Operating Company's front line Winter Service Plant:

- (i) details of the cause, time and location of the breakdown and any other relevant information shall be recorded,

- (ii) the operator shall, if possible, return the vehicle to the nearest depot in order to minimise blockages and further disruption to the network, and
 - (iii) the Operating Company shall make immediate arrangements for reserve Winter Service Plant to be made available in order to comply with the requirements of this Part.
- 4.1.3 When used on the Trunk Road for operative training and maintenance runs, the spinner disc at the rear of the Operating Company's Winter Service Plant shall be covered in such a way that damage caused by sharp edges in the event of an accident is reduced to a minimum.
- 4.1.4 Front line and reserve Winter Service Plant shall be fitted with on-board electronic data loggers in accordance with the requirements of clause 2803AR of the Specification.
- 4.1.5 The onboard electronic data loggers shall be capable of transmitting their data in near real time to a web accessible database in accordance with the requirements of clause 2804AR of the Specification.
- In the event of an on board electronic data logger malfunction, the Operating Company shall prepare a similar written record within 12 hours.
- 4.1.6 The Operating Company shall measure and record the quantity of de-icing material spread on each occasion on each precautionary treatment route. Such apparatus shall either be fitted to Winter Service Plant or located at depots and shall be additional to the data loggers.
- 4.1.7 In September and January of each Annual Period, the Operating Company shall calibrate all equipment for spreading de-icing material:
- (i) in accordance with the requirements of British Standard 1622:1989, or
 - (ii) where British Standard 1622:1989 does not provide for the calibration of any de-icing spreading equipment, in a manner proposed in writing by the Operating Company and consented to in writing by the Director. As a minimum the Operating Company shall provide details of the Winter Service Plant supplier's calibration method to the Director, and
 - (iii) in accordance with the requirements of the specific material being used.
- 4.1.8 September testing shall comply with the requirements of tests 'A' and 'B' and January testing shall comply with the requirements of test 'B' of British Standard 1622:1989.
- 4.1.9 Re-calibration and testing shall be carried out after repairs to the spreading equipment and at other times when necessary to ensure the accuracy of de-icing material spreading.
- All calibration and re-calibration shall be independently carried out and certified. Calibration certificates shall be held in accordance with the requirements of the Winter Service Plan and the Operating Company's Management System.
- 4.1.10 The Winter Service Plant that is used for spreading de-icing materials on the Trunk Roads shall be of sufficient capacity to enable the Operating Company to fulfil its obligations for Winter Service Operations.
- 4.1.11 Winter Service Plant used for spreading pre-wetted salt shall:

- (i) be capable of delivering a constant supply of brine of the appropriate concentration in accordance with paragraph 5.3.5 of this Part,
- (ii) comply with the requirements of this Part where such requirements are not inconsistent with the spreading of pre-wetted salt, and
- (iii) comply with any other requirements to ensure the effective distribution of pre-wetted salt to comply with the requirements of this Part.

The Operating Company shall demonstrate to the Director that the brine delivery system of the Winter Service Plant used for spreading pre-wetted salt meets all the requirements of this Part and the Operating Company shall provide in writing to the Director the method that will be employed to ensure that the quantity of the brine being applied during each route treatment is correct.

4.1.12 Winter Service Plant used shall comply with the requirements of this Part to ensure the effective distribution of potassium acetate and other de-icing materials.

4.1.13 The Operating Company shall provide a range of snowploughs or other winter service plant that is capable of clearing all snow conditions on all carriageway routes, footways, footbridges and cycleways in the Unit.

4.1.14 Snow blowers shall:

- (i) be capable of blowing up to 600 tonnes of snow per hour,
- (ii) have a width of cutter head of at least 1.8 metres,
- (iii) be capable of operating in up to four metres depth of snow, and
- (iv) be fitted with lights to permit effective operation during poor visibility and the hours of darkness.

4.1.15 All Winter Service Plant used for Winter Service Operations shall:

- (i) comply with the requirements of this Part,
- (ii) be fitted with a snowplough, and
- (iii) have a minimum of two additional headlamps fitted to permit forward visibility when a snow plough is fitted.

4.2 Front line, Reserve, Additional and Loading Winter Service Plant

4.2.1 The Operating Company's minimum front line, reserve and additional Winter Service Plant available for the Winter Service shall be as referred to in Appendix WSP4 to Annex 7.2/J of this Part. The minimum loading Winter Service Plant available within the Unit for loading front line, reserve and additional Winter Service Plant shall also be as referred to in Appendix WSP4.

4.2.2 Front line Winter Service Plant comprises vehicles and equipment permanently available within the Unit that is required for:

- (i) precautionary treatments,
- (ii) snow or ice clearance to a fallen or formed depth not exceeding 100 millimetres, but excluding Winter Service Plant not required to be capable of spreading whilst echelon ploughing,
- (iii) Winter Service Patrols, and
- (iv) compliance with the requirements of this Part.

- 4.2.3 All front line Winter Service Plant shall be fitted with measuring devices for air temperature and road surface temperature which shall be capable of transmitting data to the on-board data logging system.
- 4.2.4 Front line Winter Service Plant shall, as a minimum, have the ability to:
- (i) carry out precautionary treatment to all routes simultaneously,
 - (ii) carry out Winter Service Patrols on Category A and B routes,
 - (iii) clear ice and snow lying to a depth up to 100 millimetres, and
 - (iv) spread pre-wetted salt.
- 4.2.5 The Operating Company's reserve Winter Service Plant shall be that part of the Winter Service Plant permanently available within the Unit to supplement front line Winter Service Plant for the Winter Service in situations:
- (i) when such front line Winter Service Plant may not be available for whatever reason for the Winter Service, or
 - (ii) to clear snow or ice in accordance with the requirements of this Part.
- The reserve Winter Service Plant may also be used to supplement front line Winter Service Plant in snow conditions.
- 4.2.6 The additional Winter Service Plant shall be that part of the Winter Service Plant that is available for the Winter Service, either directly under the control of the Operating Company or through contingency arrangements with third parties, to deal with:
- (i) snow or ice lying to a depth of more than 100 millimetres, and
 - (ii) any other winter weather conditions which cannot be managed by front line or reserve Winter Service Plant.
- 4.2.7 Details of additional Winter Service Plant shall be as referred to in Appendix WSP4 to Annex 7.2/J of this Part.

5. DE-ICING MATERIALS

5.1 General

- 5.1.1 The Operating Company shall procure and provide the salt and other de-icing materials necessary to comply with the Winter Service requirements.
- 5.1.2 The Operating Company shall provide the minimum operational salt stock levels at the start of the Winter Service Period as detailed in Appendix WSP3 to Annex 7.2/J of this Part. If stocks have reduced to 90 percent on 21 December in any Winter Service Period, the Operating Company shall restock to 100 percent of the full pre-season stocks.
- 5.1.3 Salt for de-icing shall be 6.3 millimetre grading particle size complying with British Standard 3247:1991 and treated with an anti-caking agent.
- 5.1.4 The method of salt storage at loading points shall ensure that the moisture content of the stored salt does not exceed four percent. Should the moisture content of salt exceed four percent, the Operating Company shall take all measures necessary to ensure compliance with the requirements of this Part is regained.

Where moisture content is deliberately increased to deal with low humidity conditions, the spread rate shall not be increased.

5.1.5 Within 10 Working Days of each delivery, salt shall be tested by the Operating Company at loading points in accordance with British Standard 3247:1991 and results recorded to ascertain:

- (i) moisture content (one test per 500 tonnes),
- (ii) particle size distribution (one test per 500 tonnes),
- (iii) chloride content (one test per 1500 tonnes), and
- (iv) soluble sulphate compounds (one test per 1500 tonnes).

5.1.6 Salt stocks shall be tested by the Operating Company for salt moisture content at monthly intervals throughout each Winter Service Period and the results shall be recorded. As a minimum, the salt should be tested at the base of the stockpile.

5.1.7 The Operating Company shall store materials test data on an electronic database.

5.1.8 Potassium Acetate used for de-icing Operations at the locations specified in Table 7.2.1.1 of Annex 7.2/I shall comply with the Ministry of Defence Specification 68-118 (De-icing/Anti-Icing Fluid for Run Ways) unless otherwise consented to in writing by the Director.

5.2 Strategic Salt Stocks

5.2.1 Subject to an Order, the Operating Company shall procure and store strategic salt stocks when instructed by the Director.

5.2.2 The Operating Company shall provide storage facilities capable of storing 25,000 tonnes of strategic salt. Storage shall be in accordance with the requirements of paragraph 5.6 of this Part.

5.2.3 In undertaking these duties the Operating Company shall:

- (i) seek prices from all salt suppliers to ensure value for money,
- (ii) manage and maintain the strategic salt stocks on behalf of the Director including accurate stock monitoring using an approved weigh bridge facility,
- (iii) arrange haulage of strategic salt stocks from the initial delivery point to the strategic salt depot(s),
- (iv) maintain accurate Records of quantities and their locations,
- (v) undertake stock rotation to avoid deterioration of the salt,
- (vi) liaise with all relevant third parties such as local authorities to ascertain their need for supplies of strategic salt,
- (vii) make arrangements with such third parties for loading and haulage of, and 24 hours a day, seven days a week access to, the strategic salt, and
- (viii) invoice such third parties for all costs related to provision of strategic salt stocks on behalf of the Director.

5.2.4 All invoice information shall be entered into the contract control and management function of the Integrated Roads Information System as either a credit or debit as appropriate.

5.2.5 The Operating Company shall transfer strategic salt stocks which have not been utilised at the end of the Winter Service Period into its operational salt stocks for use in the next Winter Service Period. The Operating Company shall procure new strategic salt stocks to replace such transferred stock.

5.3 Pre-wetted Salt

5.3.1 Salt for de-icing material as part of pre-wetted salt Operations, not including the salt to be used in producing brine, shall be 6.3 millimetre grading particle size complying with British Standard 3247:1991 or equivalent.

5.3.2 Salt for de-icing material as part of pre-wetted salt Operations to be used in producing brine shall be suitable for such production.

5.3.3 For pre-wetted salt spreading Operations, the spread rates set out in Table 7.2.K.2 of Annex 7.2/K of this Part shall represent the total weight of the spread material.

5.3.4 Brine added to salt during spreading Operations shall comprise 30 percent of the total spread material by weight, giving a 70 percent salt: 30 percent brine solution.

5.3.5 Brine solution with a concentration of 23 percent dissolved sodium chloride shall be used as the pre-wetting agent.

Where air temperatures are forecast to fall below minus 15 degrees centigrade, the brine shall be diluted by the addition of five percent to ten percent water to prevent re-crystallisation of the salt. The addition of water shall be undertaken in a manner which ensures that the water and brine is thoroughly mixed to produce a consistent concentration of brine.

5.3.6 The Operating Company shall arrange for sufficient brine to be stored at each depot to treat simultaneously, at a maximum spread rate, all precautionary treatment routes serviced from that depot. An additional quantity of 20 percent brine above the minimum shall be held in reserve.

The brine within the storage facilities shall be replenished within two hours of being depleted.

5.3.7 Sensors with digital read outs shall be fitted to the Operating Company's storage facilities to measure the salt concentration of the brine automatically.

Daily checks shall be carried out by the Operating Company using a saturation meter and the results shall be stored electronically. Water supplies to saturator units shall be protected from freezing by appropriate measures.

5.4 Alternative De-icing Materials

5.4.1 In extreme conditions, such as when temperatures drop below levels at which sodium chloride is effective, the Operating Company shall use alternative de-icing materials in accordance with guidance on use of such materials, to be provided by the Director and subject to his written consent. Such alternative de-icing material shall be described in the Operating Company's Winter Service Plan.

5.4.2 The Operating Company shall store 15,000 litres, or equivalent, of alternative de-icing material within the Unit to deliver the requirements of paragraph 5.4.1 of this Part.

5.5 Abrasive Aggregates

- 5.5.1 A single sized abrasive aggregate with particle size of six millimetres, or five millimetres sharp sand having low fines content, shall be added to the salt in a 50 percent salt: 50 percent abrasive aggregate or sand mixture in accordance with the requirements of this Part.

5.6 Materials Storage

- 5.6.1 Materials shall be stored in a covered structure within the Operating Company's depots to ensure compliance with the requirements of this Part and the supplier's written instructions in the case of additives, potassium acetate and any other de-icing materials.
- 5.6.2 The Operating Company shall satisfy itself that arrangements for storage, handling and loading of de-icing materials at the loading points are adequate to achieve the specified response times.
- 5.6.3 Where there is no provision for covered storage at the Commencement of Service Date, the Operating Company shall provide such storage no later than 12 months after the Commencement of Service Date. Prior to the provision of such storage, all salt stored externally shall be covered in protective sheeting in a manner that prevents the ingress of moisture into the material as far as is practicable. All salt stored in a covered structure shall be rotated on a weekly basis to maintain a uniform condition.
- 5.6.4 As salt de-icing material is removed from storage areas by the Operating Company, a positive slope shall be maintained to avoid danger to operatives and Winter Service Plant from the collapse of faces of stockpiles.
- 5.6.5 The Operating Company shall safeguard and manage all de-icing material stock and storage facilities.
- 5.6.6 The Operating Company shall ensure that de-icing material stock does not become contaminated with foreign matter likely to cause damage to Winter Service Plant, cause the de-icing material to fail to comply with the requirements of this Part or adversely affect Trunk Road users.

This is Annex 7.2/A to Schedule 7 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/A – Winter Service Plan

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/A – Winter Service Plan

1. MANAGEMENT ARRANGEMENTS

The Winter Service Plan shall provide the following details:

1.1 Winter Service Manager

- 1.1.1 Name,
- 1.1.2 Qualifications,
- 1.1.3 Experience,
- 1.1.4 Responsibilities.

1.2 Winter Service Duty Officers

- 1.2.1 Names,
- 1.2.2 Qualifications,
- 1.2.3 Experience,
- 1.2.4 Responsibilities.

1.3 Monitoring Arrangements

- 1.3.1 Monitoring arrangements during normal working hours,
- 1.3.2 Monitoring arrangements outwith normal working hours.

1.4 Personnel Resources

- 1.4.1 Names of staff and labour resources,
- 1.4.2 Availability rosters including names, addresses and telephone numbers of the staff listed.

1.5 Call out arrangements

- 1.5.1 Call out arrangements during normal working hours,
- 1.5.2 Call out arrangements outwith normal working hours,
- 1.5.3 Contact arrangements during normal working hours,
- 1.5.4 Contact arrangements outwith normal working hours,
- 1.5.5 Mobilisation times.

1.6 Communications Equipment

1.7 Training for Managers and Other Staff

- 1.7.1 Details of previous training,
- 1.7.2 Details of proposed training.

2. WEATHER FORECASTING

2.1 Purpose

2.2 Methodology

2.3 Weather forecasting service

2.3.1 Climatic domains,

2.3.2 Weather radar,

2.3.3 Ice sensors and weather forecast sites,

2.3.4 Thermal mapping,

2.3.5 Location plans.

2.4 Computer Systems

3. MONITORING ARRANGEMENTS FOR AREAS REQUIRING SPECIAL ATTENTION

4. DECISION MAKING

4.1 Role of the Winter Service Manager

4.2 Role of the Winter Service Duty Officer

4.2.1 Winter Service Patrol mobilisation,

4.2.2 Proposals for precautionary and additional de-icing treatments when low confidence forecasts are issued for variable road and weather conditions,

4.2.3 Proposals for monitoring the effectiveness of de-icing materials,

4.2.4 Road closure and snow gate operational procedures,

4.2.5 Activation of hidden message signs.

5. LIAISON

5.1.1 Liaison with:

(i) the Director,

(ii) the Police,

(iii) the Traffic Scotland Operator,

(iv) adjacent road and highway authorities,

(v) adjacent Trunk Road operating companies including DBFO's, and

(vi) Network Rail.

6. MUTUAL AID ARRANGEMENTS

6.1 Mutual Aid

6.1.1 A statement explaining what Mutual Aid arrangements are in place, including contact details.

7. WINTER SERVICE PATROLS

7.1 Winter Service Plant and Reporting

- 7.1.1 Winter Service Plant provided by the Operating Company for the Winter Service Patrols shall be as referred to in Appendix WSP1 to Annex 7.2/J of this Part.
- 7.1.2 A Winter Service Patrol Report shall be provided by the Operating Company in the format referred to in Appendix WSP1 to Annex 7.2/J of this Part.

8. TREATMENT ROUTES

- 8.1.1 The Operating Company shall provide the following information in Appendix WSP2 to Annex 7.2/J of this Part:
- (i) precautionary treatment routes, including sections shared with an adjacent road authority,
 - (ii) contingency plans for alternative access to precautionary treatment routes where normal access is prevented due to weather related or other incidents, and
 - (iii) locations of de-icing material loading points.
- 8.1.2 The Operating Company shall provide details of cycling facilities in urban areas in Appendix WSP2 to Annex 7.2/J of this Part.

9. SNOW AND ICE CLEARANCE

9.1 Snow Clearing

- 9.1.1 Description of arrangements (including ploughing plans) and resources for managing snowfall. This plan shall demonstrate that all available ploughing plant is fully utilised to ensure that all carriageways are maintained free from snow or ice.
- 9.1.2 Road closure procedure including use of snow gates.
- 9.1.3 Prolonged snowfall strategy, including use of additional Winter Service Plant and operative resources.
- 9.1.4 Arrangements for safe clearance of snow or ice from wide single carriageways.
- 9.1.5 Arrangements for safe clearance of snow or ice adjacent to vertical concrete barriers.
- 9.1.6 Treatment strategy for footways, footpaths and cycling facilities including location of salt bins where applicable.
- 9.2 Plans showing the location of the footways, footbridges and cycling facilities in Categories A, B, C and D.

10. DE-ICING MATERIALS

10.1 Details

- 10.1.1 For each type of de-icing material, including alternatives:
- (i) detailed specification of material,
 - (ii) storage conditions, system types and capacities,

- (iii) details on testing methods, including their type and frequency,
- (iv) state suppliers, including any secondary suppliers,
- (v) state any importers used to meet supply demands,
- (vi) stock levels (total and split by location), and
- (vii) details of re-stocking, including procurement mechanism and details of stock level monitoring.

10.1.2 Details of de-icing materials stocks shall be provided by the Operating Company in Appendix WSP3 to Annex 7.2/J of this Part and shall take account of the minimum stock levels to be maintained as referred to in the Appendix.

11. STRATEGIC SALT STOCKS

11.1 Details

- 11.1.1 Identification of suppliers including locations, initial delivery points and haulage arrangements.
- 11.1.2 Identification of Operating Company storage facilities.
- 11.1.3 Identification of third parties, liaison arrangements, haulage, delivery and 24 hour access arrangements.

12. WINTER SERVICE PLANT

- 12.1.1 The Operating Company's front line Winter Service Plant and reserve Winter Service Plant available within the Unit for the Winter Service shall be provided by the Operating Company in Appendix WSP4 to Annex 7.2/J of this Part.
- 12.1.2 The Operating Company's additional Winter Service Plant available through contingency arrangements and arrangements for its mobilisation for the Winter Service shall be provided by the Operating Company in Appendix WSP4 to Annex 7.2/J of this Part.
- 12.1.3 Loading Winter Service Plant available within the Unit for loading such front line, reserve and additional Winter Service Plant shall be provided by the Operating Company in Appendix WSP4 to Annex 7.2/J of this Part.
- 12.2 **Calibration of Winter Service Plant**
 - 12.2.1 Calibration arrangements and procedures for front line and reserve Winter Service Plant, in accordance with paragraphs 4.1.7, 4.1.8 and 4.1.9 of this Part.
 - 12.2.2 The Winter Service Plan will describe how the requirements of this Part shall be met and where and how the calibration certificates will be held.

13. COMPOUNDS, DEPOTS AND FACILITIES

- 13.1 A schedule of compounds, depots and facilities covering the network within the Unit shall be provided by the Operating Company in Appendix WSP5 to Annex 7.2/J of this Part.

14. MAPS DRAWINGS AND GRAPHICAL INFORMATION

14.1 Maps

14.1.1 Provide scale maps for the following:

- (i) precautionary treatment routes for carriageways, including on/off slips and depots,
- (ii) precautionary treatment routes for footways, footbridges and cycling facilities,
- (iii) reactive treatment routes for footways, footbridges and cycling facilities,
- (iv) Winter Service Patrol routes,
- (v) ploughing routes for carriageways, including on/off slips and depots,
- (vi) road sensors including sensor types and where these sites are equipped with weather cameras, (map to differentiate between single and bi-directional cameras),
- (vii) snow gates,
- (viii) snow fences,
- (ix) shelter belts,
- (x) snow poles,
- (xi) snow or ice and hidden message signs,
- (xii) salt bins,
- (xiii) vertical concrete barriers,
- (xiv) other facilities, and
- (xv) where route based forecasting is not used, climatic domains and the sensors used to generate domain forecasts.

15. COMPILING AND MAINTAINING RECORDS

16. SNOW POLES

16.1 Maintenance, replacement of damaged or missing snow poles, refurbishment and reserve stocks.

17. SNOW GATES

17.1 Maintenance, operation and liaison.

18. VARIABLE MESSAGE SNOW AND ICE AND HIDDEN MESSAGE SIGNS

18.1 Operating and liaison procedures.

19. SALT BINS

19.1 Stock level monitoring and replenishment procedures.

20. SALT MEASUREMENT APPARATUS

20.1 Equipment and locations and recording methods.

This is Annex 7.2/B to Schedule 7 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/B – Winter Service Report

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/B – Winter Service Report

- 1 The Winter Service report shall provide:
 - 1.1 An executive summary of the annual report.
 - 1.2 An overview and review of the service provided.
 - 1.3 A summary of key performance reports.
 - 1.4 Information on significant events and related actions.
 - 1.5 An assessment of the accuracy of weather forecasts provided.
 - 1.6 An assessment of road sensor performance.
 - 1.7 An analysis of the ability of the Management System to capture reported Non-Conformances.
 - 1.8 Details of innovations and improvements implemented.
 - 1.9 Recommendations for continuous improvement.
 - 1.10 Details of actions taken during periods of low confidence forecasting for variable and marginal winter weather conditions.
 - 1.11 Details of Winter Service Plant available, including reserve and additional Winter Service Plant.

This is Annex 7.2/C to Schedule 7 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/C – Winter Service Patrols

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/C – Winter Service Patrols

1. The Category A and B Winter Service Patrols are provided in Table 7.2.C.1.

Table 7.2.C.1 – Category A and B Winter Service Patrol Routes

North West Unit	
Route	Category
A9 Inverness from Longman Roundabout to Perth at Inveralmond Roundabout	A
A9 Brora to Thurso (ferry port)	B
A835 Contin to Ullapool (ferry port)	B
A82 Fort William (Lochybridge) to Inverness (Tomnahurich)	B
A85 Oban to Tyndrum	B
A85 Lochearnhead to Crianlarich	B
A82 Ballachulish to Tarbet	B
A87 Invergarry to Shiel Bridge	B
A887 Bunloyne to Invermoriston	B
A83 Inveraray to Tarbet	B

2. Details of the Operating Company's Winter Service Patrol routes shall be as provided by the Operating Company in Table 7.2.J.2 of Appendix WSP1 to Annex 7.2/J of this Part.
3. Patrol reports shall be recorded in accordance with Table 7.2.J.3 of Appendix WSP1.

This is Annex 7.2/D to Schedule 7 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/D – Snow Clearance

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/D – Snow Clearance

Table 7.2.D.1 – Snow Clearance

Condition Criteria	Category A Patrol Routes		Non Category A Patrol Routes	
	Dual Carriageways & Motorways		Dual Carriageways	Wide Single 2+1 (WS 2 + 1) & Single Carriageways
	Number of Existing Lanes		Number of Existing Lanes	
	2	3 or More	2	1 or 2 (WS 2 + 1)
	Minimum number of lanes in each direction free from ice and snow as far as is reasonably practicable		Minimum number of lanes in each direction free from ice and snow as far as is reasonably practicable (except where snow gates)	
Snow at any time	1	2	1	1
Following clearance of minimum lanes or the cessation of snow fall all lanes are to be clear of snow	6 hours	6 hours	12 hours	12 hours

This is Annex 7.2/E to Schedule 7 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/E – Category A, B, C and D Footways, Footbridges and Cycling Facilities

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/E – Footways, Footbridges and Cycleways Categories A, B, C and D – Response Times and Clearance Requirements

Table 7.2.E.1 – Footways, Footbridges and Cycleways Categories A, B, C and D – Response Times and Clearance Requirements for Ice

Categories	Requirements
A and B	Apply de-icing treatment before 08.00 hours each morning to any ice which has formed.
C	Clear all ice by 17.00 hours on the same day the ice formed excluding Saturdays and Sundays when the area shall be cleared by 17.00 hours on the Monday immediately following.
A, B and C	Following clearance of ice or if ice has melted naturally during the day, spread anti-icing materials to prevent ice formation on the cleared surfaces in accordance with paragraph 3.1.17 of this Schedule.
D	These footways, footbridges and cycleways shall receive treatment when required by the Director.

Table 7.2.E.2 Footways, Footbridges and Cycleways Categories A, B, C and D – Response Times and Clearance Requirements for Snow or Ice Occurring Together

Categories	Requirements			
	General	Between 06.00 and 18.00 hours	Between 08.00 and 17.00 hours	Treatments out with daytime hours
A and B	Between the hours of 06.00 and 18.00, commence snow clearing as soon as practicable to prevent compaction by traffic. Ploughing should be continuous thereafter to prevent a build up of snow.	Clear all snow within 2 hours of snow ceasing to fall. On wide routes, 1.2 metre minimum width shall be cleared initially.		Clear snow when required by the Director.

Categories	Requirements			
C	<p>Between the hours of 08.00 and 17.00, commence snow clearing as soon as practicable to prevent compaction by traffic. Ploughing should be continuous thereafter to prevent a build up of snow.</p>		<p>Clear all snow by 17.00 hours on the day the snow first fell excluding Saturdays and Sundays when the area shall be cleared on the Monday immediately following.</p> <p>On wide routes, 1.2 metre minimum width shall be cleared initially.</p>	<p>Clear snow when required by the Director.</p>
A,B and C		<p>Following clearance of snow, spread anti-icing materials to prevent ice formation on cleared surfaces in accordance with paragraph 3.1.17 of this Schedule.</p> <p>Note brine shall not be used as the anti-icing agent where compacted snow or ice lenses remain on the surface of the route.</p>	<p>Following clearance of snow, spread anti-icing materials to prevent ice formation on cleared surfaces in accordance with paragraph 3.1.17 of this Schedule.</p> <p>Note brine shall not be used as the anti-icing agent where compacted snow or ice lenses remain on the surface of the route.</p>	
D	<p>These footways, footbridges and cycleways shall receive treatment when required by the Director.</p>			

Table 7.2.E.3– Category A, B and C Footways, Footbridges and Cycleways within the Unit

Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)			
				Start	Finish	Category A	Category B	Category C	Category D
1	A82/A83	Tarbet		10826/70 ch 3795 (Speed Limit Signs)	10827/05 ch 415 (Filling Station)			870	
				16501/05 ch 0 (A82 Jct)	16501/05 ch 990 (Speed Limit Signs)			990	
2	A82/A85	Crianlarich		10836/80 ch 1340 (House Access)	10836/93 ch 335 (Railway Yard Access)			345	
				10836/93 ch 545 (Railway Bridge)	10837/04 ch 380 (End of Footway)			465	
				16302/82 ch 2590 (Speed Limit Signs)	16302/95 ch 470 (A82 Jct)			690	
3	A82	Tyndrum		10837/65 ch 2295 (Speed Limit Signs)	10837/65 ch 2835 (Filling Station)			540	
4	A82	Onich		10864/00 ch 2645 (Speed Limit Signs)	10864/70 ch 295 (Speed Limit Signs)			1540	
5	A82/A830	Fort William		10866/10 ch 8355 (Speed Limit Signs)	10869/00 ch 315 (Access to Trading Estate)			7831	
				17202/00 ch 0 (Loch Bridge Jct)	17202/00 ch 560 (Speed Limit Signs)			560	
6	A82/A86	Spean Bridge		10869/95 ch 355 (Speed Limit Signs)	10870/00 ch 305 (Speed Limit Signs)			690	
				12960/90 ch 10 (Junction)	12960/90 ch 493 (A82 Jct)			483	

Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)			
				Start	Finish	Category A	Category B	Category C	Category D
7	A82	Fort Augustus		10877/75 ch 3740 (Speed Limit Signs)	10880/05 ch 545 (Speed Limit Signs)			1585	
8	A82/ A887	Invermoriston		10880/80 ch 1792 (Speed Limit Signs)	10880/80 ch 2273 (Junction with A887)			481	
				10885/05 ch 0 (Junction with A887)	10885/05 ch 172 (Speed Limit Signs)			172	
				12805/05 ch 0 (Junction with A82)	12805/05 ch 632 (Speed Limit Signs)			632	
9	A82	Drumnadrochit		10885/60 ch 3610 (Speed Limit Signs)	10890/05 ch 320 (Speed Limit Signs)			1890	
10	A82	Inverness		10890/90 ch 2460 (Speed Limit Signs)	10892/05 ch 1240 (THC HQ)			1700	
				10892/05 ch 1240 (THC HQ)	10892/05 ch 1515 (Kenneth St Junction)		420		
				10892/05 ch 1515 (Kenneth St Junction)	10898/05 (Rose St Roundabout)			1400	
				10898/05 (Rose St Roundabout)	10899/05 (Harbour Road Roundabout)	1100	1100		
				10899/05 (Harbour Road Roundabout)	10899/50 ch 150 (Speed Limit Signs)			700	
11	A828	Appin		17020/87 ch 2150 (Church)	17030/05 ch 390 (Bridge)			440	

Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)			
				Start	Finish	Category A	Category B	Category C	Category D
12	A828	Benderloch & Ledaig		17010/33 ch 70 (Start of Footway)	17010/33 ch 1170 (Junction)			1100	
13	A83	Tarbert		16570/05 ch 20 (Start of Footway)	16570/06 ch 256 (End of Footway)			1232	
14	A83	Ardrishaig		16555/06 ch 626 (Ardrishaig Sign)	16565/05 ch 481 (Speed Limit Sign)			2938	
15	A83	Lochgilphead		16540/94 ch 0 (Speed Limit Signs)	16540/94 ch 240 (Manse Brae)			240	
				16540/94 ch 240 (Manse Brae)	16540/95 ch 325 (Lorne Street)		505		
				16540/95 ch 325 (Lorne Street)	16540/95 ch 455 (Speed Limit Sign)			130	
16	A83	Minard		16540/19 ch 0 (Speed Limit Signs)	16540/19 ch 970 (End of Footway)			970	
17	A83	Furnace		16540/05 ch 0 (Start of Footway)	16540/05 ch 515 (End of Footway)			515	
18	A83	Inveraray		16520/85 ch 2770 (Start of Footway)	16530/05 ch 140 (Start of Main Street)			150	
				16530/05 ch 140 (Start of Main Street)	16530/06 ch 90 (Church)		90		
				16530/06 ch 90 (Church)	16530/10 ch 410 (Speed Limit Signs)			1000	

Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)			
				Start	Finish	Category A	Category B	Category C	Category D
19	A83	Arrochar & Succoth		16501/05 ch 2075 (Speed Limit Signs)	16512/05 ch 520 (Speed Limit Signs)			1895	
20	A830	Mallaig		17215/61 ch 1400 (Speed Limit Sign)	17215/61 ch 1630 (End of Trunk Road)			230	
21	A830	Arisaig		(Speed Limit Sign)	(Speed Limit Sign)			495	
22	A830	Corpach		17205/00 ch 350 (Speed Limit Signs)	17205/15 ch 30 (Speed Limit Signs)			2370	
23	A835	Contin		18004/50 ch 760 (Start of Footway)	18006/06 ch 472 (Speed Limit Signs)			1232	
24	A835	Garve		18006/76 ch 3217 (Start of Footway)	18008/06 ch 250 (End of Footway)			760	
25	A835/ A893	Ullapool		18012/75 ch 3000 (Braes Junction)	18012/75 ch 4020 (A835/A893 Jct)			1020	
				18014/05 ch 0 (A835/A893 Jct)	18014/05 ch 370 (Ferry Terminal)		370		
26	A84	Doune		16212/68 ch 0 (Speed Limit Signs)	16213/04 ch 212 (Speed Limit Signs)			1122	
27	A84	Burn of Cambus		16213/06 ch 940 (Speed Limit Signs)	16213/06 ch 1595 (Speed Limit Signs)			655	
28	A84	Callander		16215/05 ch 0 (Speed Limit Signs)	16215/38 ch 115 (Menteith Crescent)			975	

Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)			
				Start	Finish	Category A	Category B	Category C	Category D
				16215/38 ch 115 (Menteith Crescent)	16220/04 ch 120 (Ancaster Road)	825	825		
				16220/05 ch 0 (Ancaster Road)	16220/05 ch 830 (Speed Limit Signs)			830	
29	A84	Kilmahog		16220/48 ch 584 (Start of Footway)	16220/48 ch 895 (End of Footway)			311	
30	A84	Strathyre		16225/51 ch 2705 (Start of Footway)	16225/58 ch 610 (End of Footway)			665	
31	A84/ A85	Lochearnhead		16225/94 ch 0 (Speed Limit Signs)	16225/94 ch 570 (A85 Jct)			570	
				13930/81 ch 585 (Start of Footway)	16301/03 ch 190 (End of Footway)			743	
32	A85	Oban		11940/05 ch 815 (Speed Limit Signs)	11940/34 ch 490 (Dunollie Road)			605	
				11940/71 ch 0 (Dunollie Road)	11940/56 ch 0 (Corran Esplanade)		1090		
				11940/89 ch 0	11940/94 ch 130 (End of Trunk Road)			290	
33	A85/ A828	Connel		11920/80 ch 5790 (Speed Limit Signs)	11930/05 ch 580 (Speed Limit Signs)			1810	
				17010/05 ch 0 (A85 Jct)	17010/06 ch 220 (Speed Limit Signs)			890	

Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)			
				Start	Finish	Category A	Category B	Category C	Category D
34	A85	Taynuilt		11920/52 ch 2890 (Junction)	11920/65 ch 830 (End of Footway)			1740	
35	A85	Lochawe		11920/05 ch 1955 (Speed Limit Signs)	11920/18 ch 550 (Filling Station)			2045	
36	A85	Dalmally		11910/80 ch 2450 (Start of Footway)	11910/80 ch 3430 (Dalmally Jct)			980	
37	A85	St. Fillans		13925/58 ch 0 (Junction)	13925/58 ch 1390 (Junction)			1390	
38	A85	Comrie		13920/85 ch 0 (Speed Limit Signs)	13925/07 ch 365 (Bridge Jct)			1263	
39	A85	Crieff		13915/60 ch 0 (Speed Limit Signs)	13915/60 ch 905 (Dollerie Street)			905	
				13915/67 ch 0 (Dollerie Street)	13915/80 ch 130 (Burrell Street)	738	738		
				13915/80 ch 130 (Burrell Street)	13920/10 ch 872 (Speed Limit Signs)			956	
40	A85	Gilmerton		13910/99 ch 45 (Junction)	13915/05 ch 178 (Speed Limit Signs)			382	
41	A85	Methven		13910/27 ch 150 .. (Start of Footway)	13910/37 ch 70 (Speed Limit Signs)			1072	
42	A85	Perth & Huntingtower		13905/10 ch 0 (Roundabout)	13910/07 ch 20 (Speed Limit Signs)			809	

Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)			
				Start	Finish	Category A	Category B	Category C	Category D
				13910/07 ch 620 (Speed Limit Signs)	13910/10 ch 90 (End of Footway)			1153	
43	A86	Kingussie		12915/40 ch 0 (Speed Limit Signs)	12915/40 ch 265 (Manse Road)			265	
				12915/40 ch 265 (Manse Road)	12915/40 ch 795 (Station Road)		530		
				12920/05 ch 0 (Station Road)	12920/05 ch 465 (Speed Limit Signs)			465	
44	A86	Newtonmore		12920/10 ch 2730 (Speed Limit Signs)	12920/70 ch 965 (Primary School)			1191	
				12920/70 ch 965 (Primary School)	12920/70 ch 1353 (B9150 Jct)		388		
				12925/05 ch 0 (B9150 Jct)	12925/05 ch 25 (End of Footway)			25	
				12925/05 ch 200 (Hotel Entrance)	12925/05 ch 450 (End of Footway)			250	
45	A87	Uig		17493/60 ch 65 (Start of Footway)	17495/05 ch 1322 (End of Trunk Road)			2647	
46	A87	Kensaleyre		17485/05 ch 990 (Speed Limit Signs)	17485/05 ch 1990 (End of Footway)			1000	
47	A87	Portree		17465/05 ch 1815 (Speed Limit Signs)	17475/05 ch 340 (Junction)			1901	

Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)			
				Start	Finish	Category A	Category B	Category C	Category D
48	A87	Broadford		17430/05 ch 0 (A851 Jct)	17440/15 ch 40 (Junction)			2826	
49	A87	Kyle of Lochalsh & Kyleakin		17410/96 ch 0 (Speed Limit Signs)	17412/30 ch 90 (Toll Station)			1269	
				17415/05 ch 0 (Bridge Barrier)	17415/20 ch 210 (Restaurant Entrance)			319	
50	A87	Balmacara		17410/00 ch 2700 (Speed Limit Signs)	17410/00 ch 3200 (Speed Limit Signs)			500	
51	A87	Inverinate		17406/00 ch 3850 (Speed Limit Signs)	17406/00 ch 4630 (Glebe Road Jct)			780	
				17406/00 ch 6500 (Access to House)	17406/00 ch 7375 (Local Road Jct)			875	
52	A87	Invergarry		17400/00 ch 60 (Speed Limit Signs)	17400/15 ch 65 (Speed Limit Signs)			1235	
53	A889	Dalwhinnie		12705/20 ch 145 (Opposite Hotel)	12705/20 ch 922 (Speed Limit Signs)			777	
54	A9	Thurso & Scrabster		10515/50 ch 3905 (Speed Limit Signs)	10530/05 ch 225 (Janet Street)			460	
				10530/05 ch 225 (Janet Street)	10530/11 ch 50 (Olrigh Street, Thurso)	335	335		
				10530/11 ch 50 (Olrigh Street, Thurso)	10535/05 ch 2140 (Ferry Terminal)			3170	

Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)			
				Start	Finish	Category A	Category B	Category C	Category D
55	A9	Helmsdale		10485/85 ch 1360 (Speed Limit Signs)	10489/10 ch 50 (End of Footway)			390	
56	A9	Portgower		10485/55 ch 3180 (Start of Footway)	10485/75 ch 260 (End of Footway)			490	
57	A9	Brora		10482/40 ch 3540 (Bus Stop)	10483/05 ch 430 (Gower Street)			500	
				10483/05 ch 430 (Gower Street)	10483/50 ch 225 (Filling Station)		545		
				10483/50 ch 225 (Filling Station)	10485/05 ch 45 (45m north of Clynelish Rd)			1100	
58	A9	Golspie		10480/06 ch 4720 (Speed Limit Signs)	10480/65 ch 555 (War Memorial)			815	
				10480/65 ch 555 (War Memorial)	10480/65 ch 1510 (Duke Street)		955		
				10480/65 ch 1510 (Duke Street)	10482/05 ch 115 (Speed Limit Signs)			525	
59	A99	Wick		10492/95 ch 5950 (Speed Limit Signs)	10492/96 ch 460 (West Banks Ave)			580	
				10492/96 ch 460 (West Banks Avenue)	10492/96 ch 730 (End of Trunk Road)		270		
60	A99	Lybster		10492/20 ch 1720 (Start of Footway)	10492/25 ch 155 (End of Footway)			335	

This is Annex 7.2/F to Schedule 7 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/F – Location of Known Areas Requiring Special Attention

Road Number	Water Run Off Location

Table 7.2.F.3 – Gradient Locations

Road Number	Location

REFER TO AGREED WINTER SERVICE PLAN

This is Annex 7.2/G to Schedule 7 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/G – Location Details

This is Annex 7.2/H to Schedule 7 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/H – Records

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/H – Records

- 1 Records shall include the following:
 - (i) decisions taken, when and by whom,
 - (ii) planned and actual treatment records,
 - (iii) planned and actual response times achieved,
 - (iv) planned and actual commencement times,
 - (v) planned and actual route times,
 - (vi) planned and actual spread rates,
 - (vii) observations and actions taken by the Winter Service Patrols,
 - (viii) output from Winter Service Plant on-board data capture devices,
 - (ix) Winter Service Plant down time and software faults,
 - (x) Winter Service Plant deployment records (including vehicle location records) and driver and operator logs,
 - (xi) logs (both manual and electronic) for telephone, electronic mail and two way communication calls,
 - (xii) loading point de-icing stocks and replenishment orders,
 - (xiii) ice prediction system Records,
 - (xiv) weather forecasts and actual weather experienced,
 - (xv) complaints by members of the public and Trunk Road users,
 - (xvi) accidents during winter conditions,
 - (xvii) road closures due to winter conditions,
 - (xviii) weights and volumes as appropriate for the amount of de-icing material(s) spread for each route,
 - (xix) pre- and mid-season road sensor calibration systems,
 - (xxi) Winter Service Plant calibration certificates, and
 - (xxii) actual salt stocks held including strategic salt stocks.

This is Annex 7.2/1 to Schedule 7 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/1 – Potassium Acetate Treatment

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/I – Potassium Acetate Treatment

Potassium acetate treatment shall be applied at the location specified in Table 7.2.I.1 including those parts of the Trunk Road 200 metres beyond the limits of each bridge.

Table 7.2.I.1

Road Number	Location
A9	Kessock Bridge
A82	Friars Bridge and Approaches
A9	Cromarty Bridge
A9	Dornoch Bridge
A87	Carrich Bridge
A87	Skye Bridge

This is Annex 7.2/J to Schedule 7 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/J – Appendices for Winter Service Plan

Table 7.2.J.3 – Winter Service Patrol Report Record

Patrol Route..... **Date**..... **Information checked by**.....

Winter Service Patrol start and end time	Weather conditions for Winter Service Patrol route		Assessed road condition (by driver) (X)				Assessed residual salt level (by driver) (X)			Action implemented (use symbols provided below)*						Route salted prior to patrol (X)		
	Air (°C)	Road Surface temperature (°C)	Snow	Icy	Wet	Dry	High	Medium	Low	Action code	Treatment Type	Spread rate (g/m ²)	Approximate location of salting or other action	Treatment Start Time	Treatment End Time	Yes	No	Time of salting

*Action symbols:

- | | | | |
|---|--|---|--|
| 1 | Spot treatment as instructed by the Winter Service Duty Officer. | 2 | Spot treatment as determined by driver. |
| 3 | Route treatment as advised by the Winter Service Duty Officer. | 4 | Route treatment as determined by driver. |
| 5 | Attend to runoff or seepage on surface. | 6 | Remove obstruction (eg dead dog, fallen tree, and other obstructions.) from surface. |
| 7 | Pre-wetted Salt | 8 | Dry Salt |
| 9 | Potassium Acetate | | |

APPENDIX WSP2

Table 7.2.J.4 - Precautionary Treatment Routes determined by the Operating Company

Route No.	Depot	Description	Depot to Route (km)	Time to Route (mins)	Salting Length (km)	Aver Speed (km/hr)	Route Time (mins)	Route to Depot (km)	Alternative Access	Average Width of Route	Route Tonnage @20g/m2	Treatment type
<p>REFER TO AGREED WINTER SERVICE PLAN</p>												

Route No.	Depot	Description	Depot to Route (km)	Time to Route (mins)	Salting Length (km)	Aver Speed (km/hr)	Route Time (mins)	Route to Depot (km)	Alternative Access	Average Width of Route	Route Tonnage @40g/m2	Treatment type
REFER TO AGREED WINTER SERVICE PLAN												

Location	Type (saturator/storage only)	Capacity (L)	Min (L)

REFER TO AGREED WINTER SERVICE PLAN

Table 7.2.I.8 - Front line Winter Service Plant permanently available and located in the Unit for Winter Service for carriageways Type of Winter Service Plant & registration number	Depot location	Vehicle capacity	Number of vehicles	Plant use* (i), (ii), (iii)
REFER TO AGREED WINTER SERVICE PLAN				

* Table 7.2.J.8 KEY:

- (i) precautionary treatments and clearance of snow or ice with a depth up to 100 millimetres.
- (ii) Winter Service Patrols.
- (iii) other arrangements to comply with the requirements of this Schedule.

Table 7.2.J.9 - Front line Winter Service Plant permanently available and located in the Unit for the Winter Service for footways footbridges and cycling facilities

Table 7.2.I.9 - Front line Winter Service Plant permanently available and located in the Unit for the Winter Service for footways footbridges and cycling facilities Type of Winter Service Plant & registration number	Depot location	Vehicle capacity	Number of vehicles	Plant use* (i), (ii), (iii)
REFER TO AGREED WINTER SERVICE PLAN				

*Table 7.2.J.9 KEY:

- (i) precautionary treatments for Category A response.
- (ii) snow clearance and ice clearance for Category A response.
- (iii) snow or ice clearance for Category B, Category C and Category D response.

Compound, Depot or Facility Name	Owner	Postal Address	Purpose	Access Arrangements	Contact Details	Facilities

REFER TO AGREED WINTER SERVICE PLAN

This is Annex 7.2/K to Schedule 7 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/K – Requirements for De-Icing Material Spread Rates

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/K – Requirements for De-Icing Material Spread Rates

Table 7.2.K.1 – Decision Making Process for Winter Service

Table 7.2.K.1 sets out the decision making process for winter service:

Decision Matrix			
	Predicted Road Conditions		
Road Surface Temperature	Wet	Wet Patches	Dry
May fall below 1°C	Salt before frost	Salt before frost (See note A)	No action likely, monitor weather (See note A)
Expected to fall below 1°C		Salt before frost (see note B)	
	Salt after rain stops		
	Salt before frost and after rain stops (see note C)		
	Salt before frost	Monitor weather conditions	
Expected snow	Salt before snow		
Freezing Rain	Salt before rainfall (see note C)		
	Salt during rainfall (see note C)		
	Salt after rainfall (see note C)		
The decision to undertake precautionary treatments should, if appropriate, be adjusted to take account of residual salt or surface moisture.			

A. Particular attention should be given to any possibility of water running across carriageways and such locations should be monitored and treated as required.

B. When a weather warning contains reference to expected hoarfrost considerable deposits of frost are likely to occur and close monitoring will be required. Particular attention should be given to the timing of precautionary treatments due to the possibility that salt deposited on a dry road may be dispersed before it can become effective.

C. Under these circumstances rain will freeze on contact with running surfaces and full pre-treatment should be provided even on dry roads. This is a most serious condition and should be monitored closely and continuously throughout the danger period.

Table 7.2.K.2 – Forecast Weather and Road Conditions Status Codes and Treatment Rates

Table 7.2.K.2 sets out the forecast weather and road condition status codes and treatment rates. Rate of spread for precautionary treatments may be adjusted to take account of residual salt or surface moisture unless stated otherwise.

A road is considered to be only damp when water is present that clearly darkens the road surface, but there is no spray or water flowing across the surface. A wet road is one where minimal spray is evident and there is no water flowing across the surface and no drops of water are formed by trafficking. A very wet road is one where trafficking causes drops of water to form in the air; higher spread rates are required for very wet roads or successive treatments are needed.

National research has shown that salt spreading equipment may be delivering more or less than the targeted salt spread rates within the traffic lanes. The research has also shown that residual salt levels reduce remarkably during the initial 12 hours after distribution regardless of whether dry, treated or pre-wetted salting techniques are employed. The loss can be as much as one and a half of the initial material spread during this period on a heavily trafficked road in dry conditions.

Protection is only achieved when salt is fully dissolved before forecast conditions occur and treatments should be timed to take account of this.

Spread rates for pre-wetted salt are the combined weight of dry rock salt and brine combined at 70:30 proportion by weight respectively with a maximum brine concentration of 23 percent salt.

Treatments should be carried out, wherever possible after traffic has dispersed standing water. The rates in the table below are for precautionary salt treatment prior to snowfall which is essential to form a de-bonding layer and snow clearance.

Operational experience has indicated that thin surfacing courses do not benefit from an increase in dosage above that required for hot rolled asphalt but that the effect of residual salt on the carriageway is reduced particularly in areas of low traffic, and as such treatment can be applied more frequently. Treatment of thin surface courses should be treated with caution: residual salt should not be relied upon to provide protection: and if there is any hint of moisture being present a pessimistic view of the forecast should be taken.

Table 7.2.K.2 – Treatment Matrix

Treatment Matrix Spread rates for precautionary treatments		
Forecast weather condition	Frost Susceptible/surface water run-off area (grammes/square metre)	Road Surface Wet (grammes/square metre)
A. RST higher than plus 1°C	0	0
B. RST lower than or equal to plus 1°C but higher than minus 2°C	10 to 20	10 to 20
C. RST lower than or equal to minus 2°C but higher than minus 5°C	10 to 20	10 to 20
D. RST lower than or equal to minus 5°C	20	20
E. RST lower than or equal to plus 1°C but higher than minus 2°C following rain	20	30
F. RST lower than or equal to minus 2°C but higher than minus 5°C following rain	30	40
G. RST lower than or equal to minus 5°C following rain	40	40
H. Hoar Frost	20	20
I. Freezing Fog	10	20
J. Freezing Rain	40 <i>(See decision matrix)</i>	40 <i>(See decision matrix)</i>
K. Snow Accumulations up to 30mm	30	40
L. Snow Accumulations over 30mm	40	40
M. Hard Packed Snow/Ice	<i>See clearance matrix</i>	<i>See clearance matrix</i>

Table 7.2.K.3 –Precautionary Treatment Potassium Acetate Spreading Rates

CONDITIONS FORECAST	SPREAD RATE (litres/square metres)
Road surface temperature lower than or equal to plus 1°C but higher than minus 2°C	0.0156
Road surface temperature lower than or equal to minus 2°C but higher than minus 5°C	0.0312
Frost and road surface temperature lower than -5°C	a minimum of 0.0312 which should be increased with manufacturer's recommendations
Snow	
Freezing conditions after rain	

Table 7.2.K.4 – Snow or Ice Clearance Salt Spreading Rates

Clearance Matrix			
Minimum Salt Spread rates for Snow or Ice Clearance			
Road Surface Condition	Treatment		
	Spreading (grammes/square metre)	Ploughing	Blowing
	Salt		
Ice Formed	20 to 40	No	No
Snow covering of less than 30mm	20	Yes	No
Snow covering exceeds 30mm	20 to 40	Yes	No
Snow accumulations due to prolonged snowfall	20 to 40	Yes (continuous)	Where applicable
Hard packed snow/ice less than 20mm thick	20 to 40 (successive treatments)	No	No
Hard packed snow/ice	salt/abrasive (successive)	No	No

This is Annex 7.2/L to Schedule 7 Part 2 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/L – Salt Stock Monitoring Report

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 2

WINTER SERVICE

ANNEX 7.2/L – Salt Stock Monitoring Report

Operating Company	Reporting Month
Salt used during reporting period	
Actual salt stocks held at the end of the reporting period	
Salt orders placed and deliveries received during reporting period	
Salt orders expected during next reporting period (include imports, dates deliveries expected & tonnage expected)	
Forecast usage during next reporting period	
Any other items to report (such as reduced treatment networks, any notable arrangements with local authorities, etc.)	

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 3

INCIDENT RESPONSE

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 3

INCIDENT RESPONSE

1. INTRODUCTION

1.1 General

1.1.1 This Part identifies the requirements for the Operating Company in relation to:

- (i) planning its Incident Response Operations for Incidents on or near to the Unit,
- (ii) executing its Incident Response Operations,
- (iii) minimising the duration of Incidents that occur on or near the Unit, including the impact that any Incidents may have on the operation of the Unit, and
- (iv) identifying and executing mitigating actions to prevent the occurrence of Incidents.

1.1.2 The Operating Company shall attend to all Incidents in a prompt and efficient manner through the planned and coordinated use of its Incident Response Resources.

1.1.3 The Operating Company's Incident Response planning activities shall include the development and use of management plans, processes and systems. The Operating Company shall undertake such activities to enhance its capability to deliver the response to, and minimise the duration of, Incidents.

1.1.4 The Operating Company's Incident Response Operations shall commence immediately after it has been notified of an Incident. Such Operations shall include:

- (i) responding to all Incidents within the response times stated in the Specification,
- (ii) providing sufficient Incident Response Resources to execute Incident Response Operations,
- (iii) undertaking repair work to restore safe access and use of the Trunk Road for all users, and
- (iv) undertaking recovery operations to restore the Unit to normal operation.

The Operating Company shall undertake its Incident Response planning and Incident Response Operations in accordance with the Incident Response Plan. This plan shall be prepared and maintained by the Operating Company as stated in paragraph 4 of this Part.

1.1.5 The Operating Company's Incident mitigation activities shall seek to minimise or eliminate the risks associated with Incidents that impact on the operation and use of the Unit. Such mitigation activities shall include:

- (i) Disruption Risk Management activities relating to Incidents that cause disruption of the operation of the network. The Operating Company shall undertake such activities in accordance with the Disruption Risk Management Plan which shall be prepared and maintained by the

Operating Company in accordance with Transport Scotland's *Manual for the Management of the Risk of Unplanned Network Disruption* and as stated in this Part, and

- (ii) activities relating to Incidents that do not cause disruption to the operation and use of the Unit.

1.1.6 The Operating Company shall ensure that all staff involved in Incident Response Operations are suitably trained and its vehicles are sufficiently equipped to deal with all Incidents.

1.2 Incident Response Services

1.2.1 The Operating Company's Trunk Road Incident Support Service and Incident Support Units shall attend to all Incidents in accordance with the response times stated in the Specification.

1.3 Multi Agency Response Team

1.3.1 For the purposes of this Part, the Multi Agency Response Team comprises partner organisations working with Transport Scotland in the deployment of resources to manage Incidents or events that are deemed in the first instance by the Director to:

- (i) have a high risk of severe disruption to road or rail journeys with potential safety risks for the travelling public,
- (ii) have a significant potential impact for large parts of the strategic transport network, and
- (iii) require a multi agency response.

1.3.2 The need to deploy the Multi Agency Response Team will be considered by the Director in dialogue with the Multi Agency Response Team partners. The decision making will be based on professional judgement and use the best intelligence available to the group. Participation by and deployment of the Multi Agency Response Team will be proportionate and defined by the nature, scale and potential impact of the Incident or event.

1.3.3 The Operating Company shall maintain a list of suitably trained staff who are able to work in the Multi Agency Response Team when it is in operation. These nominated individuals shall be available at short notice, able to attend the Traffic Scotland Control Centre when required and have a full understanding of the objectives of the Multi Agency Response Team and their role in its operation. Such staff shall be available to attend any training events that may be organised in relation to Multi Agency Response Team operations.

1.3.4 No later than 30 Days prior to the Commencement of Service Date, the Operating Company shall produce and thereafter maintain up to date throughout the Contract Period its own Multi Agency Response Team information folder which shall contain key information such as contacts, record logs and the like and which shall be handed over at each shift change when the Multi Agency Response Team is in operation.

1.3.5 The Multi Agency Response Team organisational partners will vary over the lifetime of this Contract and are likely to include:

- (i) Transport Scotland,

- (ii) the Traffic Scotland Operator,
- (iii) other operating companies,
- (iv) Network Rail,
- (v) First Scotrail,
- (vi) the Meteorological Office, and
- (vii) the Association of Chief Police Officers in Scotland.

2. CLASSIFICATION OF INCIDENTS

2.1 Major Incidents

2.1.1 For the purposes of this Part, a Major Incident means any unplanned event that requires the implementation of special arrangements by one or more of the Category 1 responders in accordance with the requirements of the *Civil Contingencies Act 2004* and the *Civil Contingencies Act 2004 (Contingency Planning) (Scotland) Regulations 2005* for:

- (i) the rescue and transport of a large number of casualties,
- (ii) the involvement, either directly or indirectly, of large numbers of people,
- (iii) the handling of a large number of enquiries likely to be generated both from the public and the news media, usually to the Police, or
- (iv) the large scale combined resources of the Category 1 responders to cater for the threat of death, serious injury or homelessness to a large number of people.

2.1.2 The Police and other Category 1 responders are responsible for declaring a Major Incident and shall immediately notify the Director and the Traffic Scotland Operator when a Major Incident has been declared.

2.1.3 When requested by the Director, the Operating Company shall support Category 1 responders with dealing with Major Incidents.

2.2 Critical Incidents

2.2.1 For the purposes of this Part, a Critical Incident means any unplanned event that includes:

- (i) all Incidents and Severe Weather events that result in significant disruption to the operation of the Unit,
- (ii) road traffic accidents on a Trunk Road involving fatalities, serious injuries, or dangerous substances,
- (iii) partial or full closure of a Trunk Road due to weather or road conditions,
- (iv) road traffic accidents involving crossover of a vehicle from one carriageway of a Trunk Road to another,
- (v) road traffic accidents on a Trunk Road resulting in serious/potentially serious damage to a structure necessitating road closures,
- (vi) road traffic accidents involving crossover of a vehicle from one carriageway of a Trunk Road to another,

- (vii) road traffic accidents on a Trunk Road resulting in serious or potentially serious damage to a Structure necessitating road closures,
- (viii) any Incident causing full or partial closures of a Trunk Road due to road traffic accidents, equipment failure, security alerts of criminal or terrorist activities or any other significant event,
- (ix) any Incident of public sensitivity,
- (x) Incidents resulting in damage to the infrastructure of the Unit,
- (xi) environmental Incidents of significant importance, and
- (xii) any Incident not on the Trunk Road that meets any of the above criteria and which may affect the Trunk Road.

2.2.2 The Operating Company shall declare an Incident to be a Critical Incident for its own and the Director's management purposes.

2.2.3 The Operating Company's notification requirements for Critical Incidents are stated in Annex 7.3/A of this Part.

2.2.4 Where the Operating Company considers Critical Incidents to have escalated, or are likely to escalate, to a Major Incident, the Operating Company shall immediately notify the appropriate Category 1 responder, the Director and the Traffic Scotland Operator.

2.3 Minor Incidents

2.3.1 For the purposes of this Part, a Minor Incident means any unplanned event on the Unit that is not considered by the Operating Company to be a Major Incident or a Critical Incident.

2.3.2 The Operating Company shall declare an Incident to be a Minor Incident for its own and the Director's management purposes.

2.3.3 The Director will change the classification of a Minor Incident to Critical Incident where other information that is available to the Director indicates that such a classification change is required.

3. DISRUPTION RISK MANAGEMENT PLAN

3.1 General

3.1.1 Disruption risk management shall refer to the activities undertaken by the Operating Company that are aimed at improving journey time reliability by minimising or eliminating the risk of unplanned disruption to the operation of the Unit. The Operating Company shall develop and implement its Disruption risk management processes in accordance with Transport Scotland's *Manual for the Management of the Risk of Unplanned Network Disruption* to:

- (i) collect, store and analyse data on Incidents to identify locations on the Unit with a pattern of, or potential for, disruption Incidents,
- (ii) undertake a risk assessment at each Disruption Risk Site using a standard approach to be provided by the Director to identify Disruption Risk Sites with high and very high risk level,

- (iii) develop and submit a Statement of Intent, for consent by the Director, for appropriate risk management action at Disruption Risk Sites identified as having a high and very high risk level. Such actions include capital investment projects, development and implementation of a management plan and further investigation of specific Disruption Risk Sites,
- (iv) when consented to by the Director, implement approved risk management actions where a bid for funding has been successful, and
- (v) establish, maintain, implement and continuously improve a Disruption Risk Management Plan for the Unit. The Operating Company shall update the Disruption Risk Management Plan at intervals not exceeding 12 months.

3.1.2 The Operating Company's Disruption Risk Management Plan for the Unit shall contain details of its arrangements for implementing its disruption risk management activities.

3.2 Disruption Risk Management Plan

3.2.1 The Disruption Risk Management Plan shall combine the details and requirements of other management plans and Records required by this Contract that contribute to the management of Disruption Risk. Such Records and plans include:

- (i) the Incident Response Plan,
- (ii) the Winter Service Plan,
- (iii) the Trunk Road Incident Support Service plan,
- (iv) the Incident Support Unit plan,
- (v) the Standard Incident Diversion Routes,
- (vi) the wind management plans,
- (vii) the flooding management plans,
- (viii) the landslide management plans,
- (ix) disruption risk Records,
- (x) Disruption Risk Sites,
- (xi) the Statement of Intent requests for risk management action, and
- (xii) any other management plans and risk records related to potential disruption risk.

3.2.2 No less than 30 days prior to the Commencement of Service Date, the Operating Company shall submit to the Director for consent, a draft Disruption Risk Management Plan covering the full extent of the Unit. The Disruption Risk Management Plan shall be developed in accordance with Transport Scotland's *Manual for the Management of the Risk of Unplanned Network Disruption* by utilising all relevant historic data supplied by the Director.

3.2.3 The Operating Company shall, at intervals not exceeding 12 months, update the Disruption Risk Management Plan and re-issue it to the Director, or issue a statement that the plan has been reviewed and that no update is required.

4. INCIDENT RESPONSE PLAN

4.1 General

4.1.1 No less than 30 days prior to the Commencement of Service Date, the Operating Company shall submit an Incident Response Plan to the Director for his written consent.

4.2 Scope of the Incident Response Plan

4.2.1 The Operating Company's Incident Response Plan shall ensure a prompt and efficient response to Incidents including:

- (i) road traffic collisions,
- (ii) vehicle breakdown,
- (iii) deposit and spillage of debris, waste or animal carcasses,
- (iv) damaged infrastructure on the Unit,
- (v) flooding and scour of roads and Structures,
- (vi) Incidents other than vehicle damage that put Structures at risk,
- (vii) spillage of fuels, chemicals, noxious substances, body fluids and other sensitive material,
- (viii) landslips and rock falls,
- (ix) subsidence,
- (x) damaged electrical apparatus including where live elements may be exposed,
- (xi) Severe Weather events affecting any part of the Unit excluding the clearance of ice and snow in accordance with the Winter Service Plan, and
- (xii) any other circumstances involving an Incident.

4.2.2 The Operating Company's Incident Response Plan shall demonstrate the adequacy and availability of its Incident Response resources and arrangements to implement all necessary Incident Response Operations and meet the response times referred to in the Specification.

4.2.3 The Incident Response Plan shall include the:

- (i) management arrangements including the named resources of the Operating Company and other relevant organisations,
- (ii) management arrangements to ensure the provision of out of hours Incident Response as referred in the Specification,
- (iii) management communication and instruction arrangements to provide the response referred to in this Part,
- (iv) arrangements for notifying the Emergency Services of the contact details for the Incident Liaison Officer,
- (v) arrangements with operating companies in other Units for the use of additional Incident Response Resources in exceptional circumstances,
- (vi) communication methods including a dedicated direct telephone number available to the Emergency Services to contact the Operating Company

- and the Operating Company's method of informing the Emergency Services of the direct telephone number and any changes to it,
- (vii) communication resilience arrangements for ensuring availability of communications in the event of failure of electricity supplies, mobile telephone services and landline telephone services, radio communication services, or any other service on which the Incident Response Operations depend,
 - (viii) communication between Operating Company vehicles, offices, depots, sites of Incidents, Emergency Services and other Operational Partners,
 - (ix) availability of Operating Company and other resources and their locations, supply chain management arrangements, emergency contact details and mobilisation arrangements for labour, plant, and materials to implement all potential Incident Response Operations,
 - (x) management arrangements for Incidents other than vehicle damage that put Structures at risk,
 - (xi) arrangements for the provision of Mutual Aid,
 - (xii) management arrangements for the availability of the Incident Liaison Officer both during and outwith Normal Working Hours,
 - (xiii) arrangements for post Incident debriefing and reporting to the Director of Critical or Major Incidents, Incidents involving spillage or deposit of hazardous or sensitive materials, Incidents involving Structures and any Incident where the requirements of this Contract have not been met,
 - (xiv) arrangements for liaison with all appropriate organisations referred to in this Schedule,
 - (xv) arrangements for coordination with other Incident responders referred to in this Schedule,
 - (xvi) arrangements for dealing with spillage and deposit of hazardous or sensitive material referred to in this Schedule,
 - (xvii) arrangements for dealing with Structures including unsafe or potentially unsafe Structures referred to in this Schedule,
 - (xviii) the management process for obtaining specialist advice to determine the safety and stability of damaged or at risk Structures and the Design for temporary works, remedial and strengthening measures for Structures, and
 - (xix) arrangements for complying with the liaison requirements of Schedule 3 Part 7.

4.3 Liaison Arrangements

4.3.1 In developing its Incident Response Plan, the Operating Company shall:

- (i) identify all relevant Operational Partners that have involvement in dealing with an Incident,
- (ii) agree the communication arrangements between itself and the relevant Operational Partners in the event of an Incident, and

- (iii) ensure mutual understanding of the roles and responsibilities of the Operating Company and the relevant Operational Partners in the event of an Incident.

Details of all relevant Operational Partners, the agreed communication arrangements and the roles and responsibilities for dealing with Incidents shall be incorporated within the Incident Response Plan.

4.3.2 The Operating Company shall maintain close working relationships with all relevant Operational Partners through regular meetings to review and update the communication arrangements and enable the integration of communication systems and technology.

4.3.3 The Emergency Services, in conjunction with local authorities and central government departments, undertake regular contingency planning and Incident planning meetings and conduct contingency and Incident exercises. The Operating Company shall participate in all meetings and exercises to which it is invited by such parties, including meetings of all local contingency planning forums whose areas cover any part of the Unit.

4.4 Coordination with other Incident Responders

4.4.1 The Operating Company shall ensure all Emergency Services, Statutory Authorities, and other appropriate Operational Partners are advised of its arrangements for initiating Incident Response Operations.

4.4.2 The Operating Company shall provide all relevant Operational Partners with one Electronic Copy and one controlled paper copy of its current Incident Response Plan.

4.5 Review of the Incident Response Plan

4.5.1 The Operating Company shall keep the Incident Response Plan under continuous review and at intervals of no more than three months:

- (i) update and re-issue such plan to the Director for consent, or
- (ii) issue a statement to the Director declaring that the plan has been reviewed and that no update is required.

4.5.2 The continuous review shall include the adequacy and availability of the Incident Response Resources to implement all necessary Incident Response Operations, and where required, proposed changes to the arrangements identified through Incident de-briefings. The Operating Company's review procedures shall also ensure the accuracy of contact details is maintained.

4.5.3 Notwithstanding the requirements above, the Incident Response Plan shall be re-issued to the Director not later than 10 Working Days prior to the end of each Annual Period.

4.6 Amendments to Incident Response Plan

4.6.1 The Operating Company shall not make amendments to the arrangements set out in the Incident Response Plan without the prior written consent of the Director, with the exception of changes to contact details.

4.6.2 When consented to by the Director, the Operating Company shall immediately notify any amendments to the Incident Response Plan to all holders of controlled copies of the plan and shall provide a controlled copy of the change within one Working Day.

4.7 Incident Response Resource Classification

4.7.1 Incident Response Resources shall be classified, as initial, secondary or back-up Incident Response Resources.

4.7.2 The Operating Company shall ensure that:

- (i) initial and secondary Incident Response Resources are available during and outwith Normal Working Hours to comply with the response times for attendance at an Incident as stated in the Specification,
- (ii) arrangements are established such that the Operating Company can deliver the back-up Incident Response Resources to the site of the Incident as soon as possible and no later than 24 hours from the time when the need for the back-up Incident Response Resources has been identified.

4.7.3 The Incident Response Resources identified in the Specification are the minimum provision and shall not be construed as being all the resources required by the Operating Company to fulfil its obligations for Incident Response Operations.

4.8 The Incident Liaison Officer

4.8.1 The Operating Company shall appoint suitably qualified personnel to undertake the role of Incident Liaison Officer in accordance with the requirements of Schedule 5 Part 4. No later than 30 days prior to the Commencement of Service Date, the Operating Company shall notify in writing to the Director the names, contact information and back up mobile telephone contact numbers for all Incident Liaison Officers. The Operating Company shall include details of the cover arrangements during periods of absences or unavailability.

4.8.2 The Incident Liaison Officer shall be responsible for the management and delivery of the Operating Company's Incident Response duties and shall have the information and the authority to provide an effective response appropriate to any Incident. The Incident Liaison Officer shall be available during and outwith Normal Working Hours and be based within the Operating Company's office(s).

4.8.3 The Incident Liaison Officer shall act as the first point of contact within the Operating Company's organisation for all Incidents on or near the Trunk Road Unit. When requested by the Director, the Incident Liaison Officer shall undertake duties from the Traffic Scotland Control Centre.

4.8.4 The Incident Liaison Officer shall be available to receive notification of an Incident from:

- (i) the Traffic Customer Care Line Operator,
- (ii) the Emergency Services,
- (iii) the Traffic Scotland Operator,
- (iv) local authorities,
- (v) the public,
- (vi) the Operating Company's personnel, and

(vii) any other sources.

4.8.5 The duties of the Incident Liaison Officer include:

- (i) notifying the Emergency Services, the Traffic Scotland Operator and the Director of Incidents in accordance with the requirements specified in Annex 7.3/A of this Part,
- (ii) mobilising the initial Incident Response Resources,
- (iii) maintaining contact with and keeping informed the Emergency Services, the Traffic Scotland Operator, local authorities and other affected parties as necessary during the Incident,
- (iv) managing and coordinating the execution of Incident Response Operations,
- (v) managing the Trunk Road Incident Support Service to meet the requirements of this Part,
- (vi) when necessary, providing the required support to the Emergency Services,
- (vii) determining the need for secondary and back-up Incident Response and mobilising where necessary,
- (viii) subject to an Order, the provision of Mutual Aid,
- (ix) determining the need for obtaining specialist advice from the Bridges Manager and making contact as appropriate,
- (x) ensuring all Standard Incident Diversion Routes supplied by the Director are reviewed prior to the Commencement of Service Date,
- (xi) the review and update of existing Standard Incident Diversion Routes in full consultation with relevant Operational Partners,
- (xii) developing new Standard Incident Diversion Routes in accordance with Transport Scotland's *Development Procedures for Operating Companies*,
- (xiii) making an initial assessment as to whether the Incident is already, or has the potential to escalate to, a Critical or Major Incident, and
- (xiv) preparing Incident reports for submission to the Director in accordance with requirements of paragraph 10 of this Part.

4.8.6 The Operating Company shall provide all necessary resources needed by the Incident Liaison Officer to coordinate, mobilise, deploy and supervise Incident Response Resources and Operations in response to an Incident.

4.9 Arrangements for Full-Time Cover

4.9.1 Incident Response cover shall be available both during and outwith Normal Working Hours from the Commencement of Service Date to the Contract Expiry Date.

4.9.2 The Operating Company shall prepare rotas of trained operatives able to attend Incidents and implement appropriate measures or actions. The Operating Company shall prepare such rotas at least 30 days prior to the Commencement of Service Date and thereafter at least 10 Working Days prior to 1 April and 1 October in each Annual Period. The rotas shall detail the availability of the Incident Liaison Officers and Incident Response crews for each six month period commencing 1 April and 1 October in each Annual Period. Such rotas shall be issued to the Director and all relevant Operational Partners.

The rotas shall include a list of named Operating Company staff with relevant contact information including line management details. The rotas shall be updated when the staff identified on the rotas cease to be available or when changes are proposed by the Operating Company. The Director and all relevant Operational Partners shall be notified immediately of any changes to issued rotas.

4.9.3 The Operating Company shall train and supervise all personnel who may be involved in any aspect of Incident Response to ensure they are familiar with the types of Incident that may occur including any special procedures to be followed outwith Normal Working Hours.

4.10 Contact Arrangements

4.10.1 The Operating Company's Incident Response Resources shall be contactable both during and outwith Normal Working Hours throughout the duration of each Annual Period.

4.11 Resource Mobilisation and Deployment

4.11.1 For all Incidents the Incident Liaison Officer shall mobilise and deploy:

- (i) initial Incident Response Resources as soon as possible to meet the response times stated in the Specification,
- (ii) secondary Incident Response Resources as soon as possible to meet the response times stated in the Specification whenever the need for them is identified, and
- (iii) back-up Incident Response Resources as soon as possible and no later than 24 hours from when the need for them is identified.

4.12 Offices and Depots

4.12.1 The Operating Company shall make available offices and depots as stated in the Specification to provide support for the provision of the Incident Response Operations.

4.13 Operating Company's Incident Communications

4.13.1 The Operating Company shall ensure that adequate communication is maintained with other Operational Partners at all times.

4.13.2 Within 10 minutes of receipt of information relating to an Incident, the Operating Company shall disseminate such information to relevant Operational Partners.

5. INCIDENT RESPONSE OPERATIONS

5.1 Core and Ordered Incident Response Operations

5.1.1 The Operating Company shall undertake Incident Response Operations as Core Operations where the cost of the Incident Response Operations at each Incident is less than or equal to £10,000.

5.1.2 The Operating Company shall undertake Incident Response Operations where the cost of the Incident Response Operations at each Incident is above £10,000. Such Incident Response Operations shall be subject to a retrospective Order.

5.2 Scope of Incident Response Operations

5.2.1 Incident Response Operations include:

- (i) providing assistance to the Emergency Services,
- (ii) traffic management for hard shoulder closures, lane closures, road closures and other closures instructed within the carriageway,
- (iii) arranging for and implementing traffic diversions including those necessary for carriageways, footways, cycleways and rights of way,
- (iv) making safe and protecting any part of the Unit infrastructure,
- (v) making safe and protecting infrastructure located on or adjacent to the Unit that is not the property of the Scottish Ministers and arranging with the owner of such infrastructure for its repair or replacement,
- (vi) making safe, protecting and when necessary removing unsafe and fallen trees and branches,
- (vii) cleaning and sweeping,
- (viii) removal and disposal of general debris, animal carcasses and other obstructions in the road,
- (ix) containment, removal and disposal of debris and waste including chemicals, noxious substances, body fluids and other hazardous and sensitive material,
- (x) repairing and replacing any part of the Trunk Road infrastructure where necessary or where otherwise determined by the Director for a particular Incident as part of the Incident Response Operations,
- (xi) alleviating and averting flooding,
- (xii) checking and making safe any electrical apparatus involved in an Incident,
- (xiii) where required, the initial assessment of a Structure involved in an Incident to determine its continued safe use,
- (xiv) lifting and propping bridges, other Structures and other parts of the Trunk Road infrastructure,
- (xv) over-spanning bridge decks, supports at bridges and other Structures that are unsafe due to failure or are damaged due to any cause and, where possible, enabling such bridges and Structures to remain in service,
- (xvi) removal and disposal of debris arising from landslips and rock falls,
- (xvii) dealing with subsidence,
- (xviii) dealing with Severe Weather events,
- (xix) subject to an Order, the provision of Mutual Aid, and
- (xx) providing regular Incident status updates to relevant Operational Partners in addition to complying with the liaison requirements of Schedule 3 Part 7.

5.3 Standard Incident Diversion Routes

5.3.1 The Operating Company shall execute the management and implementation of all existing Standard Incident Diversion Routes and related Incident Response Operations.

- 5.3.2 The Operating Company shall ensure that signing on all Standard Incident Diversion Routes is installed to current standards and is maintained as required throughout the period of the Incident. At the conclusion of the Incident, all such signing shall be immediately removed and returned to storage.
- 5.3.3 Subject to an Order, the Operating Company shall review a Standard Incident Diversion Route to identify changes or potential improvements. This review shall be undertaken in full consultation with relevant Operational Partners.
- 5.3.4 Where the Operating Company undertakes a review of any Standard Incident Diversion Route to identify changes or potential improvements, it shall:
- (i) produce revised documentation in both hard copy and electronic format,
 - (ii) maintain Records of amendments and distribution, and
 - (iii) submit final documentation to the Director for approval and distribution via the Traffic Scotland Operator.

6. TRUNK ROAD INCIDENT SUPPORT SERVICE

6.1 General

- 6.1.1 The Trunk Road Incident Support Service shall patrol designated strategic routes of the Unit to detect and respond to Incidents. The Trunk Road Incident Support Service shall be integrated with the Traffic Scotland Control Centre as stated in this Part.
- 6.1.2 The Operating Company's Trunk Road Incident Support Service shall be fully operational from 14 July 2014.
- 6.1.3 The Traffic Scotland Operator will coordinate and control the dispatch of the Trunk Road Incident Support Service, including the dispatching of Trunk Road Incident Support Service resources to respond to Incidents and the real time monitoring of the location and deployment status of all Trunk Road Incident Support Service vehicles.
- 6.1.4 The Operating Company shall ensure that all Trunk Road Incident Support Service personnel comply with the requirements of *Disclosure Scotland* clearance as stated in Schedule 3 Part 1.

6.2 Primary and Secondary Functions of Trunk Road Incident Support Service

- 6.2.1 The primary functions which shall be undertaken by the Operating Company in delivering the Trunk Road Incident Support Service are:
- (i) responding to notifications of Incidents received from the Traffic Scotland Operator. The Operating Company shall also respond to Incidents reported by the Police and other Operational Partners after first notifying the Traffic Scotland Operator,
 - (ii) making Incidents safe through the application of temporary traffic management,
 - (iii) relieving congestion and removing hazards by the clearance of debris from traffic lanes and hard shoulders,
 - (iv) arranging for immediate repairs where the Trunk Road infrastructure is damaged as a result of an Incident,

- (v) assessing the scene and securing the attendance of additional or specialist resources where the task is beyond the Trunk Road Incident Support team's capabilities,
- (vi) providing a communications link between the site, the Traffic Scotland Operator and the Operating Company's Incident Liaison Officer which meets the requirements of the Director,
- (vii) reporting abandoned or broken down vehicles to the Operating Company's Incident Liaison Officer,
- (viii) offering assistance to broken down vehicles, including assisting in removing them to safe locations and offering fuel,
- (ix) providing high visibility patrols on the routes,
- (x) monitoring and reporting unusual or unexpected activity, disruption and or congestion on the Unit caused by Incidents and special events to the Traffic Scotland Operator and the Operating Company's Incident Liaison Officer,
- (xi) providing Incident Response Operations, subject to support being available, to Incidents on the routes,
- (xii) liaising with the Traffic Scotland Operator and Police control rooms. Liaison with the Police control rooms shall be via the Traffic Scotland Operator and the Emergency Services at Incidents as required,
- (xiii) participating in and contributing to the Trunk Road Incident Support Service working groups, and
- (xiv) Safety Patrols, Safety Inspections and making safe or repairing Category 1 Defects in accordance with the requirements of Schedule 7 Part 1.

6.2.2 The Operating Company shall not utilise Trunk Road Incident Support Service resource for other additional secondary functions without the prior approval of the Director.

6.2.3 Due to the high profile and service oriented nature of the Trunk Road Incident Support Service, Trunk Road Incident Support Service personnel shall not engage in any general duties that may compromise the image of the service.

6.3 Hours of Operation

6.3.1 The Trunk Road Incident Support Service resource shall utilise the Trunk Road Incident Support Service vehicles to patrol designated routes systematically in accordance with the provisions of this Schedule, as follows:

- (i) Vehicle 1 – between 07:00 hours and 19:00 hours, seven days a week.

Shift patterns shall allow for handover time between shifts, appropriate time for breaks and appropriate time for administration tasks at either end of the operational day.

The shift patterns shall ensure that at least one vehicle is operational during any change of working shifts.

6.4 Geographical Coverage and Response Times

- 6.4.1 Trunk Road Incident Support Service vehicles shall patrol the designated strategic routes detailed in Annex 7.3/B of this Part. The response time for each route or part thereof are stated in the Specification.
- 6.4.2 Where the Trunk Road Incident Support Service patrols are required to cover a secondary route, the response time for such routes shall be as stated in the Specification.
- 6.4.3 Where the Trunk Road Incident Support Service patrols are required by the Transport Scotland Operator to attend Incidents outwith their designated patrol routes or Unit in order to provide assistance to the Police and other Operating Companies, the Trunk Road Incident Support Service patrols shall respond in accordance with the requirements of this Part.

The Operating Company shall accommodate Trunk Road Incident Support Service patrols from other Units. Such circumstances shall be recorded and excluded from the relevant Key Performance Indicators.

- 6.4.4 Where Trunk Road Incident Support Service patrols are unable to respond to an Incident, both within and outwith the Operating Company's own Unit, the Operating Company shall immediately notify the Traffic Scotland Operator and Director of such circumstances.

6.5 Resource Requirements, Competence and Training

- 6.5.1 Sufficient, suitably qualified and experienced personnel shall be available seven days a week, during the hours of operation, to undertake the Trunk Road Incident Support Service and maintain the high public profile and integrity of this service.
- 6.5.2 The Trunk Road Incident Support Service personnel shall possess appropriate qualifications in road maintenance and traffic management.
- 6.5.3 Prior to commencing any Trunk Road Incident Support Service Operations, all Trunk Road Incident Support Service personnel shall be suitably trained in appropriate areas, including:
- (i) driver training,
 - (ii) vehicle and equipment checks and vehicle familiarisation,
 - (iii) network and route familiarisation,
 - (iv) understanding of the all purpose Trunk Road and motorway network,
 - (v) roles and responsibilities of the Traffic Scotland Operator, Emergency Services, Trunk Road Incident Support Service and Incident Support Units,
 - (vi) legal responsibilities and powers,
 - (vii) Airwave communication,
 - (viii) emergency traffic management,
 - (ix) knowledge of hazardous materials,
 - (x) scenarios,
 - (xi) what to do at road traffic collisions,
 - (xii) how to undertake carriageway clearance,

- (xiii) Safety Inspections and Patrols,
- (xiv) scene preservation and Incident management,
- (xv) broken down and abandoned vehicles – vehicle recovery service,
- (xvi) administrative procedures,
- (xvii) preparation of health and safety risk assessments and dynamic risk assessments,
- (xviii) communication skills,
- (xix) first aid, and
- (xx) conflict resolution.

The scope and provision of such training shall be agreed in writing by the Director prior to the commencement of Operations and shall be in line with the standards agreed by the Director.

- 6.5.4 The Trunk Road Incident Support Service patrol staff shall participate in joint training exercises with relevant Operational Partners.
- 6.5.5 Trunk Road Incident Support Service personnel shall carry at all times photographic identification cards provided by the Operating Company, the details of which shall be subject to the written consent of the Director. The cards shall display as a minimum full name, company, position and employee number.
- 6.5.6 Trunk Road Incident Support Service personnel shall be professionally attired including the wearing of appropriately badged, uniform style clothing which shall be subject to the written consent of the Director in accordance with Appendix 32/1 of the Specification.

6.6 Vehicles and Equipment

- 6.6.1 The type of vehicles to be provided by the Operating Company and their equipment shall be as stated in the Specification.
- 6.6.2 Trunk Road Incident Support Service vehicles shall have a global positioning system that provides the Operation Company's Incident Liaison Officer with a "live" location and identification facility to enable the effective tasking of resources and monitoring of Operations. The Operating Company shall provide the relevant Network Operations provider with a live feed to this data and all necessary supporting information to allow this live feed to be integrated into the Traffic Scotland Service systems.
- 6.6.3 Trunk Road Incident Support Service vehicles shall use the Trunk Road Incident Support Service Type 1 vehicle requirement as detailed in the Specification. Any temporary vehicles engaged for the service shall be clearly identified as such by the use of temporary markings complying with the Type 2 vehicle requirement as detailed in the Specification.
- 6.6.4 The Operating Company shall provide a communications link between the Trunk Road Incident Support Service personnel, the Traffic Scotland Operator, the Police and the Incident Liaison Officer which provides a swift and reliable means for the notification of Incidents.

6.7 Airwave Communication

- 6.7.1 The Trunk Road Incident Support Service shall use an encrypted digital radio communications system known as Airwave. The Operating Company shall utilise this equipment as a dedicated communication system between Trunk Road Incident Support Service personnel, the Traffic Scotland Control Centre, the Incident Liaison Officer and the Police.
- 6.7.2 In order to carry out the services required, the Operating Company shall be required to apply for, acquire and operate a TETRA Encryption Algorithm 2 sub-user licence for use with this communication system. The Operating Company shall be solely responsible for the procurement of, and conforming to any conditions of, this licence.
- 6.7.3 The Operating Company shall comply with the various codes of practice that apply to this licence. These codes, guidance on the Airwave sharers list and TETRA Encryption Algorithm 2 licensing are available from the OFcom website at <http://licensing.ofcom.org.uk/radiocommunication-licences/business-radio/guidance-for-licensees/airwave-emergency-services/airwave/>.
- 6.7.4 The Operating Company shall develop an approved code of practice for Airwave in compliance with *Traffic Scotland Airwave Users Guide/Operating Protocols and Procedures*.
- 6.7.5 The Operating Company shall indemnify the Director against any claims arising as a result of negligence or any other action on its part, relating to the use, storage and compliance of Airwave equipment and the Operating Company's TETRA Encryption Algorithm 2 licence.

6.8 The Trunk Road Incident Support Service Plan

- 6.8.1 The Operating Company shall prepare and submit a Trunk Road Incident Support Service plan to the Director as part of the Incident Response Plan.

The Operating Company's procedures and method statements contained within its Management System shall cover:

- (i) traffic management,
 - (ii) traffic delay monitoring and reduction,
 - (iii) assistance in the removal of vehicles and provision of fuel for stranded vehicles,
 - (iv) repair of Defects, and
 - (v) removal of objects and debris causing a hazard.
- 6.8.2 The Trunk Road Incident Support Service plan shall be separate from, but suitably integrated with, the Incident Response Plan and be cross referenced where required with the procedures contained in the Incident Response Plan. The plan shall include the following headings:
- (i) Operating Company management structure,
 - (ii) communication systems,
 - (iii) Police and Traffic Scotland Operator liaison and key contacts,
 - (iv) schedule of resources and staff rotas,
 - (v) vehicle and equipment log including locations,

- (vi) resource training and performance appraisal, and
- (vii) reporting and evaluation.

The Operating Company shall continuously review its Trunk Road Incident Support Service plan and at intervals not exceeding three months, shall submit the plan to the Director for written consent.

6.9 Communication with the Traffic Scotland Control Centre

- 6.9.1 On reaching the scene of an Incident, the Trunk Road Incident Support Service patrol shall report the time of arrival, the nature of Incident and its estimated duration to the Traffic Scotland Control Centre and Incident Liaison Officer.
- 6.9.2 Once the Incident is cleared, the patrol shall report the time of departure off-task and confirm the nature of the Incident to the Traffic Scotland Control Centre and Incident Liaison Officer.
- 6.9.3 If the Incident is expected to last more than 30 minutes, the patrol shall provide regular updates to the Traffic Scotland Control Centre, the relevant Police control rooms and Incident Liaison Officer. Such information shall be supplied within 10 minutes of receipt of information.

7. INCIDENT SUPPORT UNITS

7.1 General

- 7.1.1 Incident Support Units shall provide the Incident Response service within the Unit. When required, the Incident Support Unit shall provide an Incident Response service on those routes patrolled by the Trunk Road Incident Support Service.
- 7.1.2 The Incident Support Units shall be managed and operated by the Operating Company to provide Incident Response Operations:
 - (i) on all sections of the Unit outwith the designated routes of the Trunk Road Incident Support Service,
 - (ii) on all Trunk Road Incident Support Service routes outwith the hours stated in paragraph 6.3.1 of this Part, and
 - (iii) on all Trunk Road Incident Support Service Routes during its normal operational hours when required.

7.2 Primary and Secondary Functions of the Incident Support Units

- 7.2.1 The primary functions of Incident Support Units are:
 - (i) under Police instruction, making Incidents safe through the application of temporary traffic management,
 - (ii) relieving congestion and removing hazards to safety by clearance of debris from traffic lanes and hard shoulders,
 - (iii) where Trunk Road infrastructure is damaged as a result of an Incident, undertaking immediate repairs in accordance with the requirements of Schedule 7 Part 1,
 - (iv) assessing the scene and securing the attendance of additional or specialist resources where the task is beyond the Incident support team's capabilities,

- (v) providing a communications link between the Incident site and the Operating Company's Incident Liaison Officer,
- (vi) reporting abandoned or broken down vehicles to the Operating Company's Incident Liaison Officer,
- (vii) offering assistance to broken down vehicles including assisting in removing broken down vehicles to safe locations and offering fuel, and
- (viii) liaising with the Operating Company's Incident Liaison Officer and with Police control rooms and the Traffic Scotland Operator, and individual Police officers at Incidents as required.

7.2.2 Subject to there being no impact on the provision of the primary functions, the Incident Support Units may undertake secondary functions as part of the Operating Company's operations including:

- (i) Safety Patrols and Safety Inspections,
- (ii) maintenance Operations such as cleaning signs, drainage clearance and litter picking, and
- (iii) making safe or repairing Category 1 Defects,

in accordance with the requirements of Schedule 7 Part 1.

7.2.3 The Incident Liaison Officer shall keep Records of all occasions where Incident Support Units from other Units respond to Incidents on this Unit. Such Incidents shall be excluded from all relevant Performance Indicators.

The Incident Liaison Officer shall ensure instances are recorded where Incident Support Units are not able to attend Incidents outwith the Unit.

7.2.4 Where Incident Support Unit patrols are unable to respond to an Incident, both within and outwith the Operating Company's own Unit, the Operating Company shall immediately notify the Traffic Scotland Operator and Director of such circumstances.

7.3 Resource Requirements, Competence and Training

7.3.1 Sufficient, suitably qualified and experienced personnel shall be available at all times to carry out the Incident Support Units' duties.

7.3.2 The Incident Support Units' personnel shall possess appropriate qualifications in road maintenance and traffic management.

7.3.3 Prior to commencing any Incident Support Unit Operations, the Operating Company shall provide sufficient training for Incident Support Units personnel on its plans and procedures for delivery of the requirements of this Part. Such training shall cover:

- (i) driver training,
- (ii) vehicle and equipment checks and vehicle familiarisation,
- (iii) network familiarisation,
- (iv) understanding of the all purpose Trunk Road and motorway network,
- (v) roles, responsibilities and scope of Incident Support Units service,
- (vi) roles and responsibilities of relevant Operational Partners including the Traffic Scotland Operator, Emergency Services, Trunk Road Incident Support Service, including legal responsibilities and powers,

- (vii) Airwave communication
- (viii) emergency traffic management,
- (ix) hazardous materials training,
- (x) operational response strategies and scenarios,
- (xi) road traffic collisions training,
- (xii) carriageway clearance training,
- (xiii) Safety inspections and Safety Patrols,
- (xiv) scene preservation and incident management,
- (xv) broken down and abandoned vehicles – vehicle recovery service,
- (xvi) administrative procedures,
- (xvii) preparation of health and safety risk assessments and dynamic risk assessments,
- (xviii) communication skills,
- (xix) first aid,
- (xx) conflict resolution, and
- (xxi) general maintenance Operations and procedures.

The scope and provision of such training shall be agreed in writing by the Director prior to the commencement of Operations and shall be in line with the standards agreed by the Director.

- 7.3.4 The Incident Support Unit personnel shall participate in joint training exercises with relevant Operational Partners.
- 7.3.5 Incident Support Unit personnel shall carry at all times photographic identification cards provided by the Operating Company. The cards shall display as a minimum full name, company, position and employee number.

7.4 Vehicles and Equipment

- 7.4.1 The type of vehicles and the equipment to be provided within them by the Operating Company shall be as stated in the Specification.
- 7.4.2 Incident Support Unit vehicles shall have a global positioning system that provides the Operation Company's Incident Liaison Officer with a "live" location and identification facility to enable the effective tasking of resources and monitoring of Operations. If requested by the Director, the Operating Company shall provide the relevant Network Operations provider with a live feed to this data and all necessary supporting information to allow this live feed to be integrated into the Traffic Scotland Service systems.
- 7.4.3 Incident Support Unit vehicles shall use the Trunk Road Incident Support Service Type 1 vehicle requirements as detailed in the specification. Any temporary vehicles engaged for the service shall be clearly identified as such by the use of temporary markings complying with the Type 2 vehicle requirements as detailed in the Specification.

7.5 Incident Support Units Plan

7.5.1 The Operating Company shall submit to the Director an Incident Support Units plan which shall be part of the Incident Response Plan.

The Operating Company's procedures and method statements contained within its Management System shall cover:

- (i) traffic management,
- (ii) traffic delay monitoring and reduction,
- (iii) assistance in the removal of vehicles and provision of fuel,
- (iv) repair of Defects, and
- (v) removal of objects and debris.

7.5.2 The Incident Support Units plan shall be separate from, but suitably integrated with the Incident Response Plan and be cross referenced where required with the procedures contained in the Incident Response Plan. The plan shall include the following headings:

- (i) Operating Company management structure,
- (ii) communication systems,
- (iii) Police and Traffic Scotland Operator liaison and key contacts,
- (iv) schedule of resources and staff rotas,
- (v) vehicle and equipment log including locations,
- (vi) resource training and performance appraisal, and
- (vii) reporting and evaluation.

The Operating Company shall continuously review its Incident Support Units plan and at intervals not exceeding three months, shall submit the plan to the Director for written consent.

7.6 Reporting to the Incident Liaison Officer

7.6.1 On reaching the scene of an Incident, the Incident Support Unit shall report the time of arrival, the nature of Incident and its estimated duration to the Incident Liaison Officer.

7.6.2 Once the Incident is cleared, the patrol shall report the time of departure off-task and confirm the nature of the Incident to the Incident Liaison Officer.

7.6.3 If the Incident is expected to last more than 30 minutes, the patrol shall provide regular updates to the Incident Liaison Officer. Such information shall be supplied to the relevant Operational Partners within 10 minutes of receipt of information.

8. PARTICULAR REQUIREMENTS IN RESPECT OF SPILLAGE AND DEPOSIT OF HAZARDOUS OR SENSITIVE MATERIAL

8.1.1 The following allocation of responsibilities applies to all Incidents involving the spillage or deposit of hazardous or sensitive material:

- (i) the Emergency Services have the primary responsibility for establishing a safe situation at an Incident site involving the deposit of hazardous or sensitive materials,
- (ii) the Emergency Services shall have primary responsibility for co-ordinating the removal of body parts,
- (iii) the Emergency Services will have the primary responsibility for identification of chemicals, noxious substances and other hazardous or sensitive material to ensure the safety of the public and the personnel dealing with the Incident. If the Emergency Services consider the Incident site to be low risk due to the nature, quantity and location of such spillages or deposits, the Operating Company shall undertake the identification and safe removal of any chemicals, noxious substances and other hazardous or sensitive material under the supervision of the Emergency Services including any body fluids not removed by the Emergency Services,
- (iv) the Operating Company shall not enter an area containing chemicals, noxious substances, body fluids, body parts, and other hazardous or sensitive material until such time as the Emergency Services have confirmed that they require assistance and that it is safe to do so,
- (v) the Operating Company shall deploy suitably trained resources to deal with spillages or deposit of chemicals, noxious substances, body fluids or other hazardous or sensitive materials onto the Unit,
- (vi) the Operating Company's Incident Response Resources shall include facilities for the identification, management, removal and disposal of chemicals, noxious substances, body fluids and other hazardous and sensitive material,
- (vii) the Operating Company shall liaise as necessary with the Scottish Environmental Protection Agency to ensure that identification, management, removal and disposal of waste materials is undertaken in accordance with current best practice guidance to minimise risk to the environment, and
- (viii) the Operating Company shall ensure pollution control measures in accordance with *Pollution Prevention Guideline 22* issued by the Scottish Environmental Protection Agency are available for use.

9. PARTICULAR REQUIREMENTS IN RESPECT OF STRUCTURES

9.1 General

9.1.1 For any Incident affecting Structures outwith the responsibility of the Director, the Operating Company shall liaise with and, subject to an Order provide support to, relevant Operational Partners.

9.1.2 The Operating Company's Incident Response Operations relating to Incidents involving Structures shall, in accordance with the Specification, include:

- (i) temporary props,
- (ii) supports,
- (iii) barriers,

- (iv) diversion signs,
 - (v) trench crossing units, and
 - (vi) steel plates.
- 9.1.3 The Operating Company shall liaise with Transport Scotland and the Traffic Scotland Operator as detailed in Annex 7.3/A of this Part.
- 9.1.4 The Operating Company shall have access to secondary and back-up Incident Response Resources for temporary bridging, temporary bridge propping, heavy craneage, temporary barriers, demolition, access platforms and diving.
- 9.1.5 Following the provision of initial Incident Response Resources, the Operating Company shall provide secondary and back-up Incident Response Resources in respect of Structures to:
- (i) assess the safety and stability of a damaged Structure,
 - (ii) assess whether its use or stability is put at risk and if the safety of the public is endangered,
 - (iii) arrange and implement footway and cycleway diversions,
 - (iv) make safe damaged parapets and barriers,
 - (v) clear detached non structural elements where there is a risk of them falling to the carriageway or navigable watercourse below,
 - (vi) install traffic barriers to prevent vehicular access to and across Structures following a Critical or Major Incident that renders the Structure potentially unsafe,
 - (vii) make safe electrical supplies to Structures including damaged signs, gantries, high mast lights and other Structures,
 - (viii) fence to prevent public access to damaged Structures,
 - (ix) fence damaged parapets and walls,
 - (x) install temporary barriers to achieve the appropriate containment following damage to parapets and safety fence,
 - (xi) provide special access to investigate damaged or unsafe Structures,
 - (xii) implement weight or traffic restrictions to certain vehicle types on Structures,
 - (xiii) set up signing for short or long term diversion routes, and
 - (xiv) alleviate and avert flooding to Structures and take measures to prevent further damage due to scour.
- 9.1.6 Where Incidents require:
- (i) Design for remedial measures,
 - (ii) the assessment of damage, its effect on load carrying capacity and the ability to remain in service, or
 - (iii) Design of temporary works for existing Structures,
- these Operations shall be subject to an Order.

10. REPORTING OF INCIDENTS

10.1 Critical and Major Incidents

- 10.1.1 The names, contact telephone numbers and e-mail details of the Director's, Traffic Scotland Operator and Performance Audit Group staff to be contacted will be notified to the Operating Company in writing by the Director during the Mobilisation Period and will include outwith Normal Working Hours telephone numbers where applicable.
- 10.1.2 On becoming aware of a Critical or Major Incident the Incident Liaison Officer shall first take such actions as are necessary to arrange the response to such Incident and then immediately contact the Traffic Scotland Operator and the appropriate Director's staff member(s) as stated in Annex 7.3/A of this Part. The Operating Company shall provide sufficient information to enable the Traffic Scotland Operator and Director's staff member(s) to be able to brief the Scottish Ministers and the media with as full an account of events as quickly as possible.

10.2 Minor Incidents

- 10.2.1 On becoming aware of a Minor Incident that has the potential to escalate to a Critical Incident, cause significant delay or cause risk to the public or workers, the Operating Company shall notify the relevant Operational Partners as stated in Annex 7.3/A of this Part.

10.3 Road Traffic Incidents Involving Fatalities

- 10.3.1 In addition to the reporting requirements stated in Annex 7.3/A of this Part for Major and Critical Incidents, where an Incident involves fatalities, the Incident Liaison Officer shall immediately notify the staff stated in Annex 7.3/D of this Part, providing brief details of the Incident.
- 10.3.2 Within 24 hours of any fatal Incident, the Operating Company shall submit a detailed report by electronic copy using part 1 of the fatal accident notification form detailed in Annex 7.3/D of this Part to the appropriate Director's staff referred to in the Annex.
- 10.3.3 A joint site observation at the location shall be undertaken by the Operating Company, the Director and the Police, within 25 Working Days of the Incident. Within five Working Days of the site visit having been carried out, the Operating Company shall submit a detailed report using part 2 of the fatal accident notification form detailed in Annex 7.3/D of this Part to the Director within five Working Days. The report shall include all correspondence relating to the Incident and potential causal factors including the maintenance, historic site data, weather conditions and any other information relevant to the location of the Incident.
- 10.3.4 In the event of a fatal Incident inquiry being held, the Operating Company shall, subject to an Order:
- (i) assist the Director, provide all available information, and
 - (ii) attend the inquiry to be examined on matters of fact.

11. POST INCIDENT DEBRIEFING

11.1 General

- 11.1.1 No later than 30 days after each Critical or Major Incident, the Operating Company shall:

- (i) review its Disruption Risk Management Plan and propose improvements to the Director,
- (ii) coordinate debriefing activities with relevant Operational Partners as required, and
- (iii) coordinate debriefing activities with other operating companies as required.

11.1.2 No later than 25 Working Days after the commencement of each Annual Period, the Operating Company shall submit an annual report reviewing the impact of Incidents on the Unit for the previous Annual Period.

12. INCIDENT DATA

12.1 General

12.1.1 The Incident Liaison Officer shall ensure that all data stated within this Part is collected, maintained and updated at all times.

12.1.2 All data and other relevant information collected by the Operating Company in implementing its:

- (i) Disruption Risk Management Plan,
- (ii) Incident Response Plan,
- (iii) Incident Response Operations,
- (iv) Trunk Road Incident Support Service plan, and
- (v) Incident Support Units plan,

shall be stored within the Integrated Roads Information System database in accordance with the Instructions for Use of the Management of Incidents Function in IRIS. Where such Records are not captured electronically, the data required shall be manually logged into the Integrated Roads Information System within 24 hours of the data being collected by the Operating Company.

Records not required to be stored in the Integrated Roads Information System shall be retained in accordance with Schedule 5 Part 2, including the daily record sheet to be maintained by the Operating Company in the format provided in Annex 7.3/C of this Part for both the Trunk Road Incident Support Service and the Incident Support Units activities.”

This is Annex 7.3/A to Schedule 7 Part 3 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 3

INCIDENT RESPONSE

ANNEX 7.3/A – Notification of Incidents

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 3

INCIDENT RESPONSE - ANNEX 7.3/A – NOTIFICATION OF INCIDENTS

No Notification of Major, Critical and Minor Incidents

Time of Day	Who to contact	Major Incident			Critical Incident			Minor Incident		
		By Whom	How	When	By Whom	How	When	By Whom	How	When
Normal Working Hours (Mon 0800 - Fri 1800)	CAT1	TRISS or ILO	Telephone	Immediately	TRISS or ILO	Telephone	Immediately			
	TSOp	TRISS or ILO	Telephone*	Immediately	TRISS or ILO	Telephone*	Immediately	TRISS or ILO	Telephone*	Immediately
	ILO	TRISS or ISU	Telephone	Immediately	TRISS or ISU	Telephone	Immediately	TRISS or ISU	Daily Record Sheet	End of shift
	TRT	ILO	Telephone	Immediately						
	TEM	ILO	Email	Immediately	ILO	Email	Immediately			
Outwith Normal Working Hours	CAT1	TRISS or ILO	Telephone	Immediately	TRISS or ILO	Telephone	Immediately			
	TSOp	TRISS or ILO	Telephone*	Immediately	TRISS or ILO	Telephone*	Immediately	TRISS or ILO	Telephone*	Immediately
	ILO	TRISS or ISU	Telephone	Immediately	TRISS or ISU	Telephone	Immediately	TRISS or ISU	Daily Record Sheet	End of shift
	TEM	ILO	Email	Immediately	ILO	Email	Immediately			

Note: In addition to the notification of Major, Critical and Minor Incidents above, the Operating Company must also follow and implement the guidance provided in Annex 7.3/D in the notification of road traffic Incidents involving fatalities.

Type of Service or Role

CAT1 – Category 1 responder in accordance with the Civil Contingencies Act 2004

TSOp – Traffic Scotland Operator

ILO – Incident Liaison Officer

TRT – Transport Resilience Team - The primary purpose of the TRT is to support the operational response by the Operating Company and report to the Scottish Ministers on the issues and actions taken.

TEM – Transport Emergencies Mailbox – Mailbox used to provide information to Transport Scotland staff alerting them to issues or possible situations to enable them to respond accordingly – TransportEmergencies@transport.gov.scot

Contact Mode

Telephone* – TRISS personnel contact the TSOp via Airwave Radio

Daily Record Sheet – see Annex 7.3/C

This is Annex 7.3/B to Schedule 7 Part 3 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 3

INCIDENT RESPONSE

ANNEX 7.3/B – Designated Trunk Road Incident Support Service Routes

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 3

INCIDENT RESPONSE

ANNEX 7.3/B – Designated Trunk Road Incident Support Service Routes

A9 from Tore, through Inverness, to Daviot.

A96 from Inverness to Inverness Airport roundabout.

A82 from Longman Roundabout to the junction with General Booth Road.

This is Annex 7.3/C to Schedule 7 Part 3 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 3

INCIDENT RESPONSE

ANNEX 7.3/C – Daily Record Sheet

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 3

INCIDENT RESPONSE

ANNEX 7.3/C – Daily Record Sheet

Patrol Routes:

Date: **Day:**

Operative Names:

1. No. of Incidents attended (Line out for each attended)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

2. Incident Call Outs - Insert Reference Number

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

3. Incident(s) of Note - Insert Reference Number

1.	2.
3.	4.

4. Defect Identification - Insert Reference Number

1.	5.
2.	6.
3.	7.
4.	8.

5. Roadside Assistance to Public

Route and Location	Nature	Time Spent (Minutes)
1.		
2.		
3.		
4.		

6. Assistance Rendered to Police (other than Incident Call Outs)

Route and Location	Nature	Time Spent (Minutes)
1.		
2.		
3.		
4.		

7. Safety Patrol(s)

Route	Duration	No. of Faults/Issues
1.		
2.		
3.		
4.		

8. Updates for the Traffic Scotland Operator and other agencies

(for example - required Lane closures, Severe Weather, excess surface water)

Time(s)	Route and Location	Nature
1.		
2.		
3.		
4.		

9. Any other information not shown previously (continue overleaf if required).

Completed Daily Logs shall be forwarded to the Operating Company at the end of each shift.

This is Annex 7.3/D to Schedule 7 Part 3 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 3

INCIDENT RESPONSE

ANNEX 7.3/D – Fatal Accident Notification

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 3

INCIDENT RESPONSE

ANNEX 7.3/D – Fatal Accident Notification

FATAL ACCIDENT NOTIFICATION (PART 1)

ACCIDENT REFERENCE



ACCIDENT DETAILS

Locus					
Route No and c/way type		Grid Reference			
Time		Day		Date	
Council Area		Police Area		Police Ref No	
Weather			Road Condition		
Road Works			Light condition		

DESCRIPTION OF CIRCUMSTANCES

VEHICLE DETAILS

CASUALTY DETAILS

Prepared by:

Date

Sent to:

TS Area Manager

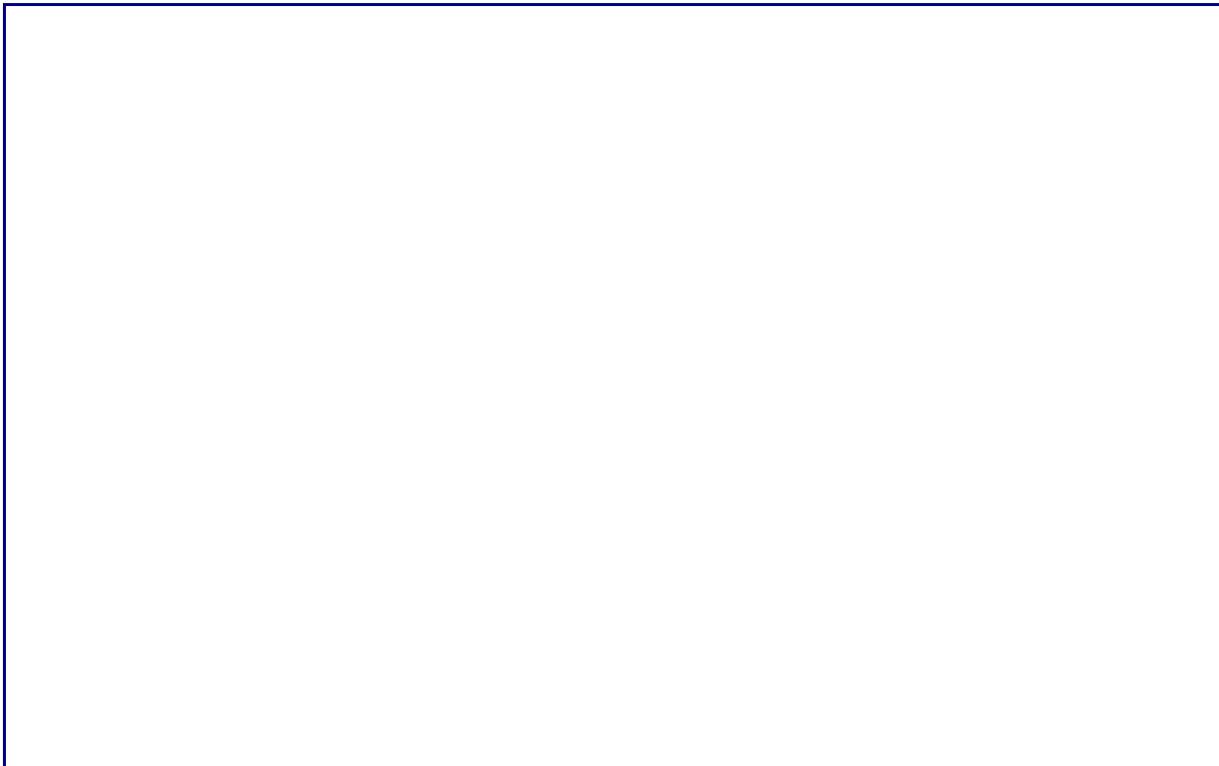
TS Strategic Road Safety Officer

* The Operating Company shall inform Transport Scotland's area manager, network manager, area network manager and strategic road safety officer immediately by email after the Incident and submit this form within 24 hours.

** At an appropriate time after the Incident, ordinarily within 28 days, the Operating Company should arrange a suitable date to visit the site with representatives from Transport Scotland's accident investigation team and the Police to record the nature of the locus and establish whether any further details have come to light. The site visit is intended to ascertain at that time whether an AIP investigation is worthwhile. Following the site visit, Part 2 of this form shall be completed and submitted electronically to Transport Scotland.

FATAL ACCIDENT NOTIFICATION

LOCATION PLAN



PHOTOGRAPHS

<p><i>No of photos at OC's discretion</i></p>	
	<p><i>No of photos at OC's discretion</i></p>

FATAL ACCIDENT NOTIFICATION

DETAILS OF EMERGENCY RESPONSE OPERATIONS UNDERTAKEN BY THE OPERATING COMPANY

ADDITIONAL NOTES

FATAL ACCIDENT NOTIFICATION (PART 2)



JOINT SITE OBSERVATIONS

ACCIDENT REFERENCE

--

ACCIDENT DETAILS

Locus				
Route No and c/way type		Grid		
Time		Day		Date
Council		Police Area		Police Ref No
Weather			Road	
Road Works			Light	

SITE VISIT DETAILS

Day/Date and time of inspection			
Weather at time of site		Road	
Attendees at meeting			

OVERALL DESCRIPTION OF THE LOCUS AND SITE OBSERVATIONS

--

C/Way type and width		Road Surface	
Speed Limit		Road Studs	
Is kerbing present?		Drainage type	
Is footway present?		Verge width	
Carriageway markings		Street Lighting	
Road signs or safety barrier present		Other street furniture	
Pedestrian Crossing		Vehicle hit object off c/way	

3 YEAR ACCIDENT HISTORY (IF APPLICABLE)

--

FATAL ACCIDENT REPORT FORM SUPPLEMENTARY PHOTOGRAPHS

--	--

SUMMARY

As a result of discussions and information gathered from the site visit as well as consideration given to the concentration and level of accidents throughout the network it is suggested that:

Tick as appropriate

- a) An accident investigation report is undertaken as part of the current year's programme.
- b) An accident investigation study is not required at this time.
- c) A copy of the Police fatal accident report is obtained when it becomes available.

Prepared by: Date

Sent to: TS Area Manager
 TS Strategic Road Safety Officer

- ⇒ A copy of the form should be retained by the OC and copies submitted to TS and the Police.

FATAL ACCIDENT PROCEDURES GUIDE

The Operating Company shall notify the following personnel within Transport Scotland in the case of an Incident involving a fatality **immediately by e-mail**:

Area Manager

Network Manager

National Network Manager

Strategic Road Safety Officer (strategicroadsafety@transportscotland.gsi.gov.uk)

A detailed report using Part 1 of this form shall be submitted to the Area Manager and Strategic Road Safety Officer by electronic copy within **24 hours** of the incident. It shall include, but not be limited to, the following information :

- ⇒ Location (preferably with plan)
- ⇒ Brief description of the circumstances
- ⇒ Photographs of the location if possible
- ⇒ Details of casualties and vehicles involved
- ⇒ Details of road conditions
- ⇒ Information such as weather, road works, and furniture
- ⇒ Outline of the emergency response undertaken
- ⇒ Information about the deceased or the Police incident reference number

A joint site observation at the locus should be undertaken by the Operating Company's AIP representative, Transport Scotland's Strategic Road Safety Officer and the Police, ordinarily within 28 days, of the incident.

A detailed report using Part 2 of the incident reporting procedure shall be submitted to the Area Manager and Strategic Road Safety Officer within **1 week** of the site visit having been carried out.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 4

LANDSCAPE DEVELOPMENT PROCESS AND DELIVERABLES

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 4

LANDSCAPE DEVELOPMENT PROCESS AND DELIVERABLES

1. LANDSCAPE DEVELOPMENT PROCESS

1.1 General

1.1.1 No later than 30 days after the start of the Mobilisation Period, the Director will provide the Operating Company with a copy of the current landscape management information including the:

- (i) landscape strategy,
- (ii) landscape inventory,
- (iii) landscape maintenance plan,
- (iv) Landscape Development Plan, and
- (v) annual landscape management report.

1.1.2 The Operating Company shall ensure the landscape inventory, including detailed inspection records and maintenance requirements, are complete and kept up to date at all times.

1.1.3 The Operating Company's Landscape Architect shall be responsible for the preparation and delivery of:

- (i) the landscape strategy,
- (ii) the Landscape Development Plan, and
- (iii) the annual landscape management report.

1.1.4 The Operating Company shall continuously update the landscape inventory in the routine maintenance and management function of the Integrated Roads Information System and ensure the landscape inventory is complete and accurate at all times.

1.1.5 The Operating Company shall submit one hard copy and one Electronic Copy with drawings in portable document format (pdf) to the Director of the:

- (i) landscape strategy,
- (ii) Landscape Development Plan, and
- (iii) annual landscape management report,

at the timescales detailed within this Part.

1.1.6 The Operating Company's Landscape Architect shall attend all landscape and environmental progress meetings arranged with the Director. The Landscape Architect shall also attend as necessary meetings with others, including the Director's staff and any third party organisations or individuals, concerning landscaping issues related to the Unit.

1.2 Landscape Strategy

1.2.1 During the first Annual Period, the Operating Company shall prepare a detailed landscape strategy for the Unit which takes full account of the landscape strategy

developed by the previous operating company. The detailed landscape strategy shall be submitted for the Director's consent no later than 50 Working Days before the end of the first Annual Period.

1.2.2 The Operating Company shall annually review and update the landscape strategy and submit this for the Director's consent no later than 25 Working Days prior to the end of the second Annual Period. For subsequent Annual Periods the Operating Company shall comply with the annual timetable outlined in Annex 7.4/D of this Part.

1.2.3 The landscape strategy shall be produced on a Route by Route basis and shall identify and describe in detail the specific landscape character of the Route. This shall include the relevant features and elements within and adjacent to each Route.

1.2.4 The landscape strategy shall comply with Transport Scotland's mandatory landscape policy, *Fitting Landscapes – Securing more sustainable landscapes*, and include:

- (i) clear cross-referencing to the landscape inventory,
- (ii) Ordnance Survey based location plans clearly showing the Routes and areas under review,
- (iii) brief descriptions of the Routes and areas under review, highlighting the general character of the extent of the Route, the appearance and value of the landscape, comments on the quality of the landscape and any ecological elements which may impact on, or be affected by, the maintenance and management of the Trunk Road soft estate,
- (iv) a range of photographs depicting the various character zones,
- (v) the perceived main issues relating to the continued management of the Trunk Road soft estate in this location, taking into account topics such as safety, visual aspects, general amenity and biodiversity. This may also require consideration of the interests and elements of land immediately adjacent to, but outwith, the Trunk Road boundary,
- (vi) consideration of any relevant, related studies, plans or strategies for the location, including Route action plans and Route accident reduction plans,
- (vii) general proposals for the future development of the environment related to the Trunk Road, and
- (viii) any other issues that may be relevant to the landscape strategy, including information and advice from third parties such as Scottish Natural Heritage and relevant National Park Authority.

1.3 Landscape Development Plan

1.3.1 The Operating Company shall take account of the landscape strategy and the annual landscape management report in preparing the Landscape Development Plan. The Landscape Development Plan shall be developed to ensure compliance with the Specification and take account of the opportunities identified in the schedule of landscape opportunities referred to in this Part.

1.3.2 No later than 50 Working Days before the end of the first Annual Period, the Operating Company shall prepare and submit a Landscape Development Plan for the second Annual Period for the Director's consent.

- 1.3.3 The Operating Company shall review, revise and update the Landscape Development Plan during each subsequent Annual Period. For subsequent Annual Periods the Operating Company shall comply with the annual timetable outlined in Annex 7.4/D of this Part.
- 1.3.4 When developing the Landscape Development Plan, the Operating Company shall ensure compliance with Transport Scotland's mandatory landscape policy *Fitting Landscapes – Securing more sustainable landscapes*
- 1.3.5 When developing the Landscape Development Plan, the Operating Company shall take account of Transport Scotland's commitment to the protection and enhancement of biodiversity through all relevant legislation and documents including:
- (i) the Scottish Government's biodiversity strategy *Scotland's Biodiversity – It's in your hands*.
 - (ii) *the 2020 Biodiversity Challenge Document*
- 1.3.6 The Landscape Development Plan shall include:
- (i) recommendations in accordance with the landscape strategy,
 - (ii) recommendations resulting from the annual landscape management report, and
 - (iii) recommendations resulting from the Operating Company's landscape opportunities inspections referred to in this Part.
- 1.3.7 For each potential landscape scheme and intervention identified in the schedule of landscape opportunities, the Landscape Development Plan shall include:
- (i) Route number,
 - (ii) Scheme name,
 - (iii) location reference,
 - (iv) outline details of the proposed Operations,
 - (v) justification for selection,
 - (vi) cost estimate, and
 - (vii) priority rating (high, medium and low) with relevant justification.

1.4 Schedule of Landscape Opportunities

- 1.4.1 The Operating Company's Landscape Architect shall prepare and maintain a schedule of landscape opportunities and use this in the preparation of the Landscape Development Plan. The schedule of landscape opportunities may be requested by the Director and shall be informed by the results of the regular landscape opportunities inspections and by ad hoc inspections and visits to the network by the Landscape Architect and through discussion with other relevant operatives.
- 1.4.2 The landscape opportunities inspections shall be undertaken by the Landscape Architect regularly at intervals not exceeding 12 months throughout the Unit to identify potential opportunities to improve the landscape associated with the Trunk Road network.

1.4.3 The schedule of landscape opportunities shall:

- (i) record potential landscape schemes and interventions, and
- (ii) identify Landscape Areas which could be improved by changing the maintenance requirements detailed in Schedule 7 Part 1

The Operating Company shall provide an Estimated Bid Value for all potential landscaping schemes and interventions as well as cost estimates for improvements to maintenance requirements.

1.4.4 Both of the categories identified in paragraph 1.4.3 of this Part shall also be considered and developed in terms of:

- (i) general amenity,
- (ii) more efficient and more appropriate maintenance,
- (iii) road safety and reliability,
- (iv) improved biodiversity and nature conservation,
- (v) sustainability and climate change, and
- (vi) any other issues identified as significant by the Landscape Architect.

1.4.5 When identified within the schedule of landscape opportunities, the Operating Company shall submit to the Director as part of the Landscape Development Plan a report detailing the proposed changes to the maintenance requirements for Landscape Areas. The report shall include a full description of the benefits of the proposed change and any cost savings or cost increases associated with undertaking the alternative maintenance activities. Subject to an Order and when consented to by the Director, the Operating Company shall implement the proposed changes to the maintenance requirements.

1.5 Landscape Scheme Implementation Information

1.5.1 The Operating Company shall meet with the Director following submission of the Landscape Development Plan to review each potential landscape scheme and intervention identified. The Director shall determine which of the proposed landscape Schemes or management variations shall be developed further and inform the Operating Company.

1.5.2 The Operating Company shall prepare a Statement of Intent and Value for Money Assessment for those potential Schemes, interventions and alterations to maintenance Operations approved in principle by the Director for further consideration as part of the Landscape Development Plan.

1.5.3 The Statement of Intent shall include the following information:

- (i) description of the proposal,
- (ii) large scale plan showing the context of the area,
- (iii) more detailed plans and drawings with supporting sketches or photographs illustrating the specific proposal,
- (iv) written description of the relevant objectives,
- (v) demonstration of the proposal's relationship to the landscape strategy for the relevant Route or section of Route,

- (vi) detailed cost estimate,
- (vii) details and justification of the priority rating given, and
- (viii) Design and construction programme.

1.5.4 Subject to an Order, the Operating Company shall design and execute landscape Schemes and interventions.

1.5.5 The Operating Company shall provide and maintain throughout each Annual Period, a detailed programme for all landscape Schemes and interventions that have been ordered. The detailed programme shall include the:

- (i) period of construction,
- (ii) activities to be undertaken, and
- (iii) estimated completion dates.

This programme shall be submitted to the Director in accordance with the requirements of Schedule 4 Part 1.

1.6 Annual Landscape Management Report

1.6.1 The Operating Company shall submit an annual landscape management report to the Director in accordance with the annual timetable outlined in Annex 7.4/D of this Part. The report shall provide a review of all landscaping Operations undertaken within the Unit during that Annual Period.

1.6.2 The annual landscape management report shall correspond to the various Routes within the Unit as described in the routine maintenance and management function of the Integrated Roads Information System.

1.6.3 The annual landscape management report shall record:

- (i) the general condition of the Landscape Areas within the Unit including a short statement for each Route,
- (ii) details of the effectiveness of maintenance Operations undertaken,
- (iii) details of the effectiveness of the changes consented to by the Director, that have been made to the maintenance Operations as stated in paragraph 1.4.5 of this Part,
- (iv) a summary of all Operations undertaken as part of the Landscape Development Plan including a statement on the progress of all approved schemes,
- (v) details of the additional Landscape Areas added into the Operating Company's maintenance programme resulting from the completion of Schemes undertaken by others working on behalf of the Director,
- (vi) the performance of any contractors and sub-contractors responsible for landscape Operations within the Unit,
- (vii) a statement advising the Director on the progress on delivering the requirements of the landscape strategy,
- (viii) the Operating Company's achievement of the requirements of the pesticide plan referred to in this Part, specifying the general level of pesticide use throughout the Unit and noting locations subjected to significant

applications. If requested by the Director, pesticide record forms that are produced by the Operating Company in accordance with the landscape specification shall be included as an annex to the annual landscape management report,

- (ix) details of the Operations undertaken in support of enhancing biodiversity and nature conservation, including works associated with creating, repairing or improving any wildlife mitigation measures within the Unit,
- (x) a statement from the Operating Company detailing any problems or specific unforeseen issues that have affected the delivery of the landscaping requirements which may have arisen during the period covered by the annual report and recommendations for action required,
- (xi) details of any significant amendments made by the Operating Company to the landscape inventory in the routine maintenance and management function of the Integrated Roads Information System,
- (xii) a grassland report to include the activities identified in Annex 7.4/A of this Part, setting out the Operating Company's achievements and any concerns and opportunities for the grassed areas in each section of Route identified within the landscape strategy,
- (xiii) an injurious species report referring to the approved injurious species management plan required by this Part, detailing the location, nature and extent of the injurious species infestations that can be found within the Unit and the success or otherwise of the measures taken by the Operating Company to reduce the area and extent of the known infestations, and
- (xiv) a summary report of road kill records within the Unit recorded in the routine maintenance and management function of the Integrated Roads Information System and details of the impact of the species identified within the report.

1.6.4 As part of its annual landscape management report, the Operating Company shall prepare and submit a pesticide plan including targets for the potential reduction of pesticide usage through the use of alternative, but equally effective, proposals. The pesticide plan shall take account of the relevant requirements contained within the Specification.

1.6.5 As part of its annual landscape management report, the Operating Company shall prepare and submit an injurious species management plan. The injurious species management plan shall include:

- (i) details contained within the injurious species report of infestations within Unit,
- (ii) proposals for achieving a reduction in infestation during the next Annual Period, and
- (iii) proposed targets for reducing infestations during the next Annual Period.

The Director shall consider the report and confirm the Operating Company's targets for reducing infestations during the next Annual Period. All areas of infestation shall be recorded within routine maintenance and management function of the Integrated Roads Information System and updated annually before the end of each Annual Period.

- 1.6.6 As part of its annual landscape management report, the Operating Company shall prepare and submit a deer management plan including the activities identified in Annex 7.5/C of this Part, setting out the Operating Company's achievements in respect of deer management and its strategy and future proposals for the next Annual Period.

This is Annex 7.4/A to Schedule 7 Part 4 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 4

LANDSCAPE DEVELOPMENT PROCESS AND DELIVERABLES

ANNEX 7.4/A – Grassland Report

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 4

LANDSCAPE DEVELOPMENT PROCESS AND DELIVERABLES

ANNEX 7.4/A – Grassland Report

1.1 Grassed areas, in the various categories recorded, make up the largest single landscape element within the Trunk Road boundary and the management and maintenance of these areas requires the commitment of a considerable level of resource during each Annual Period. The intention of the grassland report is for the Operating Company's Landscape Architect to identify the general condition of the grassed areas within the Unit and ensure that the appropriate maintenance operations undertaken meet the objectives of the area as recorded in the Landscape Strategy.

1.2 As well as any location specific objectives which may have been determined, other more general objectives could include:

- (i) safety,
- (ii) integration with the wider landscape,
- (iii) encouragement of ecological diversity, and
- (iv) visual interest and amenity.

1.3 It is not intended that the report will record every individual area of grass under each category but rather provide an overview of the broad condition of the grass within defined character zones and in response to specific areas of interest, such as junctions, settlements and the like.

The grassland report shall include:

- (i) general description of existing grassland within unit,
- (ii) specific Route grassland areas,
- (iii) current maintenance regime,
- (iv) issues arising from current maintenance regime,
- (v) high amenity grass areas,
- (vi) amenity grass areas,
- (vii) general grass,
- (viii) rough grass,
- (ix) specific issues,
- (x) sward health,
- (xi) sight line areas,
- (xii) weed content,

- (xiii) erosion/over-run,
- (xiv) bulbs, and
- (xv) specific opportunities for amending grass maintenance regimes.

This is Annex 7.4/B to Schedule 7 Part 4 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 4

LANDSCAPE DEVELOPMENT PROCESS AND DELIVERABLES

ANNEX 7.4/B – NOT USED

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 4

LANDSCAPE DEVELOPMENT PROCESS AND DELIVERABLES

ANNEX 7.4/B – NOT USED

This is Annex 7.4/C to Schedule 7 Part 4 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 4

LANDSCAPE DEVELOPMENT PROCESS AND DELIVERABLES

ANNEX 7.4/C – Deer Management Plan

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 4

LANDSCAPE DEVELOPMENT PROCESS AND DELIVERABLES

ANNEX 7.4/C – Deer Management Plan

The Code of Practice for Deer Management ("the Code") was introduced by the *Wildlife and Natural Environment (Scotland) Act 2011* (WANE Act). The Code applies to all land owners and managers of land where wild deer are found which includes areas within the Trunk Road boundary.

The Code advises that there is a difference between collaboration in the deer management planning process and cooperation in sharing practical deer management tasks. While some direct action may be required by the Operating Company in order to meet its requirements in accordance with this Part, this will be subject to the normal controls and approvals under this Contract.

The fundamental objective of the Code is to set out recommended action for sustainable deer management and to make provision for collaboration between landowners and managers, thereby ensuring that any negative impacts of deer on the public interest are minimised as far as practicable and deer welfare is safeguarded.

The Operating Company's annual deer management plan shall be prepared as part of its annual landscape management report. The deer management plan shall be prepared in accordance with this Annex and the provisions of the Code. The Operating Company shall structure its deer management plan on the following basis:

- (i) strategy – a broad strategy covering the general approach adopted by the Operating Company to managing deer across the Unit. This section should identify the general areas within the Unit where wild deer may come into conflict with the road network (specifying the area and Routes involved); include good practice proposals for collaborating in deer management planning with adjacent landowners or other interested parties and recommend methods to be employed for meeting the requirements of the Code,
- (ii) part A – this shall form a record of works undertaken and achievements made by the Operating Company over the preceding Annual Period in respect of deer management within the Unit. This may include the planned installation or maintenance of specific deer mitigation facilities, liaison with adjacent landowners or other interested parties, action to resolve Incidents or reports received concerning deer accessing the Unit and general comment on the efficacy of current mitigation measures in place across the Unit, and
- (iii) part B – proposals and actions intended to be implemented during the following Annual Period in accordance with the Operating Company's deer management plan strategy. This may include areas and Routes to be targeted for deer management, details of deer mitigation proposals and the likely actions involved and proposals for future liaison and collaboration with adjacent landowners and other interested parties.

In terms of possible organisations with whom collaboration or liaison may be required in respect of deer management, the Operating Company may need to consider approaching the local Deer Management Group(s) (if applicable), Scottish Natural Heritage, The Forestry Commission, National Trust for Scotland, local authorities and the like in addition to any relevant local individual landowners or estates, although this should not be considered an exhaustive list.

This is Annex 7.4/D to Schedule 7 Part 4 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 4

LANDSCAPE DEVELOPMENT PROCESS AND DELIVERABLES

ANNEX 7.4/D – Landscape Development Deliverables Annual Timetable

Table 7.4.D.1 - Landscape Development Deliverables Annual Timetable

Latest Date	Action
31 May	Operating Company to submit draft annual landscape management report
30 June	Director to provide feedback on draft annual landscape management report
31 July	Operating Company to submit finalised annual landscape management report and revised landscape strategy
15 August	Operating Company to submit draft Landscape Development Plan for review by the Director
15 September	Meeting to take place between the Director and the Operating Company to provide feedback on the Landscape Development Plan and agree which proposals should be further developed along with an outline programme and to agree outline programme
15 November	Operating Company to submit Statements of Intent for each agreed proposal together with a detailed delivery programme for final approval. Each approved intervention will then follow as a detailed bid.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 5

NEW ROADS AND STREET WORKS ACT 1991

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 5

NEW ROADS AND STREET WORKS ACT 1991

1. DEFINITIONS

1.1 General

- 1.1.1 For the purposes of this Schedule, the term "Road Works Authority" has the meaning given to it in section 108 (1) and the term "Register" has the meaning given to it in section 112A of Part IV of the *New Roads and Street Works Act 1991*.
- 1.1.2 The *New Roads and Street Works Act 1991* shall include any amendment thereto.

2. DELEGATED FUNCTIONS

2.1 Operating Company Obligations

- 2.1.1 The Statutory Functions of Scottish Ministers under the *New Roads and Street Works Act 1991* which are delegated to, and shall be undertaken by, the Operating Company are listed in Annex 7.5/A of this Part.
- 2.1.2 In addition to those Statutory Functions and the services in relation to the Scottish Ministers' functions listed in Annex 7.5/A of this Part, the Operating Company shall carry out the functions described in paragraphs 4 to 10 of this Part.
- 2.1.3 The Operating Company shall comply with all statutory requirements including statutory instruments, statutory codes of practice, orders, notices, directions, consents or permissions made or given in relation to any matter concerned with the *New Roads and Street Works Act 1991*, including any subsequent revision or replacement of the relevant document.
- 2.1.4 The *Transport (Scotland) Act 2005* amended sections of the *New Roads and Street Works Act 1991* and the Operating Company shall comply with these amended sections.

The Operating Company shall also comply with non-statutory codes of practice and non-statutory parts of codes of practice referred to in the *New Roads and Street Works Act 1991*. The Operating Company shall also take account of the best practice guidance and any advice notes that are issued by any authorised body in relation to the *New Roads and Street Works Act* in relation to works on the Trunk Road, as are applicable from time to time. These documents are available from the Scottish Roadworks Commissioner's website at www.roadworksscotland.gov.uk.

3. GENERAL REQUIREMENTS

3.1 Coordination and Monitoring

- 3.1.1 The Operating Company shall coordinate the execution of works of all kinds affecting the Unit or part of the Unit, including all Undertakers' work activities, and shall monitor the performance of all Undertakers to fulfil the requirements of section 118 sub-sections (1), (2), (2A), (3) and (3A) of the *New Roads and Street Works Act 1991*.

4. THE SCOTTISH ROAD WORKS REGISTER

4.1 Establishing and Maintaining the Register

4.1.1 In accordance with the requirements of sections 112A and 126A of the *New Roads and Street Works Act 1991*, the Operating Company shall employ competent persons to populate the Scottish Road Works Register and keep the register up to date at all times in accordance with the requirements of Section 112B of the *New Roads and Street Works Act 1991*.

The Director will pay the costs of any prescribed fees required under section 112A of the *New Roads and Street Works Act 1991* arising from use of the Scottish Road Works Register.

4.1.2 No later than 30 days prior to the Commencement of Services Date, the Operating Company shall provide and thereafter maintain until the Contract Expiry Date the necessary telecommunication links and three suitable computer terminals, loaded with the appropriate software, permissions and logins, to provide a connection to the Scottish Road Works Register.

After the Operating Company has completed the connection to the Scottish Road Works Register, the Operating Company shall have access to a copy of the Scottish Road Works Register for the Unit.

4.1.3 During the 30 days prior to the Commencement of Services Date, the Operating Company shall:

- (i) become fully familiar with the operation of the Scottish Road Works Register, and
- (ii) liaise daily with the previous operating company and attend meetings in relation to any Undertakers' works which are due to continue into, or commence during, the first Annual Period.

4.1.4 No later than 15 days prior to the Commencement of Service Date, the Operating Company shall collect any other *New Roads and Street Works Act 1991* records from the previous operating company.

4.1.5 No later than five Working Days after the Commencement of Service Date, the Operating Company shall bring the Scottish Road Works Register up to date in compliance with section 112B of the *New Roads and Street Works Act 1991* and keep it up to date throughout the duration of this Contract. At the end of the Contract Period, or as otherwise requested in writing by the Director, the Operating Company shall pass any paper information from the Register pertaining to the Unit to the Director.

The Director and the Performance Audit Group shall be entitled to have access to the Scottish Roadworks Register for the Unit at any time.

5. THE NATIONAL STREET GAZETTEER

5.1 Establishing and Maintaining the Gazetteer

5.1.1 The National Street Gazetteer is a database of all the roads in Scotland held in the Scottish Roadworks Register. Each local roads authority is responsible for producing the gazetteer of roads within its area, including Transport Scotland's Trunk Road and motorway network. Each local roads authority's data consists of two files:

- (i) the gazetteer file, referred to as the "base gazetteer", which includes the Trunk Road network; amendments to this file can only be carried out by the local roads authority, and
- (ii) the associated data file which the local roads authority populates only for its own network; the Operating Company is responsible for populating and maintaining the information relating to the Trunk Road network contained in this data file.

5.1.2 The local roads authorities hold area gazetteer group meetings regularly. The Operating Company shall attend these meetings to communicate any changes necessary to the "base gazetteer" to the local roads authorities.

5.1.3 No later than 60 Working Days after the Commencement of Service Date, the Operating Company shall complete a review of:

- (i) data held in the National Street Gazetteer which relates to the Trunk Roads within the Unit,
- (ii) gazetteer data published in the Scottish Road Works Register by the local roads authorities, and
- (iii) the associated data for the Trunk Roads within the Unit.

5.1.4 Within this review period, the Operating Company shall:

- (i) update the National Street Gazetteer, or arrange for it to be brought up to date by the relevant local roads authorities,
- (ii) provide the necessary information to the local roads authorities to enable updating of the National Street Gazetteer where they are to carry this function out on behalf of the Operating Company, and
- (iii) ensure that the associated data for the Trunk Roads in the Scottish Road Works Register is up to date.

5.1.5 The Operating Company shall thereafter keep both the National Street Gazetteer and the Scottish Road Works Register up to date throughout the duration of this Contract, liaising with the local roads authority as required.

6. DESIGNATIONS

6.1 Review and Updating of Designations

6.1.1 No later than 30 days prior to the Commencement of Service Date, the Operating Company shall access the existing associated data relating to the Trunk Roads within the Unit which is held in the Scottish Road Works Register. This associated data includes:

- (i) the designation of traffic sensitive roads,

- (ii) the designation of roads and structures with special engineering difficulties,
- (iii) the designation of protected roads,
- (iv) the reinstatement categories, and
- (v) all non-statutory designations.

6.1.2 The Operating Company shall create the associated data where it is missing, submit it to the Scottish Roadworks Register and thereafter maintain the data and keep it under review and up to date throughout the duration of this Contract.

6.1.3 No later than 60 Working Days after the Commencement of Service Date and at quarterly intervals thereafter, the Operating Company shall provide a report to the Director recommending any changes required to the associated data. The Operating Company shall obtain the written consent of the Director before adding, removing or amending any associated data.

The Operating Company shall carry out all the requirements of the *New Roads and Street Works Act 1991* and any other necessary procedures for making, amending and withdrawing associated data relating to any part of the Trunk Roads within the Unit.

7. INSPECTIONS, INVESTIGATORY WORK AND THE NATIONAL CORING PROGRAMME

7.1 Requirements

7.1.1 In accordance with the requirements of sections 131 and 134 of the *New Roads and Street Works Act 1991* and paragraph 7.1.2 of this Part, and prior to carrying out any inspections and investigatory work, the Operating Company shall prepare and submit to the Director for his written consent:

- (i) its processes for, and anticipated work programme of, inspections, based on historical volumes of Undertakers' works, and
- (ii) its processes for, and anticipated work programme of, investigatory works, coring and testing, based on historical failure rates for reinstatements of Trunk Roads within the Unit carried out by Undertakers.

A draft programme shall be provided to the Director no later than 15 Working Days prior to the Commencement of Service Date and not later than 25 Working Days prior to the end of each Annual Period thereafter.

A final programme shall be provided to the Director not later than 15 Working Days after the start of each Annual Period.

The programme for the first Annual Period shall be prepared by the Operating Company in consultation with the previous operating company.

7.1.2 The Operating Company shall ensure that the reinstatements carried out by Undertakers do not materially affect the structure of the Trunk Road. The Operating Company shall carry out additional inspections and investigatory work to that identified in paragraph 7.1.1 of this Part.

The purpose of these additional inspections and investigatory works is to ensure that, as a minimum, the Operating Company shall undertake the following:

- (i) a detailed inspection during the initial reinstatement process of all reinstatements which have not previously been inspected in accordance with paragraphs 2.1.2 and 7.1.1 of this Part, thus ensuring that 100 percent of reinstatements within the Unit are inspected during the initial reinstatement process,
- (ii) a further detailed inspection within 25 Working Days of the date on which the excavation commenced, and
- (iii) coring of reinstatements under an Order where any Defects are observed.

7.1.3 In addition to these inspections and investigatory works, the Director may require the Operating Company to undertake further inspections and investigatory work, subject to an Order.

7.1.4 The Operating Company shall provide a report on, and analysis of, the results of all inspections and investigatory works as part of the quarterly report required in accordance with paragraph 10 of this Part, in a format acceptable to the Director. These reports shall be retained in a register which the Operating Company shall establish and thereafter maintain and keep up to date at all times throughout the duration of this Contract.

7.1.5 The national coring programme is carried out periodically throughout Scotland and is intended to ensure compliance with standards and to achieve continual improvement in the quality of reinstatement in accordance with section 131 of the *New Roads and Streetworks Act 1991*.

7.1.6 The Area Roads Authority and Utilities Committees manage the coring programme within each area. One local roads authority is designated as lead authority with responsibility for appointing one coring contractor and to coordinate the coring and report back to the Roads Authorities and Utilities Committee.

7.1.7 The Operating Company shall liaise with the:

- (i) local roads authorities,
- (ii) the lead authority as agreed by the Area Roads Authorities and Utilities Committee and relevant Undertakers,

regarding the national coring programme.

7.1.8 The Operating Company shall submit proposals for a coring programme to assist the national coring programme to the Director. The Director will consider the coring programme submitted by the Operating Company and issue an Order for any necessary coring.

One Electronic Copy and one paper copy of the results of the coring programme executed by the Operating Company shall be forwarded to the local roads authorities carrying out the national coring programme and the Performance Audit Group. A final report on each annual programme shall be submitted by the Operating Company to the Director.

7.1.9 Where Defects in reinstatements carried out by Undertakers are identified as a result of inspections and investigatory works, the Operating Company shall pursue the relevant Undertaker and require it to rectify such Defects within the period set

out in the relevant codes of practice, or if no period is set out, within 25 Working Days.

If the Undertaker fails to rectify the Defect within the required time, the Operating Company shall advise the Director and provide written recommendations for resolving the matter.

- 7.1.10 The Operating Company shall be responsible for identifying, and pursuing on behalf of the Director, all sums due to be paid by Undertakers to the Scottish Ministers, including inspections fees, charges and penalties for which Undertakers are liable under the *New Roads and Street Works Act 1991*.

8. DUTIES AS ROAD WORKS AUTHORITY AND BRIDGE AUTHORITY

8.1 Requirements

- 8.1.1 The Operating Company shall undertake the following duties to enable the Scottish Ministers to comply with their obligations as road works authority and bridge authority as conferred by sections 122 and 147 of the *New Roads and Street Works Act 1991*:

- (i) liaising with Undertakers about plans and sections of proposed work associated with Structures on the Unit identified as special engineering difficulties,
- (ii) submitting the designs and specifications for such work, with recommendations regarding approval, for the Director's consent,
- (iii) no later than three Working Days after receipt, referring the Undertaker's proposals, together with the Operating Company's related recommendations, to the Director for his written consent.

The Director will communicate his decision on such matters to the Operating Company in writing:

- (a) within two Working Days of receipt for works relating to a service pipe, service line, overhead electric lines or telecommunication apparatus, and
- (b) within 10 Working Days of receipt for any other case,
- (iv) in accordance with the timescales stated in section 121 of Schedule 6 (7)(2) of the *New Roads and Streetworks Act 1991*, Undertaker's proposals have to be considered and replied to as follows:
 - (a) within seven days of receipt of the original application for works relating to a service pipe, service line, overhead electric lines, or telecommunication apparatus, or
 - (b) within one month of receipt of the original application in any other case.

The Operating Company shall ensure that the period between receipt of Undertakers' proposals and its subsequent written communication of the Director's decision to the Undertakers does not exceed these timescales. In accordance with the *New Roads and Streetworks Act 1991*, the plan and section of works is deemed to have been accepted if a response is not made within these timescales,

- (v) monitoring the progress of the Undertaker's work in, on, or adjacent to, Trunk Road Structures on the Unit at all stages and reporting to the Director when the Operating Company considers that:
 - (a) progress is not in accordance with the programme, or
 - (b) work is not being carried out in accordance with the designs and specifications consented to by the Director, and
- (vi) updating the structures management function of the Integrated Roads Information System and obtaining as-built records of all work from the Undertaker, which shall be stored in the Operating Company's Structures Record file for the relevant Structure.

9. PRIVATE APPARATUS

9.1 Operating Company Obligations

9.1.1 No later than 30 days prior to the Commencement of Service Date, the Operating Company shall liaise with the previous operating company and collect details of any existing private apparatus installed in accordance with the permission to execute road works under section 109 of the *New Roads and Street Works Act 1991*, section 61 of the *Roads (Scotland) Act 1984* or under any other agreement with the Scottish Government or Scottish Ministers.

9.1.2 A driver information system is operated under a licence from the Scottish Ministers to install, maintain, operate, alter and upgrade equipment used for monitoring traffic conditions on Trunk Roads within the Unit. The equipment consists of sensors fixed to bridge parapets over the carriageway or located in verges and transmission boxes at the side of roads.

The licensed operator is required to give a minimum of six weeks' notice to the Director of the installation of additional equipment. The Director will notify the Operating Company accordingly within three Working Days of receipt of such notice.

If the Operating Company requires the removal or protection of the licensed operator's equipment by the operator in order to allow the maintenance of, or alteration to, any part of the Unit, the Operating Company shall issue a written instruction to the licensed operator giving 25 Working Days' notice of the requirement for such removal or protection to be arranged.

If the licensed operator fails to adequately remove or protect its equipment, the Operating Company shall take all necessary measures to remove or protect the equipment and shall seek to recover all costs incurred from the licensed operator.

The Operating Company shall notify the Director in writing of any such failures by the licensed operator and any failure by the licensed operator to meet the Operating Company's costs.

Any such unrecovered Operating Company costs shall be met by the Scottish Ministers.

9.1.3 The current licensed operator is TrafficMaster.

10. OTHER DUTIES

10.1 Liaison, Monitoring and Performance Reporting

10.1.1 The Operating Company shall attend the meetings of the relevant Area Road Authority or Authorities and Utilities Committees, as formally constituted under the statutory requirements of the *New Roads and Street Works Act 1991*, whose areas of responsibility include the Trunk Roads within the Unit.

These meetings are held four times per year. The Operating Company shall attend these meetings to ensure the effective coordination of Operations, Works and work by authorised contractors and Undertakers on the Unit and or the execution of Operations.

10.1.2 Not later than 30 days prior to the Commencement of Service Date, the Operating Company shall make recommendations for the Director's consent on the liaison arrangements required between itself, other operating companies and agencies of the Scottish Government to deliver the requirement of the *New Roads and Streetworks Act 1991*.

10.1.3 Not later than 30 days prior to the Commencement of Service Date, in liaison with the Director and the other operating companies, the Operating Company shall:

- (i) devise common Monitoring Indicators for the Undertakers' work, and
- (ii) devise common Performance Indicators for its own work,

and obtain the Director's written consent to them. Following receipt of the Director's consent, the Operating Company shall add the indicators to the appropriate lists in Schedule 5 Part 6, Annexes 5.6/A and 5.6/B.

10.1.4 The Operating Company shall follow the principles that underpin the Performance Indicators and Monitoring indicators listed in Schedule 5 Part 6 when devising the new common indicators, which shall be designed to demonstrate the Operating Company's performance, and that of the Undertakers, in relation to their obligations under the *New Roads and Street Works Act 1991* and relevant statutory instruments, statutory and non-statutory codes of practice, regulations, orders, notices, directions, consents, permissions, best practice guidance documents and advice notes as referred to in this Part.

10.1.5 The Operating Company shall use these common Monitoring Indicators and Performance Indicators and the Scottish Road Works Commissioner's performance indicators to provide monitoring information and performance assessment reports to the Director on a quarterly and annual basis.

10.1.6 The Operating Company shall provide a report on the performance of the Operating Company against the Scottish Road Works Commissionaire's indicators on an annual basis. The request for such a report will be received by the Director from the Scottish Road Works Commissioner and passed to the Operating Company within seven Working Days of receipt. The Operating Company shall propose any amendments and additions which are necessary to improve the indicators and which will assist in the improvement of its performance, for the Director's consent, within the timescale stipulated by the Director.

10.1.7 The Operating Company shall attend quarterly meetings and one annual meeting to discuss the quarterly and annual reports respectively and any other meetings that

are necessary in order to coordinate and ensure compliance with the Scottish Road Works Register and the Scottish Road Works Commissioner's requirements.

10.1.8 The Operating Company shall provide the annual report not later than 50 Working Days after the end of each Annual Period. The annual report shall:

- (i) include a review of the effectiveness of the Monitoring Indicators in measuring the performance of the Undertakers,
- (ii) include a review of the effectiveness of the Performance Indicators in measuring its own performance,
- (iii) include a review of the performance of the Operating Company against the Scottish Road Works Commissioner's indicators, and
- (iv) propose any amendments and additions which are necessary to improve the indicators and which will assist in the improvement of both its own and the Undertakers' performance, for the Director's consent.

10.1.9 When consented to in writing by the Director, the Operating Company shall implement the additional and revised Monitoring Indicators or Performance Indicators and the lists in Schedule 5 Part 6, Annexes 5.6/A and 5.6/B shall be updated accordingly.

10.1.10 Commencing 75 Working Days after the start of the first Annual Period and thereafter throughout the duration of this Contract, the Operating Company shall provide the Director with a quarterly report not later than 25 Working Days after the end of each quarter. The quarterly report shall include the amounts due from each Undertaker during the preceding three month period, together with any necessary information to support the reason for the fees, charges and penalties.

10.2 Enforcement

10.2.1 The Operating Company shall monitor the Scottish Roadworks Register for potential fixed penalty notices.

10.2.2 The Operating Company shall, on a set of dates to be confirmed in writing with the Director, on a monthly basis:

- (i) discuss potential fixed penalty notices with the Director,
- (ii) provide the necessary background,
- (iii) make recommendations to the Director for their issue or retention,
- (iv) on receipt of consent from the Director to the recommendations, notify the relevant party of the intention to pursue a fixed penalty notice and manage the process up to the point of issuing the penalty, and
- (v) make recommendations to the Director for the final fixed penalty issue or retention.

10.2.3 The Operating Company shall provide support to the Director at any hearings held in connection with disputed notices.

10.2.4 The Operating Company shall also create potential fixed penalties, where appropriate, for notices which have not been identified automatically by the Scottish Roadworks Register.

The issuing of fixed penalty notices shall be undertaken by the Director.

This is Annex 7.5/A to Schedule 7 Part 5 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 5

NEW ROADS AND STREET WORKS ACT 1991

ANNEX 7.5/A – Statutory Functions and Other Services

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 5

NEW ROADS AND STREET WORKS ACT 1991

ANNEX 7.5/A – Statutory Functions and Other Services

Notes to Table 7.5.A.1

Items in the Statutory Functions column marked # are in the current Contracting Out Order (1996). Items marked #* will be additions to the new Contracting Out Order due to commence before the Commencement of Service Date. In the event of the new Contracting Out Order not commencing before the Commencement of Service Date, the sections so marked will be treated as "Service to the Minister" until such time as the Contracting Out Order commences.

Where any particular section requires the Operating Company to "Assist the Minister as requested", if the assistance requires physical works to take place on the network, the request for assistance will be accompanied by an Order for the required activity.

Table 7.5.A.1 New Roads and Street Works Act 1991				
Section of NRSWA	Provision	Statutory Functions	Services in relation to Scottish Ministers functions	Operating Company 's Duties
109	Permission to Execute Road Works		#	Advise the Scottish Ministers on conditions to be attached to permission, payment of fees, withdrawal of permission and or removal of apparatus
		#		Exercise the functions conferred on the Scottish Ministers as road works authority by this section except for the power to grant permissions which must not be exercised without the prior consent of the Scottish Ministers
			#	Assist the Scottish Ministers, as requested by the Scottish Ministers

Table 7.6.A.1 New Roads and Street Works Act 1991				
Section of NRSWA	Provision	Statutory Functions	Services in relation to Scottish Ministers functions	Operating Company 's Duties
110	Prohibition of unauthorised road works		#	Advise the Scottish Ministers of any offences committed, with details and recommendations for further actions
				Assist the Scottish Ministers, as requested by the Scottish Ministers
112B	Duty to enter information on the Scottish Road Works Register	#*		Carry out the functions of the Scottish Ministers as road works authority or as roads authority under sub section
113(1)	Advance notice of certain works and compliance with requirements imposed by the roads authority		#	Monitor the Scottish Roadworks Register for notices of Undertakers' works on the network and processing any such notices
113 (4)		#*		Carry out the functions of the Scottish Ministers as road works authority under sub section (4)
113(5)		#		Advise the Scottish Ministers of any offences committed with details and recommendations for further actions
			Assist the Scottish Ministers, as requested by the Scottish Ministers	
114(1)	Notice of starting date of works and prohibition on starting works without notice except with consent of road works authority		#	Monitor the Scottish Roadworks Register for notices of undertakers works on the network and processing any such notices
114(4)		#*		Carry out the functions of the Scottish Ministers as road works authority under sub section (4)
114(5) and (6)			#	Advise the Scottish Ministers of any offences committed with details and recommendations for further actions
				Assist the Scottish Ministers, as requested by the Scottish Ministers

Table 7.5.A.1 New Roads and Street Works Act 1991				
Section of NRSWA	Provision	Statutory Functions	Services in relation to Scottish Ministers functions	Operating Company 's Duties
115(1) and (4)	Power to give directions as to timing of road works and duty to have regard to code of practice in exercising power	#		Exercise the functions conferred on the Scottish Ministers as road works authority by this section
115(1A)	Power to give directions as to timing of subsisting road works and duty to have regard to code of practice in exercising power	#*		Exercise the functions conferred on the Scottish Ministers as road works authority by this section
115(2A) (3)			#	Advise the Scottish Ministers of any appeals against directions or offences committed, with details and recommendations for further actions Assist the Scottish Ministers, as requested by the Scottish Ministers
115A(1) (3)	Powers to give direction as to placing apparatus	#*		Exercise the functions conferred on the Scottish Ministers as road works authority by this section Advise the Scottish Ministers of any disputes
115A (5) (6)			#	Advise the Scottish Ministers of any appeals or offences committed, with details and recommendations for further actions Assist the Scottish Ministers, as requested by the Scottish Ministers
116	Notice of emergency works		#	Monitor the Scottish Roadworks Register for notices of Undertakers' works on the network and process any such notices Advise the Scottish Ministers of any offences committed, with details and recommendations for further actions Assist the Scottish Ministers, as requested by the Scottish Ministers

Table 7.5.A.1 New Roads and Street Works Act 1991				
Section of NRSWA	Provision	Statutory Functions	Services in relation to Scottish Ministers functions	Operating Company 's Duties
117(1) to (3) (7) and (9)	Restriction on works following substantial works for road purposes	#		Exercise the functions conferred on the <i>Scottish Ministers</i> as road works authority by this section
			#	Advise the Scottish Ministers of any disputes regarding withholding consent
			#	Advise the Scottish Ministers of any offences committed, with details and recommendations for further actions
117(6)			Assist the Scottish Ministers, as requested by the Scottish Ministers	
118	General duty of roads works authority to co-ordinate works	#		Exercise the functions conferred on the Scottish Ministers as road works authority by this section
119(1)	General duty of undertakers to co-operate with respect to the execution of road works	#*		Exercise the functions conferred on the Scottish Ministers as road works authority by this section
119A	Enforcement of S118 S119 : imposition of penalties		#	Advise the Scottish Ministers of any offences committed, with details and recommendations for further actions
				Assist the Scottish Ministers, as requested by the Scottish Ministers

Table 7.5.A.1 New Roads and Street Works Act 1991				
Section of NRSWA	Provision	Statutory Functions	Services in relation to Scottish Ministers functions	Operating Company 's Duties
120 (1)	Protected roads	#*		Exercise the functions conferred on the Scottish Ministers as road works authority by this section except for the power to designate which must not be exercised without the prior consent of the Scottish Ministers
120 (1)(4) and (6)			#	Advise the Scottish Ministers of the details of any proposed consents under this section and any disputes regarding consents
120(3)	Protected roads		#	Advise the <i>Scottish Ministers</i> of any fees recoverable from undertakers, with details and recommendations for further actions Advise the Scottish Ministers of any recommendation to designate a road
120 (3)(5) and (6)			#	Assist the Scottish Ministers, as requested by the Scottish Ministers Advise the Scottish Ministers of any expenses he may agree to contribute to undertakers, or disputes notified to him

Table 7.5.A.1 New Roads and Street Works Act 1991				
Section of NRSWA	Provision	Statutory Functions	Services in relation to Scottish Ministers functions	Operating Company 's Duties
121(2) to (4)	Supplementary provisions as to designation of protected roads		#	Assist the Scottish Ministers, as requested by the Scottish Ministers
			#	Advise the Scottish Ministers in respect of these subsections, with details and recommendations for further actions. Prepare appropriate directions to Undertakers for use by the Scottish Ministers
		#*		On consent from the Director, exercise the functions conferred on the Scottish Ministers as road works authority by this section
			#	Assist the Scottish Ministers, as requested by the Scottish Ministers
			#*	Carry out the functions of the Scottish Ministers as roads authority under sub section (6)
121(5)			#	Assist the Scottish Ministers, as requested by the Scottish Ministers
121 (6)		#*		Carry out the functions of the Scottish Ministers as roads authority under sub section (6)
122(1)	Roads with special engineering difficulties	#		Exercise the functions conferred on the Scottish Ministers as road works authority by this section except the power to designate which must not be exercised without the prior consent of the Scottish Ministers
122(6)		#		Carry out the functions of the Scottish Ministers as roads authority under sub section (6)

Table 7.5.A.1 New Roads and Street Works Act 1991				
Section of NRSWA	Provision	Statutory Functions	Services in relation to Scottish Ministers functions	Operating Company 's Duties
123(2)	Traffic-sensitive roads		#	Assist the Scottish Ministers, as requested by the Scottish Ministers
123(4)		#		Exercise the functions conferred on the Scottish Ministers as road works authority by this section except the power to designate without the consent of the Scottish Ministers
		#		Carry out the functions of the Scottish Ministers as roads authority under sub section (4)
124(2)	Undertaker to comply with directions given by traffic authority	#*		Make directions where appropriate for the Scottish Ministers as traffic authority under this section.
124(5)	Road works authority power to take steps where undertaker has failed to comply	#*		Take appropriate steps on behalf of the Scottish Ministers as roads authority under this section except insofar as they relate to the power to recover costs without the consent of the Scottish Ministers.
124(4) and (6)	Summary conviction		#	Advise the Scottish Ministers of any costs recoverable from undertakers, with details and recommendations for further actions Assist the Scottish Ministers, as requested by the Scottish Ministers Advise the Scottish Ministers of any offences committed, with details and recommendations for further actions

Table 7.5.A.1 New Roads and Street Works Act 1991				
Section of NRSWA	Provision	Statutory Functions	Services in relation to Scottish Ministers functions	Operating Company 's Duties
125(3) and (4)	Power to give notices to undertaker to mitigate and discontinue obstruction and to take necessary steps		#	Assist the Scottish Ministers, as requested by the Scottish Ministers
		#*		Serve notices as appropriate on behalf of the Scottish Ministers as road works authority under this section.
			#	Advise the Scottish Ministers of any non- compliance with a notice, and make recommendations for further action
125(2)	Summary Conviction		#	Advise the Scottish Ministers of any costs recoverable from undertakers, with details and recommendations for further actions
				Assist the Scottish Ministers, as requested by the Scottish Ministers
				Advise the Scottish Ministers of any offences committed, with details and recommendations for further actions
126 (1A) (2A)	Qualifications of supervisors and operatives:- Notification of names		#	Assist the Scottish Ministers, as requested by the Scottish Ministers
				Advise the Scottish Ministers of any instances where these powers should be used, with details and recommendations for further actions
126(3)	Qualifications of supervisors and operatives		#	Advise the Scottish Ministers of any offences committed, with details and recommendations for further actions

Table 7.5.A.1 New Roads and Street Works Act 1991				
Section of NRSWA	Provision	Statutory Functions	Services in relation to Scottish Ministers functions	Operating Company 's Duties
126A	Duty to ensure competence of employees		#	Assist the Scottish Ministers, as requested by the Scottish Ministers Assist the Scottish Ministers in ensuring that only competent employees are used for this function
127(1)	Undertaker to afford reasonable facilities to the road works authority	#*		Exercise the functions conferred on the Scottish Ministers as road works authority by this section
127(2)	Summary conviction		#	Advise the Scottish Ministers of any offences committed, with details and recommendations for further actions
129(3) and (4)	Undertaker to inform road works authority of completion of interim and permanent reinstatement		#	Assist the Scottish Ministers, as requested by the Scottish Ministers
129(6)	Summary conviction		#	Advise the Scottish Ministers of any offences committed, with details and recommendations for further actions
130(5)	Offence relating to materials, workmanship and standard of reinstatement		#	Assist the Scottish Ministers, as requested by the Scottish Ministers Advise the Scottish Ministers of any offences committed under any part of section 130, with details and recommendations for further actions

Table 7.5.A.1 New Roads and Street Works Act 1991				
Section of NRSWA	Provision	Statutory Functions	Services in relation to Scottish Ministers functions	Operating Company 's Duties
131(1)	Powers of road works authority in relation to reinstatement	#		Exercise the functions conferred on the Scottish Ministers as road works authority by this section
131(2)		#		Exercise the functions conferred on the Scottish Ministers as road works authority by this section and pass all costs received that are fixed fees in 131(2) to the Scottish Ministers
131(3) and (4)		#		Exercise the functions conferred on the Scottish Ministers as road works authority by this section, except insofar as they relate to the power to recover costs
131(3) and (4)			#	Advise the Scottish Ministers of any costs recoverable from Undertakers, with details and recommendations for further actions
132A	Powers of road works authority to require undertakers to resurface		#	Assist the Scottish Ministers, as requested by the Scottish Ministers
		#*		Exercise the functions conferred on the Scottish Ministers as road works authority or bridge authority by this section and the regulations referred to.
134	Inspection fees	#*		Exercise the functions conferred on the Scottish Ministers as roads works authority by this section and pass all fees received to the Scottish Ministers
135	Liability for cost of temporary traffic regulations		#	Advise the Scottish Ministers of any costs recoverable from Undertakers, with details and recommendations for further actions

Table 7.5.A.1 New Roads and Street Works Act 1991				
Section of NRSWA	Provision	Statutory Functions	Services in relation to Scottish Ministers functions	Operating Company 's Duties
137	Contributions to costs of making good long-term damage.		#	Assist the Scottish Ministers, as requested by the Scottish Ministers Advise the Scottish Ministers as road works authority or relevant authority of any costs recoverable from Undertakers, with details and recommendations for further actions
139	Duty to inform undertakers of location of apparatus		#	Assist the Scottish Ministers, as requested by the Scottish Ministers
140	Duty to maintain apparatus	#*		Exercise the functions conferred on the Scottish Ministers as road works authority or relevant authority by this section except insofar as they relate to the power to recover costs
141(1)	Liability for damage or loss caused		#	Advise the Scottish Ministers as road works authority or relevant authority of any costs recoverable from Undertakers, with details and recommendations for further actions Assist the Scottish Ministers, as requested by the Scottish Ministers
		#*		Advise the Scottish Ministers of any compensation recoverable from Undertakers, with details and recommendations for further actions On consent from the Scottish Ministers, exercise the functions conferred on the Scottish Ministers as road works authority or bridge authority by this section

Table 7.5.A.1 New Roads and Street Works Act 1991				
Section of NRSWA	Provision	Statutory Functions	Services in relation to Scottish Ministers functions	Operating Company 's Duties
142(2)	Works for road purposes likely to affect apparatus in the road		#	Assist the Scottish Ministers, as requested by the Scottish Ministers
		#*		Exercise the functions conferred on the Scottish Ministers as road works authority or bridge authority by this section
142(3)	Summary conviction		#	Advise the Scottish Ministers of any offences committed by the Scottish Ministers with details and recommendations for further actions
143(1)	Undertaker and bridge or roads authority to take steps where apparatus is affected by major works		#	Assist the Scottish Ministers, as requested by the Scottish Ministers
		#*		Exercise the functions conferred on the Scottish Ministers as road works authority or bridge authority by this section
143(3)(4)	Requirement to pay compensation in certain circumstances		#	Advise the Scottish Ministers of any compensation recoverable from, or due to, Undertakers, with details and recommendations for further actions
				Assist the Scottish Ministers, as requested by the Scottish Ministers

Table 7.5.A.1 New Roads and Street Works Act 1991				
Section of NRSWA	Provision	Statutory Functions	Services in relation to Scottish Ministers functions	Operating Company 's Duties
144(1)	Sharing of costs of necessary measures		#	Advise the Scottish Ministers of allowable costs to be borne by the Scottish Ministers.
		#*		On consent from the Scottish Ministers, exercise the functions conferred on the Scottish Ministers as road works authority or bridge authority by this section
144 (2)		#*		Exercise the functions conferred on the Scottish Ministers as road works authority or bridge authority by this section and the regulations referred.
144(3)			#	Advise the Scottish Ministers of any costs recoverable from Undertakers, with details and recommendations for further actions Assist the Scottish Ministers, as requested by the Scottish Ministers
147(4) and (5)	Consultation with bridge authority prior to execution of certain works, provision of reasonable facilities for bridge authority to monitor works, and compliance with directions of bridge authority	#*		Exercise the functions conferred on the Scottish Ministers as bridge authority by this section
147(6)	bridge authority to monitor works, and compliance with directions of bridge authority		#	Advise the Scottish Ministers of any offences committed, with details and recommendations for further actions

Table 7.5.A.1 New Roads and Street Works Act 1991				
Section of NRSWA	Provision	Statutory Functions	Services in relation to Scottish Ministers functions	Operating Company 's Duties
149(2) and (3)	Provisions as to reinstatement of sewers, drains or tunnels		#	Assist the Scottish Ministers, as requested by the Scottish Ministers
		#*		Exercise the functions conferred on the Scottish Ministers by these sections, except insofar as they relate to the power to recover costs without the prior consent of the Scottish Ministers
154	Offences		#	Advise the Scottish Ministers of any costs recoverable from Undertakers, with details and recommendations for further actions
				Assist the Scottish Ministers, as requested by the Scottish Ministers
				Advise the Scottish Ministers on further offences, with details and recommendations for further actions
154A	Fixed penalties offences for some section of part IV as shown in schedule 6A		#	Assist the Scottish Ministers, as requested by the Scottish Ministers
				Advise the Scottish Ministers when a fixed penalty notice may be issued
162(3)	Former controlled land		#	Advise the Scottish Ministers on failure to pay fixed penalty notices and recommendations for further actions
				Advise the Scottish Ministers in respect of indemnities, with details and recommendations for further actions
				Assist the Scottish Ministers, as requested by the Scottish Ministers

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

1. INTRODUCTION

1.1 General

- 1.1.1 Transport Scotland's management and maintenance of Structures requirements follow the asset management principles set out in *Management of Highway Structures: A Code of Practice* and Transport Scotland's *Asset Management Plan*.
- 1.1.2 Details of all Structures for which the Director is responsible for are contained in the structures management function of the Integrated Roads Information System.
- 1.1.3 This Schedule details the inspection and maintenance requirements to be undertaken by the Operating Company to:
- (i) maintain Structures in good and safe repair,
 - (ii) ensure Structures are safe for use, fit for purpose and can carry current traffic loads, and
 - (iii) facilitate the planning and prioritisation of maintenance Operations and Special Inspections.
- 1.1.4 The requirements of this Schedule apply to Structures for which the Director is responsible and which are contained in the structures management function of the Integrated Roads Information System.
- 1.1.5 The Operating Company shall include documented procedures in its Management System to deliver the requirements of this Part.

2. MAINTENANCE MANAGEMENT

2.1 Structures Management

- 2.1.1 In accordance with the requirements of Schedule 5 Part 4, the Operating Company shall appoint:
- (i) a Bridges Manager who shall be a member of the Operating Company's Core Management Team,
 - (ii) a Major Bridges Manager to deliver the requirements of Schedule 7 Part 7 who shall report directly to the Bridges Manager, and
 - (iii) a Gantry Manager to deliver the requirements of paragraph 8 of this Part who shall report directly to the Bridges Manager.

The Operating Company may combine the roles of the Major Bridges Manager and Gantry Manager. The Bridges Manager shall be a separate role.

2.2 The Structures Management Function of the Integrated Roads Information System

- 2.2.1 The structures management function of the Integrated Roads Information System database is used to record the information and programmes relating to the management, monitoring and maintenance of existing and proposed Structures. The

Operating Company shall use and update the structures management function of the Integrated Roads Information System database in accordance with the procedures specified in the system user manual and the *Transport Scotland Inspection Manual – Principal Inspections of Trunk Road Structures and Location System* as issued by the Director and as amended and re-issued by the Director from time to time. The structures management function of the Integrated Roads Information System shall be kept up to date by the Operating Company throughout the duration of this Contract.

2.2.2 The Operating Company shall update all data held in the structures management function of the Integrated Roads Information System, as follows:

- (i) within three Working Days of becoming aware of any new data or changes to existing data, particularly after any inspections of Structures have been undertaken, and
- (ii) when existing Structures including sign gantries have been:
 - (a) demolished or infilled,
 - (b) newly constructed,
 - (c) widened,
 - (d) maintained and subjected to remedial works, or
 - (e) strengthened and or improved.

2.3 Structures Maintenance Schedule

2.3.1 No later than 30 days prior to the Commencement of Service Date, the incoming Operating Company shall review the maintenance schedule of the outgoing operating company to assist in the Operating Company's development of its own maintenance schedule for this Contract. Maintenance schedule duties shall be undertaken at least twice per year in each Annual Period as follows:

- (i) at the end of the autumnal leaf fall (and no later than November), and
 - (ii) the beginning of summer (May or June),
- or additionally when required.

2.3.2 No later than 25 Working Days prior to the commencement of the first Annual Period and all subsequent Annual Periods, the Operating Company shall prepare a maintenance schedule and submit it to the Director for written consent. The maintenance schedule shall itemise the maintenance requirements for each Structure and associated Access Systems.

2.3.3 The Operating Company shall ensure that it has sufficiently trained staff available to undertake the duties in the agreed maintenance schedule.

2.3.4 A summarised example of the maintenance schedule is provided in Annex 7.6/A of this Part and includes provisions for recording:

- (i) the results of Structures Safety Inspections and tests,
- (ii) the actions taken including the dates these were taken and completed,
- (iii) the dates when maintenance is due to be carried out, and

- (iv) the updates to the maintenance requirements throughout the Contract Period.

2.3.5 Throughout the Contract Period, the Operating Company shall update the maintenance schedule within five Working Days of undertaking any work with:

- (i) the dates and details of the Structures Safety Inspections undertaken,
- (ii) the dates and details of any tests carried out,
- (iii) any other actions taken, and
- (iv) the dates when further maintenance is required.

The Operating Company shall also update the maintenance schedule when changes to maintenance are required to comply with the requirements of this Schedule.

2.3.6 Before commencing maintenance activities identified in the maintenance schedule each year, the Operating Company shall submit a programme to the Director and the Performance Audit Group which identifies the number of maintenance activities which are programmed to be carried out each month.

2.4 Maintenance and Operations Manuals and Health and Safety Files

2.4.1 The Operating Company shall review and update annually all maintenance and operations manuals and health and safety files for Structures. This review and update shall ensure all maintenance and operations manuals and health and safety files for Structures comply with current legislation and safe working practices and contain any changes to the maintenance requirements of the Structure.

The Operating Company shall prepare a report detailing the findings and changes made as part of the annual review. This report shall be submitted to the Director within three Working Days of the completion of the review.

2.4.2 The Operating Company shall notify the Director of missing maintenance and operations manuals and missing health and safety files for Structures which should be available. The Director shall issue an Order to the Operating Company stating his requirements for rectifying such occurrences.

2.4.3 No later than 15 Working Days after completion of any works to new or existing Structures by the Operating Company or by a Works Contractor, the Operating Company shall submit to the Director new and amended as-built records, including maintenance and operations manuals and health and safety files required by the *Design Manual for Roads and Bridges*.

3. INSPECTION REQUIREMENTS

3.1 General

3.1.1 The Operating Company shall undertake:

- (i) Structures Safety Inspections,
- (ii) General Inspections,
- (iii) Principal Inspections,
- (iv) Scour Inspections and Assessments, and
- (v) Special Inspections.

All inspections shall be undertaken in accordance with the standards and advice notes contained in the *Design Manual for Roads and Bridges* and the following Transport Scotland documents:

- (vi) *Transport Scotland Inspection Manual – Principal Inspections of Trunk Road Structures and Location System*,
- (vii) *Structures Management System user manual*, and
- (viii) *Inspections Further Data Collection Requirements*.

All Trunk Road Structures are subject to these inspection requirements, except where specifically excluded by the Director. All Principal Inspections of Structures with a span of greater than 10 metres shall be undertaken by a chartered civil or structural engineer.

- 3.1.2 Inspections on Structures that are accommodation bridges for private users shall include the road surface on the Structure and for a further five metres beyond either end of the Structure, together with any provided surface water drainage. Vehicular restraint systems, where provided, shall be inspected for a minimum of 30 metres from each terminal or anchorage at the parapet interface.

3.2 Structures Safety Inspections

- 3.2.1 Structures Safety Inspections shall be undertaken by the Operating Company at the same time as other inspection and maintenance duties.

Structures Safety Inspections shall be undertaken to identify any deficiencies which, if not rectified, represent or may result in:

- (i) a danger to the public and which therefore require immediate or urgent action,
- (ii) accidents,
- (iii) deterioration or behaviours indicating a reduction in load carrying capacity, and
- (iv) high repair costs.

- 3.2.2 The Operating Company shall undertake two types of Structures Safety Inspections:

- (i) random, and
- (ii) reactive.

The Operating Company shall undertake random Structures Safety Inspections during maintenance of Structures. When undertaking the random Structures Safety Inspection the Operating Company shall:

- (iii) observe the Structure,
- (iv) record any signs of problems or deficiencies, and
- (v) report them to the Bridges Manager.

The Operating Company shall undertake reactive Structures Safety Inspections after a problem or deficiency has been observed or reported by:

- (vi) any of the Operating Company's staff, or
- (vii) the Police or the public,

and report them to the Bridges Manager.

The Operating Company shall submit a monthly report to the Director's bridges manager detailing the findings of all random and reactive Structures Safety Inspections.

Before commencing General Inspections each year the Operating Company shall submit a programme to the Director and the Performance Audit Group which identifies the number of inspections which are programmed to be carried out each month.

- 3.2.3 The Operating Company shall identify, classify and record Defects observed as either Category 1 or Category 2 Defects in accordance with the requirements of Schedule 7 Part 1. The Operating Company shall take action appropriate to the category and severity of such Category 1 or Category 2 Defects.

3.3 General Inspections

- 3.3.1 The Operating Company shall undertake General Inspections at intervals not exceeding two years. This shall exclude any Structures on which a Principal Inspection has been carried out during the same Annual Period in which the General Inspection is due to be conducted.

- 3.3.2 The programme of General Inspections for each Structure shall be coordinated with the programme of Principal Inspections for each Structure using the following continuous six year inspection cycle:

- (i) Principal Inspection,
- (ii) General Inspection two years later,
- (iii) General Inspection four years later,
- (iv) Principal Inspection six years later.

The Operating Company shall use the existing cycle of inspections undertaken by the previous operating company as the basis for developing and implementing an inspection programme that shall meet these inspection requirements.

Before commencing General Inspections each year the Operating Company shall submit a programme which identifies the number of inspections which are programmed to be carried out each month to the Director and the Performance Audit Group.

- 3.3.3 When undertaking General Inspections, the Operating Company shall record the condition of every part of a Structure visible from the ground and deck level and, where necessary, access confined spaces including box girders and culverts.

General Inspections shall be recorded on a proforma provided within the structures management function of the Integrated Roads Information System. For any Defects found, the Defect description and priority ranking used shall be in accordance with the requirements in *The Inspection Manual for Highways Structures Volume 1* and the *Transport Scotland Inspection Manual – Principal Inspections of Trunk Road Structures and Location System*.

3.4 Principal Inspections

- 3.4.1 Structures for which Principal Inspections are required are listed within the structures management function of the Integrated Roads Information System and in

Annex 7.6/B of this Part. Details of the year in which the next Principal Inspection is due for each Structure are provided in Annex 7.6/B of this Part.

The Operating Company shall undertake Principal Inspections during the specified year for Structures listed in Annex 7.6/B of this Part at intervals not greater than six years after the preceding Principal Inspection. Principal Inspections shall include access to confined spaces within relevant Structures including box girders and culverts. Unless requested otherwise by the Director, the result of a Principal Inspection shall be recorded within the structures management function of the Integrated Roads Information System.

Before commencing Principal Inspections each year the Operating Company shall submit a programme which identifies the number of inspections which are programmed to be carried out each month to the Director and the Performance Audit Group.

3.5 Scour Inspections and Assessments

3.5.1 Scour Inspections and scour assessments shall be executed as part of the General Inspection and Principal Inspection, unless instructed otherwise by the Director.

3.5.2 The Operating Company shall carry out underwater Scour Inspections at the same time as undertaking Principal Inspections for those Structures identified in Annexes 7.6/C and 7.6/D of this Part as requiring Scour Inspections. Prior to carrying out a Scour Inspection, the Operating Company shall review any previous Stage 1 and Stage 2 Scour Assessments undertaken in accordance with BA74 of the *Design Manual for Roads and Bridges* so that any changes in conditions can be identified during the Scour Inspection. The Operating Company shall assess the potential for scour and record any observations as part of Principal Inspections together with any observations related to the scour noted and recorded during General Inspections. Scour Inspection reports shall be included as a part of the Principal Inspection report.

3.5.3 Scour Inspections and assessments shall be undertaken in accordance with the *Design Manual for Roads and Bridges* and require a two stage approach to identify those Structures where the potential risk of scour is considered high. All Structures over watercourses are listed in Annex 7.6/C of this Part and have been subject to Stage 1 assessment in accordance with BA74 of the *Design Manual for Roads and Bridges*.

In accordance with *Design Manual for Roads and Bridges*, the Operating Company shall ensure that the individual undertaking the inspection shall have the required knowledge and experience.

3.5.4 When a Stage 1 Scour Assessment is required, the Operating Company shall undertake a Scour Inspection and collect the data regarding the Structure, its foundations, the river and any information on the history of the Structure and any problems experienced. Where a risk of scour is identified, a Stage 2 Scour Assessment shall be required.

3.5.5 A Stage 2 Scour Assessment shall involve a calculation of the potential scour depths and an assessment of priority rating. Existing Structures that have had a Stage 2 Scour Assessment are listed in Annex 7.6/D of this Part.

3.5.6 The Operating Company shall undertake Scour Inspections of Structures at General Inspection and Principal Inspection, and shall include foundations of Structures, part

of the Structures and scour prevention training works that are at risk of scour. This shall be done to assess whether there are changes to the river channel or watercourse that could affect the conclusions on safety recorded in the existing Stage 1 and Stage 2 Scour Assessments. These shall be recorded as part of the General Inspection and Principal Inspection process.

The need for additional Scour Inspections to Structures after periods of heavy rainfall shall be assessed by the Operating Company as a reactive Structures Safety Inspection and, where required, a Special Inspection shall be undertaken.

- 3.5.7 When required by BA74 of the *Design Manual for Roads and Bridges*, the Director shall issue an Order for the Operating Company to undertake Stage 1 and Stage 2 Scour Assessments of a Structure.

3.6 Special Inspections

- 3.6.1 Subject to an Order, the Operating Company shall undertake Special Inspections to investigate particular concerns rather than at programmed intervals.
- 3.6.2 Special Inspections shall generally be undertaken by the Operating Company to investigate a Defect identified during a General Inspection or Principal Inspection.

3.7 Weather Resistant Steel Bridge Monitoring

- 3.7.1 The Operating Company shall undertake the management and monitoring of Structures incorporating weather resistant steel in accordance with:
- (i) the *Design Manual for Roads and Bridges*, and
 - (ii) the requirements for carrying out and reporting General and Principal Inspections referred to in paragraphs 3.3 and 3.4 of this Part.
- 3.7.2 Structures incorporating weather resistant steel which require monitoring are listed within the structures management function of the Integrated Roads Information System. The system contains data on the year in which the next Principal Inspection is due and the last year in which the steel thickness measurements were taken.
- 3.7.3 The Operating Company shall ensure that steel thickness measurement data is recorded, stored and presented in Principal Inspection reports in order that corrosion trends are apparent. Only certified calibrated gauges may be used. The structures management function of the Integrated Roads Information System contains data on the measurements, locations and previously measured steel thicknesses. The Operating Company shall use such data to monitor the corrosion trends and report on them in the relevant Principal Inspection reports.
- 3.7.4 The Operating Company shall measure, record, store and present the results of the actual steel thicknesses at the critical locations as in the Principal Inspection reports.
- 3.7.5 The Operating Company shall incorporate in its General Inspection procedures a visual inspection procedure of the critical areas where measurements are taken and areas prone to corrosion, particularly in the vicinity of all deck joints, at intervals not exceeding two years.

4. REQUIREMENTS FOR MAINTENANCE OF STRUCTURES

4.1 General

- 4.1.1 Maintenance of Structures and any associated Access System comprises activities relating to servicing of the Structure. Maintenance shall be undertaken regularly or at pre-determined intervals in accordance with any operations manual, log book or maintenance schedule.

Maintenance of Structures does not cover the repair or renewal of structural elements or components that have become unserviceable due to general wear and tear or which have deteriorated for other reasons. Such work must be identified by the Operating Company during inspections and assessments and included in the planned structural maintenance detailed in paragraph 5 of this Part.

- 4.1.2 The Operating Company shall carry out maintenance of Structures as required, and at least twice per year, to meet the requirements of this Part.
- 4.1.3 All graffiti shall be dealt with in accordance with the requirements of Schedule 7 Part 1.

4.2 Substructures and Superstructures

- 4.2.1 The Operating Company shall undertake maintenance of substructures and superstructures in accordance with the Specification.

4.3 Expansion Joints

- 4.3.1 The Operating Company shall undertake maintenance of expansion joints in accordance with the Specification and in addition shall report any Category 1 Defects immediately to the Director for further investigation and repair.

4.4 Drainage Systems

- 4.4.1 The Operating Company shall undertake maintenance of drainage systems including carriageway drainage on or adjacent to Structures in accordance with the Specification and shall include clearing drainage outlet manholes.

4.5 Parapets and Pedestrian Protection on Structures

- 4.5.1 The Operating Company shall undertake maintenance of parapets and pedestrian protection on Structures in accordance with the Specification and in addition shall report any Category 1 Defects immediately to the Director for further investigation and repair.

4.6 Bearings and Bearing Shelves

- 4.6.1 The Operating Company shall undertake maintenance of bearings and bearing shelves in accordance with the Specification and in addition shall report any Category 1 Defects immediately to the Director for further investigation and repair.

4.7 Structures Over or Conveying Watercourses

- 4.7.1 The Operating Company shall undertake maintenance of Structures over or conveying watercourses in accordance with the Specification. It shall include all the requirements detailed in paragraphs 4.1 to 4.6 and 4.9 of this Part.

4.8 Sign and or Signal Gantries, High Mast Lighting and other Masts

- 4.8.1 The Operating Company shall undertake maintenance of the non electrical components of sign gantries, signal gantries, high mast lighting and other masts

where not already covered by Schedule 7 Part 1, in accordance with the Specification and in addition shall report any Defects immediately to the Director for further investigation and repair.

4.9 Non-structural Items

4.9.1 Non-structural items exclude Access Systems associated with Structures. Non-structural items include but are not limited to:

- (i) access stairs,
- (ii) access platforms,
- (iii) hinges,
- (iv) doors,
- (v) ladders,
- (vi) pumps,
- (vii) access chambers,
- (viii) sumps,
- (ix) grills,
- (x) trash screens,
- (xi) access covers,
- (xii) watergates,
- (xiii) ventilation ducts and grills, and
- (xiv) ancillary lighting connected with the above.

4.9.2 The Operating Company shall undertake maintenance of non-structural items associated with Structures in accordance with the Specification.

4.9.3 The Operating Company shall ensure that all non-structural items associated with Structures operate effectively.

4.10 Underpasses and Culverts also used by Pedestrians and Cyclists

4.10.1 The Operating Company shall undertake maintenance of underpasses and culverts used by pedestrians, cyclists and other road users in accordance with the Specification.

4.11 Retaining Walls

4.11.1 The Operating Company shall undertake maintenance of retaining walls in accordance with the Specification.

5. REQUIREMENTS FOR STRUCTURAL MAINTENANCE

5.1 General

5.1.1 Structural maintenance shall include the repair, renewal and replacement of structural elements or components that have become unserviceable through wear and tear or deteriorated with time and usage or which have been damaged.

- 5.1.2 Structural maintenance shall include the upgrading of Structures to bring specific elements and components of Structures up to current requirements, including safety and durability standards.
- 5.1.3 The Operating Company shall determine the structural maintenance requirements from the results of:
- (i) Structures Safety Inspections,
 - (ii) General Inspections,
 - (iii) Principal Inspections,
 - (iv) Special Inspections,
 - (v) Scour Inspections,
 - (vi) Scour Assessments,
 - (vii) Bridge Assessments,
 - (viii) previous maintenance programmes,
 - (ix) the Transport Scotland structures workbank, as advised by the Director, and
 - (x) any other special programmes or assessments advised or ordered by the Director including, but not limited, to parapet and vehicle restraint system assessments and at-risk pier assessments.
- 5.1.4 Recommendations for structural maintenance Operations shall be submitted to the Director by the Operating Company as part of the annual Bids and programme process in accordance with the requirements of Schedule 4 Part 1.

5.2 Maintenance Files

- 5.2.1 The Bridges Manager shall keep Structures maintenance files at the Central Office for each Structure. These shall be in paper and Electronic Copy and referenced by Route name, the junctions between which they are located, and national Ordnance Survey grid coordinates.

Maintenance files for Structures shall contain:

- (i) copies of all inspections together with details of structural maintenance and repair, and
- (ii) drawings and records showing:
 - (a) location and extent of maintenance Operations and Works,
 - (b) materials employed,
 - (c) date of implementation,
 - (d) details of Works Contractors and subcontractors employed, and
 - (e) costs of Operations and Works.

5.3 Structural Maintenance Programme

- 5.3.1 The Bridges Manager shall review:
- (i) inspection, assessment, special investigation and feasibility reports for Structures and Access Systems,

- (ii) reports and information relating to the monitoring and management of sub-standard Structures,
- (iii) monitoring requirements for Structures with known Defects,
- (iv) test results and known strengthening and replacement requirements,
- (v) the Transport Scotland Structures Workbank,
- (vi) special programmes,
- (vii) previous maintenance programmes, and
- (viii) any other special programmes or assessments advised or ordered by the Director,

and identify and prioritise:

- (ix) maintenance, strengthening and replacement Operations required for Structures and any associated Access Systems,
- (x) Special Inspections, Scour Inspection and assessments,
- (xi) at-risk pier assessments,
- (xii) parapet and vehicle restraint system assessments,
- (xiii) Structures Assessments and interim and formal measures for sub-standard Structures,
- (xiv) monitoring requirements for Structures with known Defects, and
- (xv) any other special programmes or assessments advised or ordered by the Director,

for inclusion in the annual Bids and programmes process.

5.4 Value Management of Structural Maintenance Programme

5.4.1 In addition to preparing the structural maintenance programme set out in paragraphs 5.1 to 5.3 of this Part, the Operating Company shall prioritise and rank all the Schemes in such programme as well as Schemes with priority three and four work arising from Principal and General Inspections undertaken in an inspection year. This shall be done using the techniques described in *Maintenance and Making Better Use – Value Management of the Structures Renewal Programme – Amended for Transport Scotland*.

The output from the value management prioritisation shall be submitted to the Director for his written consent and form the basis of the following year's programme. The Director shall consider the output of the prioritisation along with any other Schemes to be included in the programme, which shall be prioritised and ranked. All programmes shall be submitted in accordance with the dates set out in the annual process described in Schedule 4 Part 1.

5.4.2 The Director may, from time to time and at his own discretion, review, change and re-prioritise the Schemes to be included in the agreed programme.

5.5 Structures Scheme Cost Estimating

5.5.1 All Structures Scheme cost estimates, shall be reviewed by the Operating Company and if required, revised prior to undergoing value management as set out in paragraph 5.4 of this Part.

5.5.2 All Structures Scheme cost estimates shall be developed in line with the requirements of this Contract. Where the scope of works changes, Scheme cost estimates shall be revised to ensure they reflect the change in scope and are accurate. The Operating Company shall, when requested, provide the Director with the current scope of works and accurate cost estimate to be used for value management as set out in paragraph 5.4 of this Part.

6. STRUCTURAL ASSESSMENTS

6.1 General

6.1.1 Structural assessments and the resulting required actions are essential in ensuring that all Structures remain in a safe and serviceable state. The Operating Company shall inform the Director immediately of any issue or deterioration identified as a result of a structural assessment that has a detrimental effect on the load carrying capacity of a Structure.

6.1.2 Subject to an Order, the Operating Company shall undertake:

- (i) structural assessments required due to increases in vehicle loadings above those used in the design of a Structure,
- (ii) assess a Structure or part of a Structure that is noted in an inspection to have deteriorated, and whose design or assessed load carrying capacity may have been reduced,
- (iii) assess a Structure or part of a Structure as a result of accidental damage,
- (iv) assessment of Structures without HB ratings,
- (v) assessment and upgrading of vehicle parapets in accordance with *Transport Scotland Interim Advice Note 25*,
- (vi) a two stage structural review and assessment of all Trunk Road Structures during this Contract for the purpose of establishing or confirming the validity of the latest assessment, or their original design if there has been no subsequent assessment, and
- (vii) identification and assessment of 'particularly at risk' supports in accordance with *Transport Scotland Interim Advice Note 29*.

6.1.3 Structural reviews and assessments shall be undertaken on a six year cycle to coincide with a Principal Inspection or as ordered by the Director.

6.1.4 Annexes 7.6/E & 7.6/F of this Part provide details on vehicle parapets and bridge supports with assessments in progress, or which require upgrading or which are under review and may require further detailed assessment.

6.2 Structural Assessment Process

6.2.1 The Operating Company shall follow the procedure referred to in Annex 7.6/G of this Part to obtain Technical Approval for structural assessments.

6.2.2 Subject to an Order, the Operating Company shall undertake structural assessments to level one to three as agreed with the Director in accordance with the assessment requirements in the *Design Manual for Roads and Bridges*.

6.2.3 The Director may, at his discretion and subject to an Order, require the Operating Company to undertake level four and five assessments that require specialist

knowledge and expertise using appropriately experienced assessing engineers. Where appropriate staff are not available from within the Operating Company, the Operating Company shall propose specialist contractors and the rates payable for the prior written consent of the Director.

6.3 Structural Assessments in Progress

- 6.3.1 Subject to an Order, where a structural assessment is in progress at the Commencement of Service Date, the Operating Company shall undertake the completion of the assessment to the level of assessment agreed with the Director.
- 6.3.2 The Operating Company shall inform the Director of any identified assessment that cannot be completed before the end of the Final Annual Period prior to undertaking any work on the assessment. The Director shall decide:
- (i) if the Operating Company is required to undertake the identified assessment, or
 - (ii) if he wishes to make alternative arrangements outwith the Operating Company's arrangements for undertaking the identified assessment.
- 6.3.3 Subject to the requirements in paragraph 6.3.2, the Operating Company shall complete all structural assessments in progress no later than the end of the Final Annual Period. The Operating Company shall not initiate any new assessments that may continue beyond the end of the Final Annual Period.
- 6.3.4 Annex 7.6/H of this Part lists sub-standard Structures with assessments in progress at the start of the first Annual Period or which are under review and may require structural assessment.

7. MANAGEMENT OF SUB-STANDARD STRUCTURES AND STRUCTURES WITH KNOWN DEFECTS

7.1 General

- 7.1.1 The Operating Company shall undertake the management of sub-standard Structures and the management of Structures with known Defects in order to:
- (i) maintain public safety, and
 - (ii) enable sub-standard Structures to remain in service whilst further assessments are carried out and until any replacement or strengthening is completed or the Structure is no longer deemed sub-standard.

These obligations may change during the Contract Period and any additional obligations shall be the subject of an Order.

The Operating Company shall manage sub-standard Structures in accordance with the requirements of the *Design Manual for Roads and Bridges*.

7.2 Interim Measures and Monitoring

- 7.2.1 All Structures that are sub-standard or require monitoring are listed within the structures management function of the Integrated Roads Information System. A summary of sub-standard Structures is also provided in Annex 7.6/I of this Part. Annex 7.6/J of this Part lists Structures with known Defects requiring monitoring which are sub-standard and Annex 7.6/K of this Part lists Structures with known Defects requiring monitoring that are not sub-standard.

- 7.2.2 The interim measures proformas provided in Schedule 6 Part 4 based on those in the *Design Manual for Roads and Bridges* shall be used by the Operating Company in relation to sub-standard Structures or Structures with known defects. Details of the current assessments and monitoring, interim and permanent measures that have been or shall be applied to sub-standard Structures are recorded in the structures management function of the Integrated Roads Information System for each sub-standard Structure.
- 7.2.3 The Operating Company shall be responsible for ensuring that all sub-standard Structures and Structures with known Defects have appropriate assessment ratings, monitoring regimes and agreed interim and planned permanent measures in place.
- 7.2.4 The Operating Company shall review annually each sub-standard Structure and its associated interim measures proforma and each Structure with known Defects. The Operating Company shall undertake appropriate monitoring and maintain interim measures in place until appropriate works are implemented or the Structure is assessed as adequate or has been strengthened or replaced. If, at any time, any Structure is categorised as an immediate risk Structure in accordance with the *Design Manual for Roads and Bridges*, the Operating Company shall inform the Director and shall implement the necessary safety and interim measures immediately.
- 7.2.5 The Operating Company shall submit all proposals and changes, including:
- (i) any new monitoring and interim measures,
 - (ii) amendments to the existing monitoring measures,
 - (iii) where the existing structural assessment rating may no longer be valid and the Structure requires re-assessment in accordance with paragraph 6 of this Part,
 - (iv) strengthening and replacement work, and
 - (v) the cessation of monitoring,
- for the written consent of the Director.

7.3 Strengthening and Replacement

- 7.3.1 The Director shall determine the programme and funding for strengthening and replacement of sub-standard Structures and Structures that are beyond their service life or Structures that require replacement for other reasons.
- 7.3.2 The proposed strengthening and replacement programme is provided in Annex 7.6/L of this Part. The programme is subject to the funding of competing priorities and is controlled by the Director.

Schemes arising from the strengthening and replacement programme are subject to the requirements of paragraphs 5.4 and 5.5 of this Part, which shall be undertaken by the Operating Company.

The Operating Company shall provide such advice as may be requested by the Director to enable him to prioritise this work.

8. ACCESS SYSTEMS

8.1 General

- 8.1.1 The Operating Company's Gantry Manager shall supervise the use of all Access Systems and carry out the duties referred to in this section.
- 8.1.2 Structures listed in Table 7.6.M.1 of Annex 7.6/M of this Part has Access Systems which may be used by the Operating Company to gain access for inspection and maintenance Operations.
- 8.1.3 Structures listed in Table 7.6.M.2 of Annex 7.6/M of this Part has permanent bridge access gantries and or runway beams which are required to remain certified for use throughout the Contract Period.
- 8.1.4 The Operating Company shall be responsible for the inspections, testing, maintenance and operation of any Access Systems, including those listed in Annex 7.6/M of this Part. The Operating Company shall ensure that prior to use, all Access Systems comply in all respects with current regulations and standards including:
- (i) British Standard 6037: Code of practice for the planning, design, installation and use of permanently installed access equipment, or equivalent,
 - (ii) British Standard 5974: Temporary installed suspended scaffolds and access equipment or equivalent,
 - (iii) British Standard EN 1808: Safety requirements on suspended access equipment – design calculations, stability criteria, construction, or equivalent, and
 - (iv) *The Operation and Maintenance of Bridge Access Gantries and Runways. (Second Edition 2007)* published by the Institution of Structural Engineers.
- 8.1.5 The Operating Company shall be responsible for and provide:
- (i) method statements for inspections and testing,
 - (ii) certification, and
 - (iii) bridge maintenance files and health and safety files,
- in relation to all Access systems.
- 8.1.6 Where available, the Director shall provide the Operating Company with operations and maintenance manuals and manufacturers' instructions in relation to Access Systems.
- 8.1.7 The Operating Company shall use of the Access Systems to allow Undertakers to inspect and maintain their plant and equipment where this is fixed to a Structure.
- The Operating Company shall liaise with, supervise and accompany all:
- (i) Statutory Authorities,
 - (ii) Undertakers,
 - (iii) authorised contractors, and
 - (iv) other interested third parties,
- who are using the Access Systems.

8.1.8 The Operating Company shall ensure that routine inspection and testing and periodic electrical inspections and testing of the Access Systems are carried out in accordance with the operations and maintenance manuals. Certificates shall be held on the health and safety file for the work. The Operating Company shall also ensure that the gantry operations and maintenance manual is kept up to date with the following:

- (i) Design and check Certificates for access gantries and runway beams, which shall be signed by a chartered engineer,
- (ii) an electrical installation completion Certificate in relation to any electrical works that are undertaken on the gantry in accordance with British Standard 7671: 1992,
- (iii) periodic electrical inspections and testing carried out on existing installations, and
- (iv) test Certificates for all lifting devices and the system as a whole.

8.2 Construction Design and Management

8.2.1 The Client's Representative appointed by the Operating Company shall ensure that a construction phase plan covering all Works or Operations relating to or requiring the use of all Access Systems is prepared.

The Operating Company, as Principal Contractor (or contractor), shall develop the construction phase plan and prepare a full and detailed method statement to cover the specific Site Operations involved for any Operations utilising the Access System.

8.2.2 The CDM Coordinator appointed by the Operating Company shall ensure that a Health and Safety Plan covering all Works or Operations relating to or requiring the use of all Access Systems is prepared.

The Principal Contractor appointed by the Operating Company for any Works or Operations utilising the Access System shall develop the Health and Safety Plan and prepare a full and detailed method statement to cover the specific Site Operations involved.

8.3 Temporary Access Systems

8.3.1 Where a temporary access platform is installed, or equipment supported or attached to the permanent Structure, the Operating Company shall satisfy itself regarding:

- (i) the competence of the Designer and contractor for the design, installation and operation of the temporary Access System and equipment, and
- (ii) ensure that the existing Structure has been assessed and certified as adequate to support all loading conditions resulting from the installation and operation of the temporary Access Systems.

8.3.2 Before any temporary Access System is used, the Operating Company shall ensure that the:

- (i) Design, installation and required certification for the temporary Access System, and
- (ii) the associated operations manual, incorporating all health and safety procedures,

is up to date and in accordance with current regulations and standards.

8.4 General and Principal Inspections of Access Systems

- 8.4.1 General and Principal inspections shall be carried out on all Access Systems, whether they are gantries or suspended scaffold installations. The inspections shall be reported separately but in the same format to those undertaken on the Structure at two year and six year intervals.
- 8.4.2 The Operating Company shall maintain an inspection regime and register for suspended scaffolding installations. This shall be placed on the health and safety file for the work and in the Structures maintenance manual.
- 8.4.3 For new temporary or permanent access installations, or for existing systems that are brought back into use, the Operating Company shall provide the appropriate Design and check Certificates which shall be placed on the health and safety file for the work. These shall be signed by a chartered civil or structural engineer where they relate to any suspended Access System installation.
- 8.4.4 The Operating Company shall ensure that its management procedures are in place and kept up to date for the operation and maintenance of any Access Systems which are required to be kept in service. Such Access Systems are listed in Annex 7.6/M of this Part. Details of procedures and required staffing levels shall be included in the gantry operations and maintenance manual and this information shall be updated regularly throughout the duration of this Contract.
- 8.4.5 The Operating Company shall ensure that the Gantry Manager and gantry operators receive any training necessary for the management and operation of the existing Access Systems and for any new system that is commissioned. Records of training together with the assessment of the suitability of the selected personnel shall be retained by the Operating Company. The Gantry Manager shall be responsible for the control of gantry operations and for ensuring that operations and maintenance manuals are reviewed at regular intervals and kept up to date.
- 8.4.6 The Operating Company shall ensure that in the event of emergencies or Access System breakdown, a safe means of exiting the Access System is available. Each operational Access System shall include the appropriate safety and first aid equipment.

9. THE TECHNICAL APPROVAL AND DEPARTURE FROM STANDARD PROCESS FOR STRUCTURES

9.1 General

- 9.1.1 The Operating Company shall submit approval in principle forms and applications for departures from standards forms for Structures to the Director for acceptance using the forms provided in Schedule 6 Part 4.
- 9.1.2 Applications for departures from standards shall allow adequate time for consideration by Transport Scotland. Such departures shall be requested prior to their inclusion in the approval in principle form or an addendum to the approval in principle form. Departures from standards which have been consented to by the Director shall be included within the approval in principle submission in accordance with the requirements of Schedule 6 Part 4.

- 9.1.3 No later than 25 Working Days after receipt of the Operating Company's approval in principle submission and departure form standards submission, the Director shall:
- (i) accept the submission in writing, or
 - (ii) reject the submission in writing with reasons, or
 - (iii) request the Operating Company to supply further information within five Working Days.

If the Director requests the Operating Company to supply further information, the minimum period of approval will be extended by five Working Days commencing on receipt of the additional information.

If the Operating Company cannot provide the additional information within five Working Days, it shall contact the Director to agree an alternative timeframe.

If the Approval in Principle submission is rejected by the Director, the period of approval of 25 Working Days shall recommence on receipt of the redrafted submission.

Where the Director is unable for any reason to meet this timescale, he shall notify the Operating Company in writing. The Operating Company shall not be entitled to any additional reimbursement if the Director is unable to meet the timescales referred to.

10. MANAGEMENT AND MAINTENANCE OF STRUCTURES WHERE AGREEMENTS EXIST WITH THIRD PARTIES

- 10.1.1 Agreements exist between the Scottish Ministers, Network Rail and British Waterways. The Operating Company shall familiarise itself with these agreements which may impact upon the management, maintenance and replacement of Structures. Annex 7.6/N of this Part lists Structures within the Unit where agreements exist with third parties and provides a brief description.

11. BRIDGES WITH SIGNED LOW HEADROOM AND THOSE SUBJECT TO BRIDGE STRIKES BY OVERHEIGHT VEHICLES

- 11.1.1 Bridges with clearances below 5.03 metres have signs identifying the maximum safe vehicle height which may pass beneath.

High vehicles are classified as those which:

- (i) cannot pass safely under a bridge with the standard minimum headroom clearance of 5.03 metres, or
- (ii) have a vehicle and load combination greater than 4.95 metres in height, allowing for the minimum safety margin of 0.275 metres.

- 11.1.2 The Operating Company shall implement the requirements of the following documents, as part of its procedures and Incident Response Plans, to deal with bridges strike incidents within the Unit:

- (i) *Response to a Bridge Strike over the Railway – A Protocol for Highway and Road Managers and Bridge Owners*, and
- (ii) *Prevention of Strikes on Bridges over Highways – A Protocol for Highway and Road Managers and Bridge Owners*.

- 11.1.3 Structures with signed low headroom are listed within the structures management function of the Integrated Roads Information System and in Annex 7.6/O of this Part.
- 11.1.4 Structures within the Unit which are subject to frequent bridge strikes, together with the dates of when previous strikes have occurred, are listed within the structures management function of the Integrated Roads Information System and in Annex 7.6/P of this Part.

This is Annex 7.6/A to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/A – Maintenance Schedule Proforma

Maintenance Activity Code	Clause No.	Maintenance Activities
RCM 1	6110AR 6112AR 6117AR	Substructure and Superstructure - Vegetation/debris/bird dropping removal and disposal, checking/tightening/replacing of bolts to parapets (to include making good local damage to protective systems).
RCM 2	6110AR 6111AR	Expansion Joints - Cleaning out debris/vegetation/sediment from joints and drainage associated with joint, checking/tightening of bolts securing the joint, checking neoprene or elatomeric material for splitting or detachment, checking cover plates and nosing
RCM 3	6110AR 6112AR	Drainage Systems - Removal of obstructions/vegetation which could reduce capacity of the system, cleaning drainage holes, channels, pipes, drainage outlet manholes, weep pipes. Checking operation of flap valves and greasing if required.
RCM 4	6110AR 6113AR	Parapets and Pedestrian Protection - Checking/ tightening/ replacing of bolts. Cleaning hollow section drain holes. Removal of debris/vegetation/bird droppings. Checking freedom of parapet expansion joint.
RCM 5	6110AR 6114AR	Bearings and Bearing Shelves - Removal of debris/vegetation/bird droppings. Checking freedom of movement of bearings. Cleaning where appropriate greasing of accessible mating surfaces.
RCM 6	6110AR 6111AR 6112AR 6113AR 6114AR 6115AR 6117AR	Structures Over or Conveying Watercourses - As above and including - Removal of debris encrustations/greasing/lubrication of all fittings (in accordance with maintenance manual). Removal and disposal of debris and silt to ensure free flow of water.
RCM 7	6110AR 6116AR 6117AR	Sign Gantries and High Mast Lighting - Holding down assemblies and fixings including cladding to be checked/ tightened/ cleaned/ greased (to include making good local damage to protective systems and replacement of bolts where required). Checking box type structures are water-tight and report leaks & bird entry issues.
RCM 8	6110AR 6117AR	Non-structural Items - Movable parts to be cleaned and greased. Holding down assemblies and fixings including cladding to be checked/tightened (to include making good local damage to protective systems).
RCM 9	6110AR 6112AR 6113AR 6114AR 6115AR 6117AR 6118AR	Underpasses and Culverts used by Pedestrians - Cleaning of ramps, light fittings, ceilings and soffits, mirrors and handrails. Removal of vegetation/sediment on or adjacent to structure which could have a detrimental effect on the function of the structure. Vegetation/debris/bird dropping removal and disposal. Drainage system/gulleys/grates/channels cleared to maintain efficient operation.
RCM 10	6110AR 6112AR 6113AR	Retaining Walls - Removal of vegetation on or adjacent to structure which could have a detrimental effect on the function of the structure.

This is Annex 7.6/B to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/B – List of Structures Requiring Principal Inspections

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/B – List of Structures Requiring Principal Inspections

NEXT PRINCIPLE INSPECTION YEAR: 2012		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A82 1060 W70	GILLE RUAIDH RA	2012
A82 1100	ATHA	2012
A82 1370 W56	BUNLOIT RB	2012
A82 1380 W13	ACHNAHANNET LA	2012
A82 1380 W20	LENIE COTTAGE LA	2012
A82 1380 W26	LOWER LENIE LA	2012
A82 1380 W32	CRAIG BOGLASHIN S	2012
A82 1400 W63	TEMPLE PIER LA	2012
A82 1450 W56	DUBH ALLT MOR RB	2012
A82 1450 W60	QUARRY LA	2012
A82 1470 W20	KIRKTON NTH WALL LA	2012
A82 1490 W99	FRIARS PLACE WALL RB	2012
A82 305	CULAG FARM	2012
A82 305 W64	CULAG BANK LA	2012
A82 305 W71	CULAG BANK A LA	2012
A82 315	CULVERT 38	2012
A82 325	WADE'S BRIDGE	2012
A82 325 W54	TRIAL BANK LA	2012
A82 335	INVERBEG U/P	2012
A82 345	CAMUS NAN CLAIS	2012
A82 345 W73	RUBHA BAN RB	2012
A82 380 F	TARBET SMITHY F/B 1	2012
A82 380 W12	TARBET 1 RB	2012
A82 380 W13	TARBET 2 RB	2012
A82 380 W17	TARBET ISLE 1	2012
A82 380 W21	TARBET ISLE 2	2012
A82 380 W24	TARBET ISLE WALL 4	2012
A82 380 W43	INVERHOULIN WALL 2	2012
A82 380 W44	INVERHOULIN WALL 3	2012
A82 380 W48	BLAIRANNAICH 1 RB	2012
A82 380 W50	BLAIRANNAICH 2 RB	2012
A82 380 W57	BLAIRANNAICH 3 RB	2012
A82 380 W59	BLAIRANNAICH 4 RB	2012
A82 400 W54	COIRE NAN EACH 1 RB	2012
A82 400 W56	COIRE NAN EACH 2 RB	2012
A82 400 W63	COIRE NAN EACH 3 RB	2012
A82 410 W49	RUBHA BAN RB	2012
A82 570 C55	AUCHRIOCH 1	2012

NEXT PRINCIPLE INSPECTION YEAR: 2012		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A82 570 C60	AUCHRIOCH 2	2012
A82 610 W13	BHREAC-LIATH LA	2012
A82 740 W99	LAIRIG EILDE LAY-BY	2012
A82 750	LAIRIG EILDE NEW	2012
A82 750 W1	LAIRIG EILDE VIEWPNT	2012
A82 751	LAIRIG EILDE CANTLVR	2012
A82 770 W78	ALLT-NA-REIGH RA	2012
A82 850 W75	WAR MEMORIAL LA	2012
A82 880	ST BRIDES EPISCOPAL	2012
A82 890	SMITHY	2012
A82 900	ONICH SCHOOL	2012
A82 900 W30	ONICH BAY LB	2012
A82 910 W67	DRUIMM NA BIRLINN 5	2012
A82 910 W71	DRUIMM NA BIRLINN 6	2012
A82 920	CORRYCHURRACHAN S	2012
A82 940	CORRYCHURRACHAN 2	2012
A82 950	BEINN BHAN BURN	2012
A82 970 W30	FT WILLIAM SERV RD	2012
A83 140 W17	SOUTH CRALECKAN 3	2012
A83 150	SANDHOLE	2012
A83 200 C0	LOCHGAIR SCHOOLHOUSE	2012
A83 220 W53	BRACKLEY PARK	2012
A83 220 W56	MID BRACKLEY	2012
A83 220 W62	BRACKLEY SOUTH	2012
A83 220 W64	BRACKLEY VILLA	2012
A83 240 W27	BRAE ROAD	2012
A83 240 W61	SEA VIEW LB	2012
A83 240 W65	KARONGA	2012
A83 240 W88	AUCHNASGIACH LB	2012
A83 240 W99	ATTICHUAN LB	2012
A83 250	ATTICHUAN	2012
A83 250 W9	ALLT NA CRAIG	2012
A83 260 C35	WOODHOUSE	2012
A83 260 W12	BOATHOUSE LB	2012
A83 260 W4	ARDFENAIG	2012
A83 260 W44	BRENFIELD	2012
A83 260 W7	FASCADALE LB	2012
A83 260 W9	TIGH-NA-RUDHA	2012
A83 280 W30	TAYLOR'S BAY	2012
A83 280 W33	TAYLOR'S BAY COTTAGE	2012
A83 280 W64	CREAGAN BEAG	2012
A83 290 W35	MHINIDHE BEAG LAY-BY	2012
A83 290 W38	MHINIDHE BEAG S LB	2012
A83 290 W40	MHINIDHE MOR NORTH	2012
A83 290 W42	MHINIDHE MOR SOUTH	2012
A83 290 W53	ARTILLIGAN NORTH 15	2012
A83 290 W58	ARTILLIGAN NORTH 14	2012
A83 290 W60	ARTILLIGAN NORTH 13	2012

NEXT PRINCIPLE INSPECTION YEAR: 2012		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A83 290 W63	ARTILLIGAN NORTH 12	2012
A83 290 W66	ARTILLIGAN NORTH 11	2012
A83 290 W67	ARTILLIGAN NORTH 10	2012
A83 290 W68	ARTILLIGAN NORTH 9	2012
A83 290 W79	ARTILLIGAN NORTH 5	2012
A83 290 W82	ARTILLIGAN NORTH 3	2012
A83 290 W88	ARTILLIGAN NORTH 2	2012
A83 30 W21	TORPEDO RANGE E 1 LB	2012
A83 30 W22	TORPEDO RANGE E 2 LB	2012
A83 310 W78	ALLTMUIC RUAIDH LB	2012
A83 330 W97	ERINES LODGE NORTH	2012
A83 360 W38	BARRHILL	2012
A83 360 W40	SOUTH LODGE	2012
A83 360 W75	BARMORE ROAD LB	2012
A83 360 W81	KERRADALE	2012
A83 360 W89	MAZAGON RA	2012
A83 364 W4	CHURCH OF SCOTLAND	2012
A83 370	CORRANBUIE	2012
A83 380	BARDARAVINE	2012
A83 390	ACHNACARNAN SOUTH	2012
A83 40 W11	LITTLE REST 1	2012
A83 60 W22	REST AND BE THANKFUL	2012
A83 60 W79	BLACK SPOUT	2012
A830 160	SHLATACH RAIL	2012
A830 376 C50	TRAIGH BURN	2012
A830 395 C23	BOURBLACH U/P	2012
A830 395 C35	SEAVIEW CATTLE CREEP	2012
A830 395 W60	DOILEAD BURN CHANNEL	2012
A830 398 F	GLASNACARDOCH F/B	2012
A830 420 W90	MALLAIG STATION RB	2012
A830 80 C4	FASSFERN CREEP	2012
A84 110	ARDCHULLARIE	2012
A84 120	STRATHYRE	2012
A84 130	CREAGAN	2012
A85 300 W34	MEALL BUIDH LB	2012
A85 300 W36	MEALL BUIDH RB	2012
A85 310	ALLT LAIRIG CHEILE	2012
A85 310 W40	LIX RB	2012
A85 340	LUIB BURN	2012
A85 360 W30	AUCHESSAN LA	2012
A85 430 C0	CORRYGHOIL NEW	2012
A85 480 C66	CORRIES	2012
A85 490 C19	INNISCHOINAIN 2	2012
A85 500 W59	LORGAIDH WALL 2	2012
A85 500 W63	LORGAIDH WALL 3	2012
A85 500 W66	LORGAIDH WALL 4	2012
A85 500 W67	LORGAIDH WALL 5 LB	2012
A85 500 W69	LORGAIDH WALL 6	2012

NEXT PRINCIPLE INSPECTION YEAR: 2012		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A85 500 W74	LORGAIDH WALL 7 RA	2012
A85 500 W90	LORGAIDH WALL 9 RA	2012
A85 540 W42	CRUACHAN WALL 3 RA	2012
A85 540 W59	CRUACHAN WALL 4 LB	2012
A85 540 W62	CRUACHAN WALL 5 LB	2012
A85 540 W69	CRUACHAN WALL 6 RA	2012
A85 540 W70	CRUACHAN WALL 7 LB	2012
A85 540 W71	CRUACHAN WALL 8 RA	2012
A85 540 W77	CRUACHAN WALL 9 RA	2012
A85 540 W90	CRUACHAN WALL 11 RA	2012
A85 540 W94	CRUACHAN WALL 13 RA	2012
A85 550 W25	CRUACHAN WALL 14 RA	2012
A85 550 W30	CRUACHAN WALL 15 RA	2012
A85 550 W62	CRUACHAN WALL 17 RA	2012
A85 550 W66	CRUACHAN WALL 18 RA	2012
A85 550 W68	CRUACHAN WALL 19 RA	2012
A85 560 W47	BRANDER WALL 1	2012
A85 560 W54	BRANDER WALL 2	2012
A85 660	LUSRAGAN	2012
A86 190 W35	LAGGAN DAM	2012
A86 200 W62	CILLE CHOIRILL	2012
A86 200 W67	CNOC AN EAS RA	2012
A86 200 W68	GLENSPEAN LODGE	2012
A86 80 W4	LOCH LAGGAN HOTEL	2012
A9 1060 C70	LEAULT BURN	2012
A9 1070	KINCRAIG FARM U/P	2012
A9 1070 C1	KINCRAIG HOUSE BURN	2012
A9 1080	ALVIE ESTATE U/P	2012
A9 1090	ALLT AN FHEARNA	2012
A9 1100	ALLT CHRIOCHAIDH	2012
A9 1100 C69	LOCH ALVIE CREEP	2012
A9 1110	BALLINLUIG PEDES U/P	2012
A9 1110 C10	BALLINLUIG BURN	2012
A9 1120	LYNWILG U/P	2012
A9 1260 C35	STRATHDEARN 1	2012
A9 1262 F	MILLENNIUM F/B F1	2012
A9 1356	NORTH KESSOCK U/P	2012
A9 1450 C90	BROOMHILL BURN	2012
A9 1455 C23	KINDEACE BURN NEW	2012
A9 1455 C45	TULLICH BURN NEW	2012
A9 1459 W50	BALNAGOWN NORTH LB	2012
A9 1465 C5	PITMADUTHY BURN	2012
A9 1470 C85	TARLOGIE BURN/CREEP	2012
A9 1600	MOUND SLUICES (NSS)	2012
A9 1625 W80	CULMAILY 1 RB	2012
A9 1700	CRAIGALLACHIE	2012
A9 1775	HELMSDALE NEW RAIL	2012
A9 1785	HELMSDALE RIVER NEW	2012

NEXT PRINCIPLE INSPECTION YEAR: 2012		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A9 1900	LATHERON	2012
A9 1960 W62	SCRABSTER APPR'CH RB	2012
A9 1960 W74	SCRABSTER CLETT B LA	2012
A9 1960 W80	SCRABSTER OIL DPT RB	2012
A9 1960 W89	SCRABSTER COTTS 1 LA	2012
A9 1960 W91	SCRABSTER COTTS 2 LA	2012
A9 420 W10	INVER WEST LA	2012
A9 420 W12	INVER EAST RA	2012
A9 420 W44	HERMITAGE ACCESS LB	2012
A9 450 W20	LEDPETTIE LB	2012
A9 450 W95	KINDALLACHAN LB	2012
A9 670 W70	TULACH RB	2012
A9 810 W14	DRUMOCHTER 13 S/B LA	2012
A9 810 W4	DRUMOCHTER 14 S/B LA	2012
A9 880 C47	BHOTIE SOUTH	2012
A9 880 C66	BHOTIE NORTH	2012
A9 900 C75	TRUIM DAM CREEP	2012
A9 930 C72	GLEN TRUIM 3	2012
A99 10	FORSE	2012
A99 30	OCCUMSTER CLYTH BURN	2012
A99 40 C23	OLD MILL	2012
A99 40 W12	BRUAN REDGOE RB	2012

NEXT PRINCIPLE INSPECTION YEAR: 2013		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A82 1000	TOMNAHARRY	2013
A82 1010	MHUILINN	2013
A82 1020	CAILLICH	2013
A82 1030	LUNDY	2013
A82 1040	SPEAN	2013
A82 1050	MAIRI	2013
A82 1060	INVERGLOY	2013
A82 1060 W99	ALTRUA LB	2013
A82 1070	ALTRUA	2013
A82 1080	LEITIRI	2013
A82 1095	CORRIEGOUR LODGE NEW	2013
A82 1110	LEAGANN	2013
A82 1120	CHOILICH	2013
A82 1130	CEANNSIDE SIX	2013
A82 1140	CEANNSIDE FOUR	2013
A82 1150	CEANNSIDE THREE	2013
A82 1160	CEANNSIDE 2	2013
A82 1200	INVERGARRY	2013
A82 1220	OICH	2013
A82 1260	FORT AUGUSTUS	2013
A82 1260 C22	BALANTOUL	2013

NEXT PRINCIPLE INSPECTION YEAR: 2013		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A82 1290	ALLT A' MHUILINN	2013
A82 1310	INVERMORISTON	2013
A82 1320 W19	HOME FARM 4 RB	2013
A82 1320 W6	HOME FARM 1 RB	2013
A82 1320 W7	HOME FARM 2 LA	2013
A82 1330 W18	ALLT SAIGH 1	2013
A82 1330 W19	ALLT SAIGH 2	2013
A82 1330 W20	ALLT SAIGH 3	2013
A82 1380	FHITHICH	2013
A82 1400	DRUMNADROCHIT	2013
A82 1480 G95	NADICS A12	2013
A82 1520 G78	NADICS A9	2013
A82 210 G30	NADICS C1	2013
A82 342	INVERBEG	2013
A82 345 W10	RUBHA MOR LA	2013
A82 460	DUBH EAS	2013
A82 470	DUBH EAS SOUTH	2013
A82 480	DUBH EAS NORTH	2013
A82 490	ALLT FIONNE GHLINNES	2013
A82 500	ALLT FIONNE GHLINNEN	2013
A82 510	EAS EONAN	2013
A82 520	DERRYDARROCH RAIL	2013
A82 560	EUICH RAIL	2013
A82 580	STRATHFILLAN MANSE	2013
A82 580 G94	NADICS C3	2013
A82 590	TYNDRUM	2013
A82 610 C63	AUCH 1	2013
A82 650	ALLT NA H ACHLAISE	2013
A82 670	ALLT MOLACH	2013
A82 680	ALLT NAN GUIBHAS	2013
A82 690	CREAGDHUBH	2013
A82 710	ALLT NA FEADH	2013
A82 710 F	ALLT NA FEADH F/B	2013
A82 730	MEANNARCLACH	2013
A82 760	CHAILLEACH	2013
A82 770	ALLTANRIGH	2013
A82 790	CHANCELLOR	2013
A82 800	ACHTRIOCHTAN	2013
A82 820	ALLT NA MUIDHE	2013
A82 830	ALLT FHIODHAN	2013
A82 840	BALLACHULISH HARBOUR	2013
A82 850	LAROCH RIVER	2013
A82 860	ST JOHNS RECTORY	2013
A82 910	RIGH	2013
A82 960	KIACHNISH	2013
A82 970 G20	NADICS C4	2013
A82 980	NEVIS RIVER	2013
A828 120 C32	APPIN HOUSE	2013

NEXT PRINCIPLE INSPECTION YEAR: 2013		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A828 30 C38	ALLT AN DUINE MHOIR	2013
A828 50	BARCALDINE GARDENS	2013
A83 140	LEACANN	2013
A83 50 W61	ROADMANS COTTAGE RA	2013
A83 60 W83	BLACK SPOUT LANDWARD	2013
A83 70 W85	GLASCHOINE LANDWARD	2013
A83 90 W10	CUIL HOUSE RA	2013
A83 90 W23	ALLT NA CRIEGE	2013
A83 90 W91	STRONE POINT	2013
A83 99	SHIRA OLD (NSS)	2013
A830 240 C82	POLNISH BURN NEW	2013
A830 285	POLNISH NEW RAIL	2013
A830 285 C43	SCHOOLHOUSE BURN NEW	2013
A830 285 C51	ARNABOL BURN NEW	2013
A830 301	ALLTA MHAMA NEW	2013
A830 330	BEASDALE BURN NEW	2013
A830 350	BORRODALE BURN NEW	2013
A830 352	BORRODALE U/P	2013
A830 356	BRUNERY BURN	2013
A830 360	LARACHMORE NEW	2013
A830 360 C50	ARISAIG NORTH U/P	2013
A830 360 C51	ARISAIG NORTH BURN	2013
A830 374	CARACH SOUTH U/P	2013
A830 375	ALLT CAM CARACH	2013
A830 376	CARACH NORTH U/P	2013
A830 383	TRAIGH FARM U/P	2013
A830 385	GLENCAIRN FARM U/P	2013
A830 385 C1	GLENCAIRN BURN	2013
A830 387	CROSS FARM U/P	2013
A830 387 C60	KINSADEL U/P	2013
A830 80	FASSFERN	2013
A835 0 G25	NADICS A10	2013
A835 110	BLACK BRIDGE	2013
A835 110 C16	GLASCARNOCH 1	2013
A835 120	TORRAN DHU	2013
A835 130	LEACACHAIN	2013
A835 150	ALLT A BHRAIGHE	2013
A835 160	INVERLAEL	2013
A835 190 G80	NADICS X3	2013
A835 20	KILDUN RAIL	2013
A835 30	USSIE BURN 1 (ARMCO)	2013
A835 30 C11	USSIE BURN 2 (BOX)	2013
A835 50	CONTIN OLD (NSS)	2013
A835 55 C30	BALNAIN	2013
A835 55 G19	NADICS X2	2013
A835 55 W1	CONTIN NSHEB LB	2013
A835 60 C35	ALLT A MHUILINN 1	2013
A835 60 C36	ALLT A MHUILINN 2	2013

NEXT PRINCIPLE INSPECTION YEAR: 2013		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A835 60 C83	CREGAN NA CRICHE	2013
A835 60 W15	GARVE WALL 1	2013
A835 60 W25	GARVE WALL 2	2013
A835 70	SILVERBRIDGE OLD SSS	2013
A835 75	ACHNACLERACH	2013
A84 60	KELTY	2013
A84 70	LENY	2013
A84 80	KILMAHOG 1	2013
A84 90	KILMAHOG 2	2013
A84 90 W10	KILMAHOG 3	2013
A85 100	TOFTS	2013
A85 110	DALVRECK	2013
A85 140	LAWERS	2013
A85 150	MILTON	2013
A85 180	TULLYBANNOCHER	2013
A85 190	BOLTACHAN	2013
A85 210	FANK	2013
A85 240	ALLT AN FHIONN	2013
A85 240 W60	LOCH EARN 1	2013
A85 240 W90	LOCH EARN 2	2013
A85 250	GLENTARKEN	2013
A85 250 W15	LOCH EARN 3	2013
A85 260	DERRY WOOD	2013
A85 300 W30	ALLT AN DEABHTAICH	2013
A85 350	LUIB STATION	2013
A85 360	ALLT COIRE CHAORACH	2013
A85 380 G90	NADICS C2	2013
A85 430 W95	TULLICH	2013
A85 480	ORCHY	2013
A85 480 W36	CREAG A CHEOIDH	2013
A85 480 W48	LOCHAWE HOTEL	2013
A85 480 W49	TIGHT LINE	2013
A85 490	INNISCHONAIN RAIL	2013
A85 630	LAKEFIELD RAIL	2013
A85 660 W21	CONNEL WALL 1	2013
A85 90	KEILLOUR	2013
A87 170 W31	TATTENHAM CORNER 1	2013
A87 170 W34	TATTENHAM CORNER 2	2013
A87 170 W49	TATTENHAM CORNER W	2013
A87 190 W15	SHIEL JUNCTION	2013
A87 210 W73	INVERINATE WEST RHS	2013
A87 210 W80	INVERINATE WEST LHS	2013
A87 220 W57	CASTLE CUTTINGS	2013
A87 250 G68	NADICS X1	2013
A87 560	VARRAGIL	2013
A9 1020 C18	TOM CHEIREAG	2013
A9 1020 G15	NADICS A2	2013
A9 1130 G88	VMS AVIEMORE (B9152)	2013

NEXT PRINCIPLE INSPECTION YEAR: 2013		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A9 1207 F	SLOCHD SUMMIT 3 F/B	2013
A9 1210	SLOCHD BEAG	2013
A9 1230	FINDHORN	2013
A9 1240	TOMATIN HOUSE U/P	2013
A9 1250	ALLT NA FRITHE	2013
A9 1250 C25	ALLT DUBHAIG	2013
A9 1260	DALMAGARRY	2013
A9 1295 G63	NADICS A5	2013
A9 1340 G40	NADICS A8	2013
A9 1350 G45	NADICS A6	2013
A9 1355	CHARLESTOWN PED U/P	2013
A9 1355 G50	NADICS A11	2013
A9 1355 W25	PLOVER COTTAGE RA	2013
A9 1360 C60	FOULIS	2013
A9 1470 C40	TAIN ST VINCENT U/P	2013
A9 1583	MEIKLE FERRY RAIL	2013
A9 1585	DORNOCH	2013
A9 1587	EVELIX CUTHILL LINKS	2013
A9 1587 W61	COWIE HOUSE LA	2013
A9 1615	FLEET NEW	2013
A9 1625	MOUND NEW RAIL	2013
A9 1680 W91	BRORA ROSSLYN YRD LB	2013
A9 1680 W92	BRORA HIGH STREET RA	2013
A9 1680 W96	SUTHERLAND ARMS LB	2013
A9 1680 W97	BRORA SOUTH BRAE RA	2013
A9 1680 W98	BRORA MEMORIAL LB	2013
A9 1680 W99	BRORA MEMORIAL SQ RA	2013
A9 1695	BRORA RIVER NEW	2013
A9 1720 C24	ALLT GARBH-CHLAIS	2013
A9 1720 W19	KINTRADWELL LODGE RB	2013
A9 1720 W38	KINTRADWELL FARM LA	2013
A9 1730	COLLIEBURN	2013
A9 1730 G90	NADICS X4	2013
A9 1745	ALTNACOUL NEW	2013
A9 1755	LOTH RIVER NEW	2013
A9 1755 C73	ALLTEENIE BURN	2013
A9 1755 W70	LOTHMORE RB	2013
A9 1755 W77	LOTH PHONE KIOSK RB	2013
A9 1755 W81	LOTH SCHOOL RB	2013
A9 1760	CULGOWER BURN	2013
A9 1820 C88	ALLT NA HEANG	2013
A9 1830	OUSDALE	2013
A9 1840	ALT BRAIGH NAM MEUR	2013
A9 1840 C7	ALLT SLEIBHT EAN	2013
A9 1840 W81	DUBH CHOILLE 1 LB	2013
A9 1840 W85	DUBH CHOILLE 2 LB	2013
A9 1860 W13	WHITE HOUSE RA	2013
A9 1860 W5	BERRIEDALE HAIRPN RB	2013

NEXT PRINCIPLE INSPECTION YEAR: 2013		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A9 1860 W8	BERRIEDALE CMTARY RA	2013
A9 1870	BORGUE	2013
A9 1870 W36	SITHEAN DUBH RB	2013
A9 1870 W46	DUNBEATH CSTL HLL RB	2013
A9 1940 G5	NADICS X5	2013
A9 1950	THURSO RIVER	2013
A9 340 G50	NADICS A1	2013
A9 650 G90	NADICS A7	2013
A9 870	ALLT DUBHAIG	2013
A9 879 F	N OF BALSPORRAN F/B	2013
A9 880	ALLT CHUIRN	2013
A9 890	ALLT NAN CISTEACHAN	2013
A9 891 F	S OF DALWHINNIE F/B	2013
A9 900	ALLT UILLEIM	2013
A9 910	ALLT BHATHAICH	2013
A9 920	AQUEDUCT	2013
A9 930	ALLT CUAICH	2013
A9 940	ALLT GARBH	2013
A9 950 C45	RALIA LODGE	2013
A99 40 G77	NADICS X6	2013

NEXT PRINCIPLE INSPECTION YEAR: 2014		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A82 1130 C60	CEANNSIDE FIVE	2014
A82 1160 C1	CEANNSIDE 1	2014
A82 1170	SITHEINN	2014
A82 1180	LAGAIN	2014
A82 1190 C30	SEVENHEADS	2014
A82 1190 C8	NORTH LAGGAN	2014
A82 1460	RUITH	2014
A82 1470	LOCHEND	2014
A82 1480	DOCHFUR	2014
A82 1490 H1	TELFORD STREET HML	2014
A82 1500 H2	SHORE STREET HML	2014
A82 1520 H3	HARBOUR ROAD HML	2014
A82 370	STUCKGOWAN	2014
A82 380	TARBET SMITHY	2014
A82 381 F	TARBET SMITHY F/B 2	2014
A82 382 F	TARBET SMITHY F/B 3	2014
A82 390	INVERUGLAS	2014
A82 400	SLOY TAIL RACE	2014
A82 410	ARDVORLICH NORTH	2014
A82 420	STUCKINDROIN	2014
A82 430	STRATH DUBH-UISAGE S	2014
A82 440	STRATH DUBH-UISAGE N	2014
A82 450 C10	ROSE COTTAGE	2014

NEXT PRINCIPLE INSPECTION YEAR: 2014		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A82 600	CLIFTON	2014
A82 600 F	CLIFTON F/B	2014
A82 840 C87	LAROCH PEDEST U/P	2014
A82 870	BALLACHULISH	2014
A82 910 W64	DRUIMM NA BIRLINN 1	2014
A82 910 W68	DRUIMM NA BIRLINN 2	2014
A82 910 W70	DRUIMM NA BIRLINN 3	2014
A82 970	FT WILLIAM ASHBURN	2014
A82 970 C60	FT WILLIAM PEDST U/P	2014
A82 970 W31	FT WILLIAM FORESHORE	2014
A82 970 W50	FT WILLIAM WAVE WALL	2014
A828 60	CREAGAN NEW	2014
A828 90	INVERNAHYLE	2014
A83 100 W43	BUSHANG RA	2014
A83 110 W28	RUDHA NA CRAIGE L/W	2014
A83 140 W15	SOUTH CRALECKAN 1	2014
A83 140 W16	SOUTH CRALECKAN 2	2014
A83 140 W37	POWDER WORKS	2014
A83 140 W99	SANDHOLE LB	2014
A83 160 W67	WOODSIDE LB	2014
A83 160 W80	THE HAVEN LB	2014
A83 160 W82	TIGH CLADICH NORTH	2014
A83 170	CRARAE	2014
A83 180	AUCHGOYLE	2014
A83 190	ASKNISH	2014
A83 20	LOIN WATER	2014
A83 210	TOM BAN	2014
A83 260 C0	ARDFENAIG NEW	2014
A830 30	ANNAT	2014
A830 40	CAMUSNATHA	2014
A830 50	ALLT NA LEATHBHEINN	2014
A830 60	ACHDALIEU	2014
A830 70	ALLT NA FHEIDH	2014
A830 90	CORRYBEG	2014
A835 130 W66	CORRIESHALLOCH 1	2014
A835 130 W91	CORRIESHALLOCH 2	2014
A835 150 C23	GLACKOUR	2014
A835 150 W56	FOICH LODGE RA	2014
A835 170 W34	LECKMELM 1	2014
A835 170 W38	LECKMELM 2	2014
A835 180 W86	GADCAISCEIG RA	2014
A84 30 W5	BRIDGE OF TEITH N	2014
A84 39	OLD ANNET (SSS)	2014
A85 100 W32	ABERCAIRNEY	2014
A85 100 W37	CULTOQUHEY	2014
A85 100 W60	GILMERTON 1	2014
A85 100 W61	GILMERTON 2	2014
A85 100 W63	GILMERTON 3	2014

NEXT PRINCIPLE INSPECTION YEAR: 2014		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A85 100 W64	GILMERTON 4	2014
A85 100 W65	GILMERTON 5	2014
A85 100 W90	CRIEFF	2014
A85 120	MONZIEVAIRD	2014
A85 130	CLATHICK	2014
A85 160	COMRIE RAIL	2014
A85 170	LEDNOCK	2014
A85 200	TYNRIOCH RAIL	2014
A85 210 C10	STRUIE	2014
A85 230	ST FILLANS TAILRACE	2014
A85 230 W10	ST FILLANS	2014
A85 260 C75	TWIN CULVERT	2014
A85 290 F	GLEN OGLE F/B	2014
A85 380 W40	LOCH DOCHART EAST	2014
A85 400	CRNLARICH STN BURN	2014
A85 640	FEARNOCH	2014
A85 70	LOCHTY	2014
A85 80	METHVEN	2014
A86 30	AULT LAURIE	2014
A86 40 C93	CLUNY	2014
A86 60	LAGGAN	2014
A86 70	STRATHMASHIE	2014
A87 10	ALDERNAIG	2014
A87 20	ACHA LUACHRIACH	2014
A87 250	NOSTIE	2014
A87 260	BALMACARA NEW	2014
A87 30	DAINGEAN	2014
A87 330	ASHAIG	2014
A87 340	BUNAN	2014
A87 390	MHUILLIN NEW	2014
A87 40	BHOIRA	2014
A87 410	FEARNA NEW	2014
A87 430	LUIB	2014
A87 50	GARBH DHOIRE	2014
A87 500	SLIGACHAN	2014
A87 60	LOYNE	2014
A87 640	HINNISDAL	2014
A87 650	ABHAINN BHAL	2014
A87 660	CONON (UIG)	2014
A87 670	RHA	2014
A87 70	MORISTON	2014
A889 10	DROCHAID A'BHACAIN	2014
A889 30	DALWHINNIE RAIL	2014
A9 1200	BADDENGORM	2014
A9 1220	SOILSHAN U/P	2014
A9 1280	LAIRGANDOUR U/P	2014
A9 1291	DAVIOT OLD (NSS)	2014
A9 1300	INSHES O/B	2014

NEXT PRINCIPLE INSPECTION YEAR: 2014		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A9 1330	RAIGMORE NAIRN RAIL	2014
A9 1340	RAIGMORE PERTH RAIL	2014
A9 1350 H10V	NORTH KESSOCK CCTV	2014
A9 1360	CROMARTY	2014
A9 1450 C30	ACHNAGARRON	2014
A9 1450 C60	STONEFIELD BURN	2014
A9 1455	BROOMHILL U/P	2014
A9 1470	HILTON NEW	2014
A9 1625 W76	KIRKTON FARM RB	2014
A9 1640	CULMAILY NEW	2014
A9 1640 C20	ALLT DOMHAIN	2014
A9 1640 W19	SMITHY HOUSE LA	2014
A9 1660	GOLSPIE BIG BURN NEW	2014
A9 1710	CLYNEMILTON BURN	2014
A9 1720	KINTRADWELL BURN	2014
A9 1790 W20	HELMSDALE BRMHILL LA	2014
A9 1790 W30	CLASHNARROW LA	2014
A9 1809	BROKEN BURN (SSS)	2014
A9 1810 W91	ORD WALL 3 RB	2014
A9 1820	ORD BURN OLD (SSS)	2014
A9 1820 C0	ORD BURN NEW	2014
A9 1820 W3	ORD WALL 4 RB	2014
A9 1850	BERRIEDALE LANGWELL	2014
A9 1860	BERRIEDALE WATER	2014
A9 1910	RANGAG	2014
A9 1920	TACHER	2014
A9 1920 W86	CLASHGAL RA	2014
A9 1940	GEORGEMAS JUNCT RAIL	2014
A9 1940 C34	SORDALE CATTLE CREEP	2014
A9 1940 C36	ACHINGILLS	2014
A9 1940 C72	STAINLAND	2014
A9 1960	BURNSIDE BURN	2014
A9 1960 W61	SCRABSTER HOUSE LA	2014
A9 340 G67	VMS/D8 INVERALMOND	2014
A9 360	SHOCHIE	2014
A9 370	ORDIE	2014
A9 470 C41	WESTER BALLINLUIG	2014
A9 560	CRAIGHULAN	2014
A9 580	TYNATIED (BURN B)	2014
A9 590	KILLIECRANKIE VIA NB	2014
A9 600	KILLIECRANKIE VIA SB	2014
A9 610	EACHAINN (BURN C)	2014
A9 620	OLD FASKALLY U/P	2014
A9 640	ALLT GIRNAIG	2014
A9 650	GLEN GIRNAIG U/P	2014
A9 660	ALLT CHLUAIN	2014
A9 670	ESSANGAL	2014
A9 680	ALLT BHAIC	2014

NEXT PRINCIPLE INSPECTION YEAR: 2014		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A9 690	PITALDONICH	2014
A9 700	PITAGOWAN ROAD	2014
A9 720	ALLT A'CROMBAIDH	2014
A9 730	CLUNES BURN	2014
A9 740	ALLT CRAM BHRUTHAIH	2014
A9 750	DALNAMEIN	2014
A9 760	ALLT GEILLEIDH	2014
A9 760 C20	CARN NA SAIDHE N/B	2014
A9 760 C21	CARN NA SAIDHE S/B	2014
A9 790	EDENDON WATER	2014
A9 790 W7	DALNACARDOCH 6 LA	2014
A9 800	ALLT AN STALCAIR NB	2014
A9 800 W0	DALNACARDOCH 5 RA	2014
A9 800 W4	DALNACARDOCH 4 LB	2014
A9 810	ALLT AN STALCAIR SB	2014
A9 810 W28	DALNACARDOCH 1 LA	2014
A9 810 W66	DALNACARDOCH 2 LA	2014
A9 810 W89	DALNACARDOCH 3 LA	2014
A9 820	ALLT AN BHATHAICH NB	2014
A9 830	ALLT AN BHATHAICH SB	2014
A9 840	ALLT CHOARACH MOR	2014
A9 840 W82	DALNASPIDAL 1 RA	2014
A9 840 W91	DALNASPIDAL 2 RA	2014
A9 840 W99	DALNASPIDAL 3 RA	2014
A9 850	ALLT COIRE MHIC SITH	2014
A9 850 W77	DRUMOCHTER 1 RA	2014
A9 860	ALLT A'CHAORRUINN	2014
A9 910 C45	LOCH ERICHT CREEP	2014
A9 950	ALLT NA CEARDAICH	2014
A9 950 C51	GLENTRUIM CREEP	2014
A9 950 C75	RALIA CREEP	2014
A9 960	NUIDE CATTLE CREEP	2014
A9 970	INVERTON	2014
A9 980	KNAPPACH U/P	2014

NEXT PRINCIPLE INSPECTION YEAR: 2015		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A82 1000 G30	VMS/C5 FORT WILLIAM	2015
A82 1030 W94	FERGUSON'S DEPOT LB	2015
A82 1030 W99	SPEAN LODGE LB	2015
A82 1080 W30	LOCH LOCHYSIDE 1	2015
A82 1080 W53	LOCH LOCHYSIDE 2	2015
A82 1080 W72	LOCH LOCHYSIDE 3	2015
A82 1080 W81	LOCH LOCHYSIDE 4	2015
A82 1080 W95	LOCH LOCHYSIDE 5	2015
A82 1095 W15	LOCH LOCHYSIDE 6	2015

NEXT PRINCIPLE INSPECTION YEAR: 2015		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A82 1095 W24	LOCH LOCHYSIDE 7	2015
A82 1210	GHLEANNAIN	2015
A82 1240	UANAGAN	2015
A82 1270	BHROCHAIN	2015
A82 1370	EIREIGE	2015
A82 1420	FHEARCHAIR	2015
A82 1430	FOITHANEAN	2015
A82 1440	BRACHLA	2015
A82 1450	KILLIANAN	2015
A82 210 C35	CULVERT 16	2015
A82 210 F	STONEYMOLLAN F/B	2015
A82 240	FRUIN OLD (SSS)	2015
A82 242	FRUIN NEW	2015
A82 250	ALDYALLAN	2015
A82 250 W40	ALLT A'GHULLIANN LA	2015
A82 265 C67	ROSELEA	2015
A82 265 W46	BANDRY LA	2015
A82 265 W66	ALDOCHLAY ROCK BERM	2015
A82 295 W64	ROCK BERM 1 LA	2015
A82 295 W76	ROCK BERM 2 LA	2015
A82 315 W78	ROCK BERM 3 LA	2015
A82 325 W37	ROCK BERM 4 LA	2015
A82 325 W70	ROCK BERM 5 LA	2015
A82 380 W15	TARBET-TARBET ISLE	2015
A82 380 W23	BY TARBET ISLE	2015
A82 380 W27	BY TARBET ISLE 01	2015
A82 380 W29	BY TARBET ISLE 03	2015
A82 380 W30	BY TARBET ISLE 04	2015
A82 380 W42	INVERHOULIN WALL 1	2015
A82 380 W6	TARBET GARAGE RB	2015
A82 380 W76	KENMORE WALL 2	2015
A82 380 W87	KENMORE WALL 3	2015
A82 400 W39	BELOW COIRE NAN EACH	2015
A82 400 W43	CREAG AN ARNAIN RB	2015
A82 400 W80	TOM NA H-INNSE RB	2015
A82 410 W58	PULPIT ROCK RB	2015
A82 410 W60	PULPIT ROCK 1 LA	2015
A82 410 W69	PULPIT ROCK 2 RB	2015
A82 423 F	ARDLUI F/B	2015
A82 520 C15	WEST HIGHLAND WAY	2015
A82 600 C10	CLIFTON	2015
A82 610	ALLT COIRE CHAILEIN	2015
A82 640	TULLA	2015
A82 721 C61	ALLT COIRE RAINEACH	2015
A82 721 W68	COFFIN CAIRN RB	2015
A82 721 W92	MEANNARCLACH WALL RB	2015
A82 860 W34	CHOINNEICH VIEW RB	2015
A82 860 W49	CRAIGRANNOCH HOUSE	2015

NEXT PRINCIPLE INSPECTION YEAR: 2015		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A82 985	AN AIRD (ASS)	2015
A828 110	KINLOCHLAICH	2015
A828 140	DALNATRAT	2015
A828 150	DUROR	2015
A828 160	LAGNAHA	2015
A828 170	KENTALLEN STATION	2015
A828 170 W10	SGEIR A CHRIDHE	2015
A828 170 W92	CRAIGLINNHE	2015
A828 40	BARCALDINE HOME FARM	2015
A83 10 W68	ARROCHAR WALL 1	2015
A83 120	DOUGLAS WATER	2015
A83 130 W57	NORTH CRALECKAN	2015
A83 20 W43	TOM'S WALL LB	2015
A83 20 W55	ARDNAGEL	2015
A83 200 W23	KAMES COTTAGE NORTH	2015
A83 200 W24	KAMES COTTAGE S LB	2015
A83 200 W76	BLUE ROCK	2015
A83 220	CORRAN	2015
A83 221 F	CORRAN F/B	2015
A83 30	TORPEDO RANGE	2015
A83 30 W24	TORPEDO RANGE W 1 LB	2015
A83 30 W25	TORPEDO RANGE W 2 LB	2015
A83 30 W26	TORPEDO RANGE W 3 LB	2015
A83 30 W31	ARDGARTAN NORTH LB	2015
A83 30 W33	ARDGARTAN LB	2015
A83 40	LITTLE REST	2015
A83 90 C0	CLACHAN BEAG SOUTH	2015
A83 90 W11	CUIL HOUSE S 1 LB	2015
A83 90 W13	ARDGENAVAN N 1 LB	2015
A83 90 W15	ARDGENAVAN N 2 LB	2015
A83 90 W16	ARDGENAVAN LB	2015
A83 90 W17	ARDGENAVAN S 1 LB	2015
A83 90 W25	ARDGENAVAN S 2 LB	2015
A83 90 W31	DRISHAIG NORTH LB	2015
A83 90 W32	DRISHAIG SOUTH LB	2015
A83 90 W6	CUIL HOUSE NORTH	2015
A830 10	LOCHY RIVER NEW	2015
A830 10 C90	CAOL JUNCTION WEST	2015
A830 150	DHUIBH	2015
A830 170	UTHA	2015
A830 180	DEARG	2015
A830 190	GARBH	2015
A830 200	RANOCHAN	2015
A830 210	ARIENISKILL RAIL	2015
A830 220	CRICHE	2015
A830 230	ARIENISKILL	2015
A830 240	MAODAIL	2015
A830 240 C37	ALLT NA CRICHE	2015

NEXT PRINCIPLE INSPECTION YEAR: 2015		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A835 100	INCHBAE	2015
A835 140	CHUMHAINN	2015
A835 90	GARBAT	2015
A835 90 C19	ALLT RIABHACH	2015
A835 90 C42	H-INNESE-DROIGHINN	2015
A835 90 C51	ALLT AN EICH MHAIRBH	2015
A84 100 C90	GOBLACH	2015
A84 100 W10	ST BRIDES CHAPEL	2015
A84 100 W57	BEINN BHREAC 1	2015
A84 100 W75	BEINN BHREAC 4	2015
A84 110 C20	RUNACRAIG 1	2015
A84 110 C25	RUNACRAIG 2	2015
A84 110 C95	IMMERVOULIN	2015
A84 130 W30	GABION RA	2015
A84 135	BALQUHIDDER ROAD	2015
A84 137	BALQUHIDDER STATION	2015
A84 90 W0	KILMAHOG 1	2015
A84 90 W15	PASS HOUSE LB	2015
A84 90 W5	KILMAHOG 2	2015
A84 90 W60	PASS OF LENY	2015
A85 300 C65	LOCHAN LAIRIG CHEILE	2015
A85 300 C75	GLENOGLE COTTAGES	2015
A85 300 W15	ALLT AN SPUT DHUIBH	2015
A85 300 W55	GLEN OGLEHEAD (S)	2015
A85 300 W70	ALLT LAIRIG CHEILE S	2015
A85 300 W80	ALLT LAIRIG CHEILE N	2015
A85 340 C85	SUIE LODGE	2015
A85 370 C35	IUBHAIR	2015
A85 380	BENMORE	2015
A85 380 W45	LOCH DOCHART WEST	2015
A85 550	BRANDER VIADUCT	2015
A85 550 W54	CRUACHAN WALL 16	2015
A85 560	ALLT BRANDER	2015
A85 570	CRUINACHE NEW	2015
A85 610	AIRDS RAIL	2015
A85 620	AIRDS	2015
A85 670	SAULMORE	2015
A85 680	BLACK LYNN	2015
A87 100	LUNDIE	2015
A87 110	LUNDIE COTTAGE	2015
A87 180	MALAGAN	2015
A87 210	CLACHAN DUICH	2015
A87 220	AN LETH-ALLT	2015
A87 270 G45	NADICS X8	2015
A87 290 G46	NADICS X9	2015
A87 290 G52	NADICS X10	2015
A87 320	LUSA NEW	2015
A87 350	LOINN BHAINN NEW	2015

NEXT PRINCIPLE INSPECTION YEAR: 2015		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A87 350 C20	SKULAMUS	2015
A87 370	BIDEICH NEW	2015
A87 380	HARRAPOOL	2015
A87 400	BROADFORD	2015
A87 409	FEARNA OLD (LAY-BY)	2015
A87 420	STROLLAMUS	2015
A87 440	LOCH AINORT	2015
A87 450	ABHAINN CEANN	2015
A87 610	HAULTIN	2015
A87 80	FHEARCHAIR	2015
A87 90	PEATHRAIN	2015
A887 0 C65	BUACHAILLEAN	2015
A887 10	LEVISHIE	2015
A887 120	ALLT DUBH	2015
A887 120 C73	ALLT THOMAS	2015
A887 140	ALLT A' CHAISE	2015
A887 150	ALLT A COIRE BHUIDHE	2015
A887 180	ALLT AN EOIN	2015
A887 180 W55	MACKENZIE'S CAIRN	2015
A887 190	CEANNACROC	2015
A887 20	CEANN AN ACHAIDH	2015
A887 30	CAOCHAN NA MUIC	2015
A887 40	BHLARAI DH	2015
A887 50	ALLT LARAI RH	2015
A887 50 C48	ALLT A'CHOIRE BHUIDE	2015
A887 50 C64	ALLT RUADH	2015
A887 50 C70	TOM NA CROICHE	2015
A887 80	LAGAIN BHAIN	2015
A889 20	DALWHINNIE	2015
A889 40	ALLT BREAKACHY	2015
A889 50	LAGG (CUBHAIGE)	2015
A9 1010	KINGUSSIE RAIL	2015
A9 1020	KERROW	2015
A9 1030	CHAPELPARK U/P	2015
A9 1150 C87	MILTON SHEEP CREEP	2015
A9 1150 C95	STEALLAN DUBH	2015
A9 1160	MILTON CARAVAN SITE	2015
A9 1162	HIGH BURNSIDE U/P	2015
A9 1170	GRANISH U/P	2015
A9 1170 C22	AVIELOCHAN 3	2015
A9 1210 C45	SLOCHD MOR 2	2015
A9 1210 C46	SLOCHD MOR 3	2015
A9 1250 C50	INVEREEN U/P	2015
A9 1260 C65	STRATHDEARN 2	2015
A9 1270	MOY RAIL	2015
A9 1270 C33	ALLT NA SLANAICH	2015
A9 1270 C41	ALLT CREAG BHETHIN 1	2015
A9 1270 C43	ALLT CREAG BHETHIN 2	2015

NEXT PRINCIPLE INSPECTION YEAR: 2015		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A9 1290	DAVIOT NEW	2015
A9 1295	MATTAR	2015
A9 1310	RAIGMORE SOUTH	2015
A9 1320	RAIGMORE NORTH	2015
A9 1340 C50	MILLBURN	2015
A9 1590	EVELIX NEW	2015
A9 1590 C54	SKELBO BURN	2015
A9 1590 W36	ACHAVANDRA MUIR RB	2015
A9 1590 W43	SKELBO MUIR RB	2015
A9 1590 W68	FOUR PARKS BALVRD RB	2015
A9 1590 W74	CAMBUSAVIE HSPTAL RB	2015
A9 1590 W80	CAMBUSAVIE RAIL RB	2015
A9 1630	CULMAILY OLD (ASS)	2015
A9 1650 W75	GOLSPIE CHURCHYRD LA	2015
A9 1800 C95	ALLT BRISTE NORTH	2015
A9 1810	ALLT BRISTE NTH U/P	2015
A9 1810 W85	ORD WALL 2 NEW RB	2015
A9 1820 C30	ALLT AN FUDHAIR NEW	2015
A9 1890	LATHERONWHEEL	2015
A9 1900 C88	LOCHEND	2015
A9 420	INVER MILL LADE	2015
A9 470 C16	BALLINLUIG PEDES U/P	2015
A9 500	LOCH BROOM BURN	2015
A9 500 C4	PITCASTLE BURN	2015
A9 500 C74	EASTHAUGH FARM U/P	2015
A9 580 W36	KILLIECRANKIE D/H LB	2015
A9 580 W53	KILLIECRANKIE GAB RA	2015
A9 580 W82	KILLIECRANKIE C/R CB	2015
A9 580 W83	KILLIECRANKIE U/H RA	2015
A9 620 C5	TROOPERS (BURN D)	2015
A9 840 C25	ALLT CHOARACH BEAG	2015
A9 920 C57	DALWHINNIE DIST 1	2015
A9 940 C28	GARBH NORTH 2	2015
A9 990	RUTHVEN ROAD	2015
A99 10 W44	REMEGGY RB	2015
A99 40 C89	HEMPRIGGS NORTH	2015
A99 40 W34	LANGSTANE 1 RB	2015
A99 40 W37	LANGSTANE 2 RB	2015
A9S 1310 W10	RAIGMORE LA	2015

NEXT PRINCIPLE INSPECTION YEAR: 2016		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A82 1011 F	ALLT NA MHULIN BURN - NEW	2016
A82 1020 F	ALLT NA CAILLICH BURN	2016
A82 1030 F	RIVER LUNDY	2016
A82 1060 C55	EACHRAIN	2016
A82 1060 C84	GILLE RU Aidh 2	2016
A82 1280	UISGE	2016
A82 1300	PORTCLAIR	2016
A82 1320	COINNEAG	2016
A82 1330	ALLT SAIGH	2016
A82 1340	WATERFALL	2016
A82 1350	GROTAIG	2016
A82 1360	TYNEHERRICK	2016
A82 1400 C26	DRUMBUIE	2016
A82 1450 W67	WELLINGTON LAYBY	2016
A82 1500	FRIARS	2016
A82 1500 W72	GEORGE STREET LB	2016
A82 1500 W79	SAFEWAY RB	2016
A82 1500 W97	SUBWAY WALLS	2016
A82 1510	INNES STREET SUBWAY	2016
A82 1520 W11	KWIK FIT RB	2016
A82 1520 W6	BURNETTS BAKERY LB	2016
A82 285	LUSS WATER	2016
A82 295 F	LUSS TIMBER F/B	2016
A82 450	INVERARNAN	2016
A82 500 W90	DERRYDARROCH RB	2016
A82 520 C40	S OF KEILATOR 1 NEW	2016
A82 520 C50	S OF KEILATOR 3	2016
A82 520 C60	KEILATOR SHEEP CREEP	2016
A82 550	HERIVE BURN	2016
A82 550 C90	EWICH	2016
A82 910 W63	DRUIMM NA BIRLINN 4	2016
A82 910 W72	DRUIMM NA BIRLINN 7	2016
A82 910 W74	DRUIMM NA BIRLINN 8	2016
A82 910 W77	DRUIMM NA BIRLINN 9	2016
A82 910 W83	DRUIMM NA BIRLINN 10	2016
A82 989	BASE CAMP OLD RAIL	2016
A82 990	BASE CAMP NEW RAIL	2016
A828 120	ACHOSREGAN	2016
A828 120 C88	BOUNDARY	2016
A828 120 W46	SOUTH POLANACH	2016
A828 150 W11	DUROR POST OFFICE	2016
A828 180	BALLACHULISH HOSPITAL	2016
A828 190	BALLACHULISH HOUSE	2016
A828 190 W30	BALLACHULISH HOTEL	2016
A828 190 W41	BRIDGE PIER LEFT	2016
A828 190 W47	BRIDGE PIER EAST	2016
A828 35	ACHACHA	2016
A828 90 C17	ACHNACONA CROFT	2016

NEXT PRINCIPLE INSPECTION YEAR: 2016		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A83 100	SHIRA NEW	2016
A83 100 W35	SALMON DRAUGHT COT 1	2016
A83 100 W42	SALMON DRAUGHT COT 2	2016
A83 110	ARAY	2016
A83 110 W24	LOCHFYNE HOTEL NORTH	2016
A83 110 W40	NORTH CROMALT	2016
A83 110 W42	SOUTH CROMALT	2016
A83 130	AUCHENDRAIN	2016
A83 160	WHITEBRIDGE	2016
A83 160 W86	TIGH CLADICH S LB	2016
A83 280	INVERNEILL NEW	2016
A83 290	STRONACHULLIN	2016
A83 290 W94	ARTILLIGAN NORTH 1	2016
A83 300	ARTILLIGAN	2016
A83 300 W19	ARTILLIGAN SOUTH	2016
A83 310	ARTILLIGAN COTTAGE	2016
A83 320	ALLT MUIC RUAIDH OLD	2016
A83 320 C0	ALLT MUIC RUAIDH NEW	2016
A83 330	ERINES	2016
A83 340	ERINES SOUTH LODGE	2016
A83 40 W56	LITTLE REST 2	2016
A83 50	CROE WATER	2016
A83 60	COBLER	2016
A83 60 W76	EASAN DUBH SOUTH LB	2016
A83 70	KINGLAS	2016
A83 70 W83	UPPER GLASCHOINE STH	2016
A83 70 W84	UPPER GLASCHOINE NTH	2016
A83 80	FYNE	2016
A830 140	CHALLUIM	2016
A830 310 C56	LOCH NAN UAMH 3	2016
A830 395	MORAR RIVER NEW	2016
A830 395 C65	GLASNACARDOCH BURN	2016
A830 395 W76	GLASNACARDOCH BAY LB	2016
A830 395 W87	MALLAIG SEA WALL LB	2016
A830 420	GLEN DARY ACCESS	2016
A830 420 W9	GLENDARY SEA WALL LB	2016
A830 90 W55	KINLOCHEIL	2016
A835 0 C97	CONON BRAE	2016
A835 0 W95	CONON BRAE CASCADE	2016
A835 10	CONON	2016
A835 75 C62	A'BHOTHAIN DUIBH	2016
A835 75 C70	STRATHGARVE FOREST 1	2016
A835 75 C94	STRATHGARVE FOREST 3	2016
A835 75 W7	ACHNACLERACH LA	2016
A835 80	BEALLACH	2016
A835 80 C24	AN CABAR	2016
A84 10	DRIP	2016
A84 100	ANNIE BURN	2016

NEXT PRINCIPLE INSPECTION YEAR: 2016		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A84 100 W65	BEINN BHREAC 2	2016
A84 100 W70	BEINN BHREAC 3	2016
A84 110 W45	CEANN MOR	2016
A84 110 W47	RUNACRAIG GABION 1	2016
A84 110 W5	CREAG AN T-STRUITH	2016
A84 110 W50	RUNACRAIG GABION 2	2016
A84 110 W52	RUNACRAIG GABION 3	2016
A84 120 C65	STRATHYRE	2016
A84 140 W5	KENDRUM	2016
A84 30	TEITH	2016
A84 90 C35	STELL BURN	2016
A85 100 C98	ARDVRECK U/P	2016
A85 270	DALKENNETH	2016
A85 290	GLEN OGLE	2016
A85 300	OGLE	2016
A85 320	ARDCHYLE	2016
A85 330	LEDCHARRY	2016
A85 370	IMMERDHU	2016
A85 390	ALLT COIRE ARDRAIN	2016
A85 410 W51	RIVER LOCHY 1	2016
A85 410 W60	RIVER LOCHY 3	2016
A85 430 C55	ALLT FHUARAN	2016
A85 440	DUNORCHY	2016
A85 450	DALMALLY HOTEL	2016
A85 460	KINCHRACKINE	2016
A85 470	KINCHRACKINE WEST	2016
A85 480 W93	INNISCHOINNAIN E LB	2016
A85 490 C38	INNISCHOINNAIN 3	2016
A85 500 W11	LORGAIDH WALL 1	2016
A85 500 W84	LORGAIDH WALL 8	2016
A85 510	CRUACHAN VIADUCT	2016
A85 510 C3	CRUACHAN VIADUCT 1	2016
A85 510 W9	CRUACHAN VIADUCT 1	2016
A85 510 W92	CRUACHAN POWER STN	2016
A85 510 W99	CRUACHAN POWER STN 1	2016
A85 530	FALLS OF CRUACHAN	2016
A85 540	FALLS OF CRUACHAN W	2016
A85 540 W22	CRUACHAN WALL 1	2016
A85 540 W82	CRUACHAN WALL 10	2016
A85 540 W93	CRUACHAN WALL 12	2016
A85 560 W59	BRANDER WALL 3	2016
A85 560 W73	BRANDER WALL 4	2016
A85 580	BRIDGE OF AWE	2016
A85 600	TAYNUILT HOTEL	2016
A85 650 C9	CUMADALLOCH	2016
A85 660 W18	CNOC ARUAN	2016
A85 670 W84	STAFFORD ST SEA WALL	2016
A85 670 W87	ESPLANADE SEA WALL	2016

NEXT PRINCIPLE INSPECTION YEAR: 2016		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A85 670 W93	CATHEDRAL ALBANY TER	2016
A85 670 W97	GEORGE ST SEA WALL	2016
A85 680 G35	VMS/C6 OBAN	2016
A86 110 C69	ALLT NAN CLAR	2016
A86 111	ALLT A COIRE ARDHAIR	2016
A86 180	CLACHAIG	2016
A86 190	ALLT A' CHAORAINN	2016
A86 20	GYNACK	2016
A86 200	DAMH	2016
A86 200 W65	CRUINNICHIDH	2016
A86 210	ROY	2016
A86 210 C68	DRUIMANDONICH	2016
A86 40	CALDER	2016
A86 40 C83	ALLT A'GHAILL	2016
A86 40 W75	AUCHMORE 2	2016
A86 40 W76	AUCHMORE 3	2016
A86 50	MILL HOUSE BURN	2016
A86 70 C82	PATTACK	2016
A86 80	KINLOCH LAGGAN	2016
A86 80 C39	ALLT NA CLAISE	2016
A86 80 C64	ALLT MEAL DAMH	2016
A87 120	ALLT COIRE LAIR	2016
A87 130	ALLT CHOIRE A'CHAIT	2016
A87 140	AN CAORANN MOR	2016
A87 150	AN CAORANN BEAG	2016
A87 160	COIRE THOLL BHRUACH	2016
A87 160 C23	DOIREACH WEST 1	2016
A87 160 C25	DOIREACH WEST 2	2016
A87 160 C33	SHIEL TUNNEL 3	2016
A87 160 C43	SUTHERLANDS CNR EAST	2016
A87 160 C50	ALLT AN FEARNA	2016
A87 160 C53	SHIEL RIVER HEAD 1	2016
A87 160 C57	SHIEL RIVER HEAD 3	2016
A87 160 C64	ALLT COIRE MHIC-TIRE	2016
A87 160 C67	SAILEAG	2016
A87 160 C69	CREAGAN LUIB EORMA	2016
A87 160 C70	ACH' A' MHARC OLAICH	2016
A87 160 C74	BEALACH AN LAPAIN 1	2016
A87 160 C76	BEALACH AN LAPAIN 2	2016
A87 160 C81	LEAC DUBH 3	2016
A87 235	DORNIE SUBWAY NEW	2016
A87 245	DORNIE NEW	2016
A87 270	KYLE STATION RAIL	2016
A87 280	CARRICH	2016
A87 300	ALLT ANAVIG	2016
A87 310	ALLT AN DARAICH	2016
A87 410 W65	STROLLAMUS LA	2016
A87 430 C11	LUIB CREEP	2016

NEXT PRINCIPLE INSPECTION YEAR: 2016		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A87 460	BRUADARAN	2016
A87 470	ALLT MHIC MHOREIN	2016
A87 480	TORRA-MICHAIG	2016
A87 480 W38	SCONSER 1	2016
A87 540	LON CHAORACH	2016
A87 540 W79	LON CHAORACH LB	2016
A87 550	LON NA H-AIRIGH	2016
A87 550 W19	LON CREAG A CHAIT	2016
A87 550 W75	LON CREAG A CHAIT 2	2016
A87 560 W67	GLENVARRAGIL HOUSE	2016
A87 570	ALLT TOTA THAOIG	2016
A87 570 C42	LON NA H'ATHA	2016
A87 570 C54	LON NAN SLUGAN	2016
A87 570 C9	BUCHANAN'S BURN	2016
A87 570 W30	VIEWFIELD HOTEL	2016
A87 570 W49	DUNVEGAN ROAD	2016
A87 60 G10	VMS/X7 BUN LOYNE	2016
A887 100	ALLT NA H-INNSE BEAG	2016
A887 110	ALLT NA H-INNSE MOR	2016
A887 160	ALLT NA CRICHE	2016
A887 170	ALLT A' GHOIRTEIN	2016
A887 170 C86	ALLT AN EOIN EAST	2016
A887 90	TORGOYLE	2016
A9 1040	RAITTS BURN	2016
A9 1050	WILDLIFE PARK U/P	2016
A9 1060	DUNACHTON BURN U/P	2016
A9 1130	CRICHE	2016
A9 1140	CRAIG DHU U/P	2016
A9 1150	CRAIGELLACHIE NR U/P	2016
A9 1170 C12	ALLT NA CRICHE	2016
A9 1440	DALMORE O/B	2016
A9 1450	DALMORE RAIL	2016
A9 1459	KILDARY	2016
A9 1459 W51	BALNAGOWN SOUTH RB	2016
A9 1461	BALNAGOWN RIVER NEW	2016
A9 1462	EAST LODGE U/P	2016
A9 1462 C41	BALMACRAGGAN	2016
A9 1465	PITMADUTHY U/P	2016
A9 1475	ARDJACHIE CREEP	2016
A9 1650	GOLSPIE RAIL	2016
A9 1680	STRATHSTEVEN RAIL	2016
A9 1755 W45	CRACKAIG RB	2016
A9 1760 C70	PORTGOWER MILL NEW	2016
A9 1760 W44	MIDGARTY RB	2016
A9 1760 W74	DUNPHAILHEAD RAIL RB	2016
A9 1885 W5	BRIDGEND CRB WALL RB	2016
A9 1890 W11	LATHERONWHEEL VLA RA	2016
A9 1920 C5	FHEOIR	2016

NEXT PRINCIPLE INSPECTION YEAR: 2016		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A9 340	ALMOND	2016
A9 350	LUNCARTY O/B	2016
A9 380	HUNTERS LODGE	2016
A9 390	KINGSWOOD ROAD RAIL	2016
A9 400	BIRNAM GLEN	2016
A9 410	RIVER BRAAN	2016
A9 430	INVER RAIL	2016
A9 450	RIVER TAY	2016
A9 450 C70	DOWALLY BURN	2016
A9 450 C87	GUAY	2016
A9 460	KINDALLACHAN	2016
A9 460 C90	ACCESS ROAD - TOP	2016
A9 460 C92	ACCESS ROAD - BOTTOM	2016
A9 460 C94	INCH FARM CULVERT	2016
A9 460 C96	SUDS POND CULVERT	2016
A9 460 C98	OTTER UNDERPASS	2016
A9 795 F	MILLENNIUM F/B B20	2016
A99 10 C54	ACHASTLE BURN	2016
A99 20 W6	LYBSTER RA	2016
A99 30 C79	HILL O' MANY STANES	2016
A99 40	BRUAN MANSE	2016
A99 40 W30	ULBSTER RB	2016
A99 50	HUMSTER	2016

NEXT PRINCIPLE INSPECTION YEAR: 2017		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A82 1380 W45	BOGLASHIN RC ANCH PL	2017
A82 1380 W49	BOGLASHIN LA	2017
A82 1380 W59	URQUHART CASTLE LA	2017
A82 1390	BORLUM	2017
A82 1500 W20	SWIMMING POOL RB	2017
A82 1500 W22	BOWLING CLUB LB	2017
A82 1520	LONGMAN RAIL	2017
A82 220	CAMERON LODGE NORTH	2017
A82 230	EL RETIRO	2017
A82 260	FINLAS	2017
A82 265 C0	ARNBURN	2017
A82 265 C13	PORTBURN	2017
A82 345 C44	FIRKIN	2017
A82 345 C65	STUC AN T'IOBART	2017
A82 345 C89	HOLLYBANK	2017
A82 570	ALLT-ANT SAOIR	2017
A82 610 C87	AUCH 2	2017
A82 610 C94	AUCH 3	2017
A82 615	AUCH	2017
A82 615 C19	AUCH 4	2017

NEXT PRINCIPLE INSPECTION YEAR: 2017		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A82 630	COIRE AN DOTHAI DH	2017
A82 700	ETIVE	2017
A82 700 C38	ALLT A' CHRULAISTE	2017
A82 721	CABAR NEW	2017
A82 730 W55	STUDY LB	2017
A82 740	STUDY	2017
A82 750 W19	PASS OF GLENCOE 2 LB	2017
A82 750 W35	PASS OF GLENCOE 5 LB	2017
A82 750 W40	PASS OF GLENCOE 6 LB	2017
A82 750 W62	DROVERS' ROAD RA	2017
A82 780	ALLT RUIGH NEW	2017
A82 930	CORRYCHURRACHAN 1	2017
A828 0 W43	SOUTH CONNEL	2017
A828 11	CONNEL NORTH APPR'CH	2017
A828 150 C15	STEWART HOTEL	2017
A828 30 C60	FERLOCHAN	2017
A828 30 C72	MILL FARM	2017
A828 30 W24	LEDAIG	2017
A828 30 W25	CRAIGNEUK	2017
A828 50 W65	RUBHA RIABHACH NORTH	2017
A828 9	CONNEL SOUTH APPR'CH	2017
A83 170 W97	AUCHGOYLE NORTH EAST	2017
A83 180 W1	AUCHGOYLE SE LB	2017
A83 180 W22	MINARD HILL RA	2017
A83 180 W43	NURSERY COTTAGES	2017
A83 180 W49	EAS NA FEANNAIGE LB	2017
A83 180 W8	WOODHOUSE LB	2017
A83 220 W52	BRACKLEY NORTH	2017
A83 220 W78	THE WASTER	2017
A83 220 W90	TAMBORA	2017
A83 220 W92	TOWPATH COTTAGE LB	2017
A83 220 W99	GLENBURN NORTH	2017
A83 230	GLENBURN	2017
A83 230 W1	GLENBURN SOUTH	2017
A83 230 W3	HYDRO BOARD	2017
A83 230 W47	BUS DEPOT NORTH	2017
A83 230 W51	BUS DEPOT SOUTH LB	2017
A83 230 W55	GREY GULL INN	2017
A83 230 W96	CANAL BASIN LB	2017
A83 260 W5	TIGH-NA-COILLE LB	2017
A83 260 W98	BRENFIELD CROFT	2017
A83 270	ALLT NA CRICHE	2017
A83 280 C11	INVERNEILL CORNER	2017
A83 280 C30	TAYLOR'S BAY	2017
A83 340 W1	ERINES LODGE SOUTH	2017
A83 340 W2	ERINES LB	2017
A83 340 W24	MOR BALLA	2017
A83 340 W43	SOUTH MOR BALLA	2017

NEXT PRINCIPLE INSPECTION YEAR: 2017		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A83 340 W46	NTH UILEBHEIST BALLA	2017
A83 340 W5	SOUTH ERINES LB	2017
A83 340 W70	MEALL MHOR	2017
A83 350	MEALL MHOR	2017
A83 350 C36	ALLT NA BAITH	2017
A83 350 W1	SLOC NAM FEARNNA	2017
A83 350 W23	EILEAN AN DUNAIN	2017
A83 350 W49	NORTH PORT AN DUNAIN	2017
A83 350 W53	SOUTH PORT AN DUNAIN	2017
A83 360	ASHENS	2017
A83 360 W98	TARBET HARBOUR	2017
A83 364	TARBERT 2	2017
A83 90 W37	DRISHAIG RB	2017
A83 90 W45	EAST DUNDERAVE 1 LB	2017
A83 90 W46	EAST DUNDERAVE 2 LB	2017
A83 90 W47	EAST DUNDERAVE 3 LB	2017
A83 90 W84	EAST STRONE LB	2017
A83 90 W86	STRONE POINT LB	2017
A83 90 W90	NORTH STRONE 1	2017
A83 90 W93	NORTH STRONE 2	2017
A830 100	DRUMSALLIE	2017
A830 110	DRUMSALLIE WOOD	2017
A830 130	FINNAN RIVER	2017
A830 170 W86	CREAG BHAN	2017
A830 230 W6	LOCHAIN DUIBH	2017
A835 170	ARDCHARNICH	2017
A835 180	CORRY	2017
A835 190	BRAES OF ULLAPOOL	2017
A835 55	CONTIN NEW	2017
A835 55 C38	RUITH A'PHUILL	2017
A84 10 W95	ASHMILL GARAGE	2017
A84 130 W62	GABION LB	2017
A84 135 W30	BALQUHIDDER ST (ASS)	2017
A84 140	KENDRUM	2017
A84 20 W60	BRIDGE OF TEITH S	2017
A84 30 W10	AUCHENDOUNE RA	2017
A84 40 W85	TINAGULLOCH	2017
A84 60 W75	CALLANDER NORTH	2017
A85 280	BEICH	2017
A85 420	INVERLOCHY	2017
A85 590	NANT	2017
A85 660 W17	CRAIGLORA	2017
A85 660 W20	THE STUDIO LA	2017
A85 660 W22	DUNALLAN	2017
A85 660 W23	BELOW CONNELL BRIDGE	2017
A85 660 W26	LOCH ETIVE RB	2017
A85 670 W75	BEALACH AN RIGH	2017
A85 670 W77	FUINARY	2017

NEXT PRINCIPLE INSPECTION YEAR: 2017		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A85 670 W79	LORNE VIEW	2017
A86 130	CHOILLE RAIS	2017
A86 130 C10	MOY LODGE	2017
A86 130 W66	LUIBLEA	2017
A86 150	MOY BURN	2017
A86 160	ALLT NA H-UAMHA	2017
A86 160 W61	BHAIDEANACH 1 RA	2017
A86 170	URCHAR	2017
A86 200 W37	TULLOCH	2017
A86 200 W48	MURLAGGAN	2017
A86 200 W91	STRONLOSSIT 1	2017
A86 200 W92	STRONLOSSIT 2	2017
A86 22 F	MILLENNIUM F/B D1	2017
A86 220	ACHANEICH EAST	2017
A86 220 C39	ALLT MAIRI	2017
A86 220 C7	ACHANEICH	2017
A86 23 F	MILLENNIUM F/B D5	2017
A86 230	ALLTOUR (ALLT ODHAR)	2017
A86 24 F	MILLENNIUM F/B D2	2017
A86 27 F	MILLENNIUM F/B D3	2017
A86 31 F	MILLENNIUM F/B D4	2017
A86 40 W73	AUCHMORE 1	2017
A87 160 W83	LEAC DUBH 5	2017
A87 160 W85	LEAC DUBH 6	2017
A87 160 W87	BATTLEFIELD 1	2017
A87 160 W88	BATTLEFIELD 3	2017
A87 160 W89	BATTLEFIELD 4	2017
A87 160 W92	DUBH THOLLADH	2017
A87 160 W98	EAS NAN ARM EAST RHS	2017
A87 160 W99	EAS NAN ARM EAST LHS	2017
A87 170	EAS NAN ARM	2017
A87 190	SHIEL	2017
A87 200	ALLT A'CHRUINN	2017
A87 220 W16	KEPPOCH ROCK FACE	2017
A87 235 W5	EILEAN DONAN WALL LB	2017
A87 480 W39	SCONSER 2	2017
A87 480 W41	SCONSER HOUSE	2017
A87 480 W42	SCONSER SHED	2017
A87 490	ALLT DARAICH	2017
A87 510	ALLT DUBH	2017
A87 510 C22	LON LIDH	2017
A87 510 C44	LON NA MUICE	2017
A87 520	ALLT A'GHLARSAIR	2017
A87 520 W0	ALLT A GHLARSAIR 1	2017
A87 520 W62	ALLT A'GHLARSAIR 2	2017
A87 530	LON NAN AIRIGH	2017
A87 530 C50	CULVERT 2	2017
A87 600	LON NA H'IOLAINN	2017

NEXT PRINCIPLE INSPECTION YEAR: 2017		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A87 620	ROMESDAL	2017
A87 630	LON RUADH	2017
A87 650 W74	PEINSORIAG	2017
A87 660 W31	NORTH CUIL	2017
A9 1000	SPEY RIVER	2017
A9 1100 C70	CAOCHAN BURN	2017
A9 1170 C32	LAGGANTYGOWAN CREEP	2017
A9 1170 C75	FEITH MHOR	2017
A9 1170 C77	CRANNAICH 1	2017
A9 1180	CARRBRIDGE U/P	2017
A9 1190	DULNAIN	2017
A9 1280 C10	LAIRGANDOUR SOUTH	2017
A9 1280 C68	LAIRGANDOUR NORTH	2017
A9 1290 C5	NAIRNSIDE 2	2017
A9 1290 W4	NAIRNSIDE LB	2017
A9 1355 C32	GLACKMORE	2017
A9 1370	KILTEARN O/B	2017
A9 1380	SGITHEACH RIVER	2017
A9 1390	BALCONIE O/B	2017
A9 1400	ALLT GRAAD	2017
A9 1410	DEEPHAVEN	2017
A9 1420	TEANINICH	2017
A9 1420 C59	CONTULLICH BURN	2017
A9 1430	ALNESS RIVER	2017
A9 1430 C64	DALMORE MILL LADE	2017
A9 1760 C24	WESTGARTY BURN	2017
A9 1760 C29	WESTGARTY CREEP	2017
A9 1760 C41	MIDGARTY BURN	2017
A9 1760 C85	MUNRO'S BRIDGE	2017
A9 1760 W56	CREAGLOISGTE 1 RB	2017
A9 1760 W57	CREAGLOISGTE 2 RB	2017
A9 1760 W61	BRAEHEAD TERRACE RB	2017
A9 1760 W89	GREENPARK RAIL RB	2017
A9 1760 W90	GREENPARK 1 LA	2017
A9 1760 W91	GREENPARK 2 LA	2017
A9 1790	HELMSDALE SHORE ST	2017
A9 1790 C70	NAVIDALE BURN	2017
A9 1790 C80	ALLT BRISTE S	2017
A9 1800	SPUT BURN U/P	2017
A9 1800 C5	SPUT BURN NEW	2017
A9 1860 W99	BORGUE BNSIDE D/S RB	2017
A9 1870 W2	BORGUE BNSIDE D/N RB	2017
A9 1870 W56	DUNBEATH MAINS RB	2017
A9 1885	DUNBEATH NEW	2017
A9 1940 C43	CARSGOE	2017
A9 470	DALNABO O/B	2017
A9 470 W23	BALLINLUIG RAIL LA	2017
A9 470 W96	BROOM BURN CHAN'L RB	2017

NEXT PRINCIPLE INSPECTION YEAR: 2017		
Structure Reference Number	STRUCTURE NAME	Next Principal Inspection Year
A9 520	DALSHIAN RAIL	2017
A9 530	TUMMEL	2017
A9 540	FOSS ROAD	2017
A9 550	CLUNIE	2017
A9 560 W30	TIGH NA BEITHE RB	2017
A9 570	TIGH NA BEITHE RAIL	2017
A9 710	PITAGOWAN RAIL	2017
A9 818 F	MILLENNIUM F/B B13	2017
A9 820 F	MILLENNIUM F/B B12	2017
A9 830 F	MILLENNIUM F/B B11	2017
A9 831 F	MILLENNIUM F/B B10	2017
A9 834 F	MILLENNIUM F/B B9	2017
A9 836 F	MILLENNIUM F/B B8	2017
A9 841 F	MILLENNIUM F/B B6	2017
A9 842 F	MILLENNIUM F/B B5	2017
A9 845 F	MILLENNIUM F/B B4	2017
A9 850 F	MILLENNIUM F/B B3	2017
A9 860 F	MILLENNIUM F/B B2	2017
A9 861 F	MILLENNIUM F/B B1	2017
A9 862 F	MILLENNIUM F/B A23	2017
A9 863 F	MILLENNIUM F/B A22	2017
A9 864 F	MILLENNIUM F/B A21	2017
A9 865 F	MILLENNIUM F/B A20	2017
A9 866 F	MILLENNIUM F/B A19	2017
A9 867 F	MILLENNIUM F/B A18	2017
A9 868 F	MILLENNIUM F/B A17	2017
A9 869 F	MILLENNIUM F/B A16	2017
A9 871 F	MILLENNIUM F/B A14	2017
A9 872 F	MILLENNIUM F/B A13	2017
A9 873 F	MILLENNIUM F/B A12	2017
A9 874 F	MILLENNIUM F/B A11	2017
A9 881 F	MILLENNIUM F/B A10	2017
A9 882 F	MILLENNIUM F/B A9	2017
A9 883 F	MILLENNIUM F/B A4	2017
A9 884 F	MILLENNIUM F/B A8	2017
A9 885 F	MILLENNIUM F/B A7	2017
A9 886 F	MILLENNIUM F/B A6	2017
A9 887 F	MILLENNIUM F/B A5	2017
A9 888 F	MILLENNIUM F/B A3	2017
A9 889 F	MILLENNIUM F/B A2	2017
A9 890 F	MILLENNIUM F/B A1	2017
A99 20	REISGILL	2017
A9S 467	BALLINLUIG BOX CULVT	2017
A9S 468	BALLINLUIG JN 1 RAIL	2017
A9S 469	BALLINLUIG JN 2 RAIL	2017
A9S 469 W1	BALLINLUIG JN MERGE	2017

Principal Inspections due between 2012 and 2017

Structure Type	Total No	PI 2012	PI 2013	PI 2014	PI 2015	PI 2016	PI 2017
Structures with particular Requirements *	11	1	1	2			
Bridges	565	39	127	116	96	116	71
Footbridges	58	3	4	4	3	5	39
Culverts	227	26	26	25	48	62	40
Retaining Walls	515	135	54	49	89	80	108
Gantries	28	0	21	1	4	2	0
High Mast Lights	4	0	0	4	0	0	0

* See notes 4 and 5

Notes:

1. For supplementary information on bridges with particular requirements, refer to Schedule 7 Part 7.
2. Further information on the Structures listed within this table is held within the structures management function of the Integrated Roads Information System and the information room.
3. The numbers of Structures may be altered during the course of this Contract at the Director's discretion.
4. All structures with particular requirements lie within the PI programme, except where specifically excluded by their own maintenance manual as noted in Schedule 7 Part 7.
5. Not all structures with particular requirements have PIs in between 2012 and 2017.

This is Annex 7.6/C to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/C – List of Structures Over or Carrying Watercourses which have been subject to a Stage 1 Scour Assessment

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/C – List of Structures Over or Carrying Watercourses which have been subject to a Stage 1 Scour Assessment

Structure Ref No.	Structure Name
A82 1000	TOMNAHARRY
A82 1010	MHUILINN
A82 1010 F	MHUILINN F/B
A82 1020	CAILLICH
A82 1020 F	CAILLICH F/B
A82 1030	LUNDY
A82 1030F	LUNDY
A82 1040	SPEAN
A82 1050	MAIRI
A82 1060	INVERGLOY
A82 1070	ALTRUA
A82 1080	LEITIRI
A82 1095	CORRIEGOUR LODGE NEW
A82 1100	ATHA
A82 1110	LEAGANN
A82 1120	CHOILICH
A82 1130	CEANNSIDE SIX
A82 1140	CEANNSIDE FOUR
A82 1150	CEANNSIDE THREE
A82 1160	CEANNSIDE 2
A82 1170	SITHEINN
A82 1180	LAGAIN
A82 1190	LAGAN SWING BRIDGE
A82 1200	INVERGARRY
A82 1210	GHLEANNAIN
A82 1220	OICH
A82 1230	ABERCHALDER SWING BR
A82 1240	UANAGAN
A82 1250	FT AUGUSTUS SWING BR
A82 1260	FORT AUGUSTUS
A82 1270	BHROCHAIN
A82 1280	UISGE
A82 1290	ALLT A' MHUILINN
A82 1300	PORTCLAIR
A82 1310	INVERMORISTON
A82 1320	COINNEAG
A82 1330	ALLT SAIGH
A82 1340	WATERFALL
A82 1350	GROTAIG
A82 1360	TYNEHERRICK

Structure Ref No.	Structure Name
A82 1370	EIREIGE
A82 1380	FHITHICH
A82 1390	BORLUM
A82 1400	DRUMNADROCHIT
A82 1420	FHEARCHAIR
A82 1430	FOITHANEAN
A82 1440	BRACHLA
A82 1450	KILLIANAN
A82 1460	RUITH
A82 1470	LOCHEND
A82 1480	DOCHFUR
A82 1490	TOMNAHURICH SWING BR
A82 1500	FRIARS
A82 220	CAMERON LODGE NORTH
A82 230	EL RETIRO
A82 240	FRUIN OLD
A82 242	FRUIN NEW
A82 250	ALDYALLAN
A82 260	FINLAS
A82 285	LUSS WATER
A82 305	CULAG FARM
A82 315	CULVERT 38
A82 325	WADE'S BRIDGE
A82 342	INVERBEG
A82 345	CAMUS NAN CLAIS
A82 370	STUCKGOWAN
A82 380	TARBET SMITHY
A82 380 F	TARBET SMITHY F/B 1
A82 381 F	TARBET SMITHY F/B 2
A82 390	INVERUGLAS
A82 400	SLOY TAIL RACE
A82 410	ARDVORLICH NORTH
A82 420	STUCKINDROIN
A82 423 F	ARLDUI F/B
A82 430	STRATH DUBH-UISAGE S
A82 440	STRATH DUBH-UISAGE N
A82 450	INVERARNAN
A82 460	DUBH EAS
A82 470	DUBH EAS SOUTH
A82 480	DUBH EAS NORTH
A82 490	ALLT FIONNE GHLINNES
A82 500	ALLT FIONNE GHLINNEN
A82 510	EAS EONAN
A82 550	HERIVE BURN
A82 570	ALLT-ANT SAOIR
A82 580	STRATHFILLAN MANSE
A82 590	TYNDRUM
A82 600	CLIFTON
A82 600 F	CLIFTON F/B
A82 610	ALLT COIRE CHAILEIN

Structure Ref No.	Structure Name
A82 615	AUCH
A82 620	ALLT CHONOGLAIS
A82 630	COIRE AN DOTHAIDH
A82 640	TULLA
A82 650	ALLT NA H ACHLAISE
A82 660	BA
A82 670	ALLT MOLACH
A82 680	ALLT NAN GUIBHAS
A82 690	CREAGDHUBH
A82 700	ETIVE
A82 710	ALLT NA FEADH
A82 710 F	ALLT NA FEADH F/B
A82 721	CABAR NEW
A82 730	MEANNARCLACH
A82 740	STUDY
A82 760	CHAILLEACH
A82 770	ALLTANRIGH
A82 780	ALLT RUIGH NEW
A82 790	CHANCELLOR
A82 800	ACHTRIOCHTAN
A82 810	ACHNAMBEITHACH
A82 820	ALLT NA MUIDHE
A82 830	ALLT FHIODHAN
A82 850	LAROCH RIVER
A82 860	ST JOHNS RECTORY
A82 870	BALLACHULISH
A82 880	ST BRIDES EPISCOPAL
A82 890	SMITHY
A82 900	ONICH SCHOOL
A82 910	RIGH
A82 920	CORRYCHURRACHAN STH.
A82 930	CORRYCHURRACHAN 1
A82 940	CORRYCHURRACHAN 2
A82 950	BEINN BHAN BURN
A82 960	KIACHNISH
A82 970	FT WILLIAM ASHBURN
A82 980	NEVIS RIVER
A82 985	AN AIRD
A828 10	CONNEL
A828 110	KINLOCHLAICH
A828 120	ACHOSREGAN
A828 140	DALNATRAT
A828 150	DUROR
A828 160	LAGNAHA
A828 170	KENTALLEN STATION
A828 190	BALLACHULISH HOUSE
A828 40	BARCALDINE HOME FARM
A828 50	BARCALDINE GARDENS
A828 60	CREAGAN NEW
A828 90	INVERNAHYLE

Structure Ref No.	Structure Name
A83 100	SHIRA NEW
A83 110	ARAY
A83 120	DOUGLAS WATER
A83 130	AUCHENDRAIN
A83 140	LEACANN
A83 150	SANDHOLE
A83 160	WHITEBRIDGE
A83 170	CRARAE
A83 180	AUCHGOYLE
A83 190	ASKNISH
A83 20	LOIN WATER
A83 210	TOM BAN
A83 220	CORRAN
A83 221 F	CORRAN F/B
A83 230	GLENBURN
A83 250	ATTICHUAN
A83 270	ALLT NA CRICHE
A83 280	INVERNEILL NEW
A83 290	STRONACHULLIN
A83 30	TORPEDO RANGE
A83 300	ARTILLIGAN
A83 310	ARTILLIGAN COTTAGE
A83 320	ALLT MUIC RU Aidh OLD
A83 330	ERINES
A83 340	ERINES SOUTH LODGE
A83 350	MEALL MHOR
A83 360	ASHENS
A83 364	TARBERT 2
A83 370	CORRANBUIE
A83 380	BARDARAVINE
A83 390	ACHNACARNAN SOUTH
A83 40	LITTLE REST
A83 50	CROE WATER
A83 60	COBBLER
A83 70	KINGLAS
A83 80	FYNE
A83 99	SHIRA OLD
A830 10	LOCHY RIVER NEW
A830 100	DRUMSALLIE
A830 110	DRUMSALLIE WOOD
A830 130	FINNAN RIVER
A830 140	CHALLUIM
A830 150	DHUIBH
A830 170	UTHA
A830 180	DEARG
A830 190	GARBH
A830 200	RANOCHAN
A830 220	CRICHE
A830 230	ARIENISKILL
A830 240	MAODAIL

Structure Ref No.	Structure Name
A830 30	ANNAT
A830 301	ALLTA MHAMA NEW
A830 330	BEASDALE BURN
A830 350	BORRODALE BURN
A830 360	LARRACHMORE
A830 375	ALLT CAM CARACH
A830 395	MORAR RIVER NEW
A830 40	CAMUSNATHA
A830 420	GLEN DARY ACCESS
A830 50	ALLT NA LEATHBHEINN
A830 60	ACHDALIEU
A830 70	ALLT NA FHEIDH
A830 80	FASSFERN
A830 90	CORRYBEG
A835 10	CONON
A835 100	INCHBAE
A835 110	BLACK BRIDGE
A835 120	TORRAN DHU
A835 130	LEACACHAIN
A835 140	CHUMHAINN
A835 150	ALLT A BHRAIGHE
A835 160	INVERLAEL
A835 170	ARDCHARNICH
A835 180	CORRY
A835 190	BRAES OF ULLAPOOL
A835 30	USSIE BURN 1 (ARMCO)
A835 50	CONTIN OLD (PEDEST.)
A835 55	CONTIN NEW
A835 70	SILVER BRIDGE OLD
A835 75	ACHNACLERACH
A835 80	BEALLACH
A835 90	GARBAT
A84 10	DRIP
A84 100	ANNIE BURN
A84 110	ARDCHULLARIE
A84 120	STRATHYRE
A84 130	CREAGAN
A84 137	BALQUHIDDER STATION
A84 140	KENDRUM
A84 20	ASHMILL LEFT HAND
A84 21	ASHMILL RIGHT HAND
A84 30	TEITH
A84 39	OLD ANNET
A84 40	ANNET BURN
A84 50	COILLIECHAT 1
A84 60	KELTY
A84 70	LENY
A84 80	KILMAHOG 1
A84 90	KILMAHOG 2
A85 100	TOFTS

Structure Ref No.	Structure Name
A85 110	DALVRECK
A85 130	CLATHICK
A85 140	LAWERS
A85 150	MILTON
A85 170	LEDNOCK
A85 180	TULLYBANNOCHER
A85 190	BOLTACHAN
A85 210	FANK
A85 230	ST FILLANS TAILRACE
A85 240	ALLT AN FHIONN
A85 250	GLENTARKEN
A85 260	DERRY WOOD
A85 270	DALKENNETH
A85 280	BEICH
A85 290	GLEN OGLE
A85 290 F	GLEN OGLE F/B
A85 300	OGLE
A85 310	ALLT LAIRIG CHEILE
A85 320	ARDCHYLE
A85 330	LEDCHARRY
A85 340	LUIB BURN
A85 350	LUIB STATION
A85 360	ALLT COIRE CHAORACH
A85 370	IMMERDHU
A85 380	BENMORE
A85 390	ALLT COIRE ARDRAIN
A85 400	CRIANLARICH STN BURN
A85 420	INVERLOCHY
A85 440	DUNORCHY
A85 450	DALMALLY HOTEL
A85 460	KINCHRACKINE
A85 470	KINCHRACKINE WEST
A85 480	ORCHY
A85 500	LORGAI DH
A85 510	CRUACHAN VIADUCT
A85 520	FALLS OF CRUACHAN E
A85 530	FALLS OF CRUACHAN
A85 540	FALLS OF CRUACHAN W
A85 550	BRANDER VIADUCT
A85 560	ALLT BRANDER
A85 570	CRUINACHE NEW
A85 580	BRIDGE OF AWE
A85 590	NANT
A85 600	TAYNUILT HOTEL
A85 620	AIRDS
A85 630	LAKEFIELD RAIL
A85 640	FEARNOCH
A85 660	LUSRAGAN
A85 670	SAULMORE
A85 680	BLACK LYNN

Structure Ref No.	Structure Name
A85 70	LOCHTY
A85 80	METHVEN
A85 90	KEILLOUR
A86 101	ALLT A' CHRANNAIG
A86 111	ALLT A COIRE ARDHAIR
A86 130	CHOILLE RAIS
A86 150	MOY BURN
A86 160	ALLT NA H-UAMHA
A86 170	URCHAR
A86 180	CLACHAIG
A86 190	ALLT A' CHAORAINN
A86 20	GYNACK
A86 200	DAMH
A86 210	ROY
A86 22 F	MILLENNIUM F/B D1
A86 220	ACHANEICH EAST
A86 23 F	MILLENNIUM F/B D5
A86 230	ALLTOUR (ALLT ODHAR)
A86 24 F	MILLENNIUM F/B D2
A86 27 F	MILLENNIUM F/B D3
A86 30	AULT LAURIE
A86 31 F	MILLENNIUM F/B D4
A86 40	CALDER
A86 50	MILL HOUSE BURN
A86 60	LAGGAN
A86 70	STRATHMASHIE
A86 80	KINLOCH LAGGAN
A87 10	ALDERNAIG
A87 100	LUNDIE
A87 110	LUNDIE COTTAGE
A87 120	ALLT COIRE LAIR
A87 130	ALLT CHOIRE A'CHAIT
A87 140	AN CAORANN MOR
A87 150	AN CAORANN BEAG
A87 160	COIRE THOLL BHRUACH
A87 170	EAS NAN ARM
A87 180	MALAGAN
A87 190	SHIEL
A87 20	ACHA LUACHRIACH
A87 200	ALLT A'CHRUINN
A87 210	CLACHAN DUICH
A87 220	AN LETH-ALLT
A87 245	DORNIE NEW
A87 250	NOSTIE
A87 260	BALMACARA NEW
A87 280	CARRICH
A87 290	SKYE
A87 30	DAINGEAN
A87 300	ALLT ANAVIG
A87 310	ALLT AN DARAICH

Structure Ref No.	Structure Name
A87 320	LUSA NEW
A87 330	ASHAIG
A87 340	BUNAN
A87 350	LOINN BHAINN NEW
A87 370	BIDEICH NEW
A87 380	HARRAPOOL
A87 390	MHUILLIN NEW
A87 40	BHOIRA
A87 400	BROADFORD
A87 410	FEARNA NEW
A87 420	STROLLAMUS
A87 430	LUIB
A87 440	LOCH AINORT
A87 450	ABHAINN CEANN
A87 460	BRUADARAN
A87 470	ALLT MHIC MHOREIN
A87 480	TORRA-MICHAIG
A87 490	ALLT DARAICH
A87 50	GARBH DHOIRE
A87 500	SLIGACHAN
A87 510	ALLT DUBH
A87 520	ALLT A'GHLARSAIR
A87 530	LON NAN AIRIGH
A87 540	LON CHAORACH
A87 550	LON NA H-AIRIGH
A87 560	VARRAGIL
A87 570	ALLT TOTA THAOIG
A87 60	LOYNE
A87 600	LON NA H'IOLAINN
A87 610	HAULTIN
A87 620	ROMESDAL
A87 630	LON RUADH
A87 640	HINNISDAL
A87 650	ABHAINN BHAL
A87 660	CONON (UIG)
A87 670	RHA
A87 70	MORISTON
A87 80	FHEARCHAIR
A87 90	PEATHRAIN
A887 10	LEVISHIE
A887 100	ALLT NA H-INNSE BEAG
A887 110	ALLT NA H-INNSE
A887 120	ALLT DUBH
A887 140	ALLT A' CHAISE
A887 150	ALLT A COIRE BHUIDHE
A887 160	ALLT NA CRICHE
A887 170	ALLT A' GHOIRTEIN
A887 180	ALLT AN EOIN
A887 190	CEANNACROC
A887 20	CEANN AN ACHAIDH

Structure Ref No.	Structure Name
A887 30	CAOCHAN NA MUIC
A887 40	BHLARAI DH
A887 50	ALLT LARAIRIDH
A887 80	LAGAIN BHAIN
A887 90	TORGOYLE
A889 10	DROCHAID A'BHACAIN
A889 20	DALWHINNIE
A889 40	ALLT BREAKACHY
A889 50	LAGG (CUBHAIGE)
A9 1000	SPEY RIVER
A9 1040	RAITTS BURN
A9 1060	DUNACHTON BURN U/P
A9 1090	ALLT AN FHEARNA
A9 1100	ALLT CHRIOCHAIDH
A9 1130	CRICHE
A9 1190	DULNAIN
A9 1200	BADDENGORM
A9 1207 F	SLOCHD SUMMIT 3 F/B
A9 1230	FINDHORN
A9 1250	ALLT NA FRITHE
A9 1260	DALMAGARRY
A9 1262 F	MILLENNIUM F/B F1
A9 1290	DAVIOT NEW
A9 1291	DAVIOT OLD
A9 1350	KESSOCK
A9 1360	CROMARTY
A9 1380	SGITHEACH RIVER
A9 1400	ALLT GRAAD
A9 1430	ALNESS RIVER
A9 1461	BALNAGOWN RIVER NEW
A9 1470	HILTON NEW
A9 1585	DORNOCH
A9 1587	EVELIX CUTHILL LINKS
A9 1590	EVELIX NEW
A9 1590 C54	SKELBO BURN
A9 1600	MOUND SLUICES
A9 1615	FLEET NEW
A9 1630	CULMAILY FARM OLD
A9 1640	CULMAILY NEW
A9 1660	GOLSPIE BIG BURN NEW
A9 1695	BRORA RIVER NEW
A9 1700	CRAIGALLACHIE
A9 1710	CLYNEMILTON BURN
A9 1720	KINTRADWELL BURN
A9 1730	COLLIEBURN
A9 1745	ALTNACOUL NEW
A9 1755	LOTH RIVER NEW
A9 1760	CULGOWER BURN
A9 1760 C24	WESTGARTY BURN
A9 1760 C41	MIDGARTY BURN

Structure Ref No.	Structure Name
A9 1785	HELMSDALE RIVER NEW
A9 1799	WIDOW'S OLD
A9 1809	BROKEN BURN
A9 1820	ORD BURN OLD
A9 1830	OUSDALE
A9 1840	ALT BRAIGH NAM MEUR
A9 1840 C7	ALLT SLEIBHT EAN
A9 1850	BERRIEDALE LANGWELL
A9 1860	BERRIEDALE WATER
A9 1860 W99	BORGUE BURNSIDE
A9 1870	BORGUE
A9 1885	DUNBEATH NEW
A9 1890	LATHERONWHEEL
A9 1900	LATHERON
A9 1910	RANGAG
A9 1920	TACHER
A9 1950	THURSO RIVER
A9 1960	BURNSIDE BURN
A9 340	ALMOND
A9 360	SHOCHIE
A9 370	ORDIE
A9 400	BIRNAM GLEN
A9 410	RIVER BRAAN
A9 420	INVER MILL LADE
A9 450	RIVER TAY
A9 460	KINDALLACHAN
A9 500	LOCH BROOM BURN
A9 530	TUMMEL
A9 550	CLUNIE
A9 580	TYNATIED (BURN B)
A9 610	EACHAINN (BURN C)
A9 640	ALLT GIRNAIG
A9 660	ALLT CHLUAIN
A9 670	ESSANGAL
A9 680	ALLT BHAIC
A9 690	PITALDONICH
A9 720	ALLT A'CROMBAIDH
A9 730	CLUNES BURN
A9 740	ALLT CRAM BHRUTHAIH
A9 750	DALNAMEIN
A9 760	ALLT GEILLEIDH
A9 760 C20	CARN NA SAIDHE N/B
A9 760 C21	CARN NA SAIDHE S/B
A9 790	EDENDON WATER
A9 795 F	MILLENNIUM F/B B20
A9 800	ALLT AN STALCAIR N/B
A9 810	ALLT AN STALCAIR S/B
A9 818 F	MILLENNIUM F/B B13
A9 820	ALLT AN BHATHAICH NB
A9 820 F	MILLENNIUM F/B B12

Structure Ref No.	Structure Name
A9 830	ALLT AN BHATHAICH SB
A9 830 F	MILLENNIUM F/B B11
A9 831 F	MILLENNIUM F/B B10
A9 834 F	MILLENNIUM F/B B9
A9 836 F	MILLENNIUM F/B B8
A9 840	ALLT CHOARACH MOR
A9 841 F	MILLENNIUM F/B B6
A9 842 F	MILLENNIUM F/B B5
A9 845 F	MILLENNIUM F/B B4
A9 850	ALLT COIRE MHIC SITH
A9 850 F	MILLENNIUM F/B B3
A9 860	ALLT A'CHAORRUINN
A9 860 F	MILLENNIUM F/B B2
A9 861 F	MILLENNIUM F/B B1
A9 862 F	MILLENNIUM F/B A23
A9 863 F	MILLENNIUM F/B A22
A9 864 F	MILLENNIUM F/B A21
A9 865 F	MILLENNIUM F/B A20
A9 866 F	MILLENNIUM F/B A19
A9 867 F	MILLENNIUM F/B A18
A9 868 F	MILLENNIUM F/B A17
A9 869 F	MILLENNIUM F/B A16
A9 870	ALLT DUBHAIG
A9 871 F	MILLENNIUM F/B A14
A9 872 F	MILLENNIUM F/B A13
A9 873 F	MILLENNIUM F/B A12
A9 874 F	MILLENNIUM F/B A11
A9 879 F	N OF BALSPORRAN F/B
A9 880	ALLT CHUIRN
A9 881 F	MILLENNIUM F/B A10
A9 882 F	MILLENNIUM F/B A9
A9 883 F	MILLENNIUM F/B A4
A9 884 F	MILLENNIUM F/B A8
A9 885 F	MILLENNIUM F/B A7
A9 886 F	MILLENNIUM F/B A6
A9 887 F	MILLENNIUM F/B A5
A9 888 F	MILLENNIUM F/B A3
A9 889 F	MILLENNIUM F/B A2
A9 890	ALLT NAN CISTEACHAN
A9 890 F	MILLENNIUM F/B A1
A9 891 F	S OF DALWHINNIE F/B
A9 900	ALLT UILLEIM
A9 910	ALLT BHATHAICH
A9 920	AQUEDUCT
A9 930	ALLT CUAICH
A9 940	ALLT GARBH
A9 950	ALLT NA CEARDAICH
A9 970	INVERTON
A99 10	FORSE
A99 10 W44	REMIGGY

Structure Ref No.	Structure Name
A99 20	REISGILL
A99 30	OCCUMSTER CLYTH BURN
A99 30 C79	HILL O' MANY STANES
A99 40	BRUAN MANSE
A99 50	HUMSTER

This is Annex 7.6/D to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/D – List of Structures Over or Carrying Watercourses which have been subject to a Stage 2 Scour Assessment

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/D – List of Structures Over or Carrying Watercourses which have been subject to a Stage 2 Scour Assessment

Structure Ref No.	Structure Name
A9 530	TUMMEL
A9 660	ALLT CHLUAIN
A9 680	ALLT BHAIC
A9 891 F	S OF DALWHINNIE F/B
A9 900	ALLT UILLEIM
A9 1040	RAITTS BURN
A9 1600	MOUND SLUICES
A9 1760	CULGOWER BURN
A82 1010	MHUILINN
A82 1080	LEITIRI
A82 1130	CEANNSIDE SIX
A82 1210	GHLEANNAIN
A82 1220	OICH
A82 1460	RUITH
A82 1500	FRIARS
A83 99	SHIRA OLD
A83 220	CORRAN
A84 10	DRIP
A84 60	KELTIE
A84 120	STRATHYRE
A84 130	CREAGAN
A85 180	TULLYBANNOCHER
A85 250	GLENTARKEN
A85 260	DERRY WOOD
A85 300	OGLE
A85 640	FEARNOCH
A86 20	GYNACK
A86 130	CHOILLE RAIS
A87 245	DORNIE NEW
A87 260	BALMACARA NEW
A87 480	TORRA-MICHAIG
A87 540	LON CHAORACH
A830 301	ALLTA MHAMA NEW
A835 10	CONON
A835 30	USSIE BURN 1
A835 50	CONTIN OLD (PEDEST)
A887 10	LEVISHIE
A887 20	CEANN AN ACHAI DH
A887 80	LAGAIN BHAIN
A887 80	LAGAIN BHAIN OLD

Structure Ref No.	Structure Name
A887 90	TORGOYLE
A887 100	ALLT NA H-INNSE BEAG
A887 190	CEANNACROC
A889 40	ALLT BREAKACHY
A9 890	ALLT NAN CISTEACHAN
A9 910	ALLT BHATHAICH
A9 940	ALLT GARBH
A82 285	LUSS WATER
A82 370	STUCKGOWAN
A82 380	TARBET SMITHY
A82 1170	SITHEINN
A84 140	KENDRUM
A85 70	LOCHTY
A85 90	KEILLOUR
A86 190	ALLT A' CHAORAINN
A830 110	DRUMSALLIE WOOD
A830 130	FINNAN RIVER
A9 879 F	N OF BALSPORRAN F/B
A9 930	ALLT CUAICH
A9 1960	BURNSIDE BURN
A82 380 F	TARBET SMITHY F/B
A87 660	CONON (UIG)

This is Annex 7.6/E to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/E – List of Structures subject to Assessment and Upgrading of Vehicle Parapets to Transport Scotland Interim Advice Note 25

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/E – List of Structures subject to Assessment and Upgrading of Vehicle Parapets to Transport Scotland Interim Advice Note No 25

None.

This is Annex 7.6/F to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/F – List of Structures Subject to Identification of 'Particularly at Risk' Supports to Transport Scotland Interim Advice Note 29

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/F – List of Structures Subject to Identification of 'Particularly at Risk' Supports to Transport Scotland Interim Advice Note 29

Structure Ref No.	Structure Name
A9 350	LUNCARTY
A9 470	DALNABO
A9 550	CLUNIE
A9 1020	KERROW
A9 1210	SLOCHD BEAG
A9 1300	INSHES OB
A9 1310	RAIGMORE S
A9 1320	RAIGMORE N
A9 1390	BALCONIE OB

This is Annex 7.6/G to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/G – Technical Approval Procedures for Assessment of Structures in Scotland

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/G – Technical Approval Procedures for Assessment of Structures in Scotland

Assessor shall agree AIP with the TAA. This shall embrace all relevant documents from the TAS including the UK Design Manual for Roads and Bridges, and may include departures from standards or aspects not covered by standards.
↓ ↓
Assessment and check shall be carried out and the TAA shall be consulted on those aspects of the assessment which do not comply with the AIP. If further amendments to the AIP shall be required, either by the assessor or the Checker, these shall be approved by the TAA and an addendum to the AIP submitted.
↓ ↓
Assessor shall give recommendations on and agree with the TAA any substandard features identified by the assessment which are not to be upgraded. Any interim measures shall also be agreed at this stage.
↓ ↓
Assessment report submitted to the TAA with list of all substandard features identifying those which shall not be upgraded and giving recommendations for any Special Inspection or studies needed prior to the design of strengthening and/or improvement Operations.
↓ ↓
Assessor shall submit assessment and check certificates on which shall be recorded all agreed and/or approved departures from standards.
↓ ↓
TAA/OD accepts assessment and check certificates endorsing all departures from standards or aspects not covered by standards.
↓ ↓
END OF ASSESSMENT

DEFINITION

Assessment includes:

1. Load carrying capacity of deck and substructure
2. Parapets
3. Pier impact resistance
4. Safety fencing
5. Visibility
6. Vertical and Horizontal Clearances
7. Central reserve, carriageway, footway, and verge provision
8. Scour risk
9. All other aspects relative to the AIP

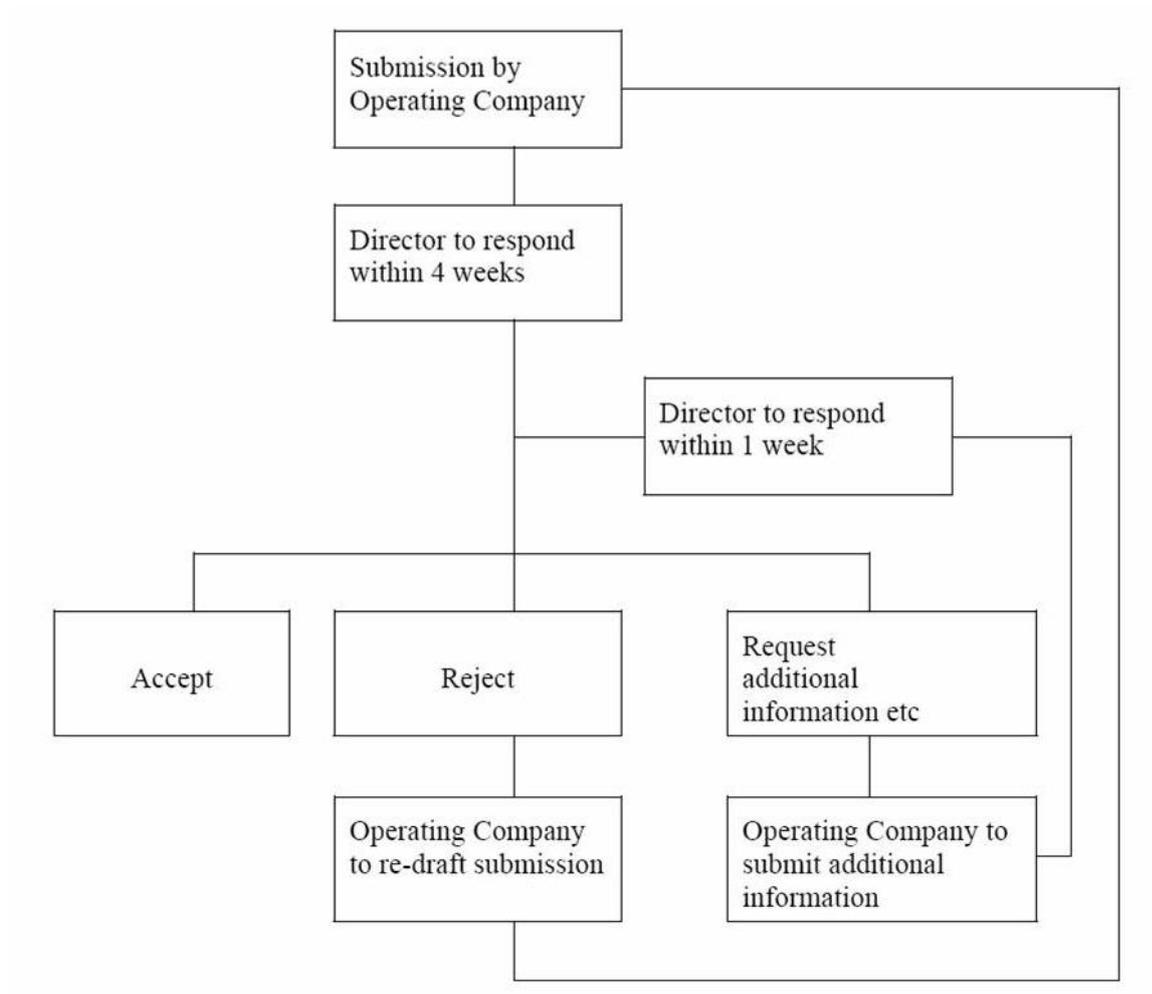
ABBREVIATIONS

TAA	= Technical Approval Authority
TAS	= Technical Approval Schedule
AIP	= Approval in Principle
OD	= Overseeing Department

NOTE:

1. For strengthening and or improvement works, Technical Approval procedures shall be the same as for new Structures.

Figure 1.1.1.A – Flow Chart for Departures from Standard or Aspects not Covered by Standards



This is Annex 7.6/H to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/H – List of Sub-Standard Structures with Structural Assessments in Progress

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/H – List of Sub-Standard Structures with Structural Assessments in Progress

There are no Structures in the North West Unit which have Structural Assessments in progress or under review.

This is Annex 7.6/1 to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/1 – List of Sub-Standard Structures

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/I – List of Sub-Standard Structures

Structure Reference	Structure Name	Sub-Standard Details
A82 620	ALLT CHONOGLAIS	7.5t ALL
A82 670	ALLT MOLACH	7.5t ALL
A82 680	ALLT NAN GUIBHAS	17.0t ALL
A82 690	CREAGDUBH	38.0t ALL
A82 770	ALLTANRIGH	17.0t ALL
A82 800	ACHTRIOCHTAN	38.0t ALL
A82 830	ALLT FHIODHAN	7.5t ALL
A84 35	CAMBUS	7.5t ALL
A85 280	BEICH	Weak verge
A85 680	BLACK LYNN	Weak verge
A87 340	BUNAN	38.0t ALL
A87 400	BROADFORD	17.0t ALL
A87 440	LOCH AINORT	Weak verge
A87 600	LON NA H'IOLAINN	Weak verge
A830 130	FINNAN RIVER	Weak verge
A887 40	BHLARAI DH	Weak verge
A887 80	LAGAIN BHAIN	17.0t ALL
A887 100	ALLT NA H-INNSE BEAG	17.0t ALL

Culvert Reference	Culvert Name	Sub-Standard Details
A82 600 C10	CLIFTON	17.0t ALL

Retaining Wall Reference	Retaining Wall Name	Sub-Standard Details
A82 1060 W99	ALTRUA WALL	0.1t ALL
A83 90 W25	ARDGENAVAN SOUTH 2	38.0t ALL
A83 160 W86	TIGH CLADICH SOUTH	38.0t ALL
A84 90 W0	KILMAHOG	38.0t ALL
A84 90 W15	PASS HOUSE	38.0t ALL
A86 40 W75	AUCHMORE 2	3.0t ALL
A86 200 W65	CRUINNICHIDH	3.0t ALL
A99 40 W30	ULBSTER RB	0.1t ALL

This is Annex 7.6/J to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/J – List of Structures with Known Defects Requiring Monitoring which are Sub-Standard

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/J – List of Structures with Known Defects Requiring Monitoring which are Sub-Standard

Structure Reference	Structure Name	Monitoring				Comment
		Interim Measures (Formal/Other)	Class (BD 79/06 App. C)	Interval	Details	
A82 620	ALLT CHONOGLAIS	Formal	1	Yearly	7.5t ALL	To be replaced
A82 670	ALLT MOLACH	Formal	1	Yearly	7.5t ALL	To be replaced
A82 680	ALLT NAN GUIBHAS	Formal	1	Yearly	17.0t ALL	To be replaced
A82 690	CREAGDUBH	Formal	1	Yearly	38.0t ALL	To be replaced
A82 770	ALLTANRIGH	Formal	1	Yearly	17.0t ALL	To be replaced
A82 800	ACHTRIOCHTAN	Formal	1	Yearly	38.0t ALL	To be replaced
A82 830	ALLT FHIODHAN	Formal	1	Yearly	7.5t ALL	To be replaced
A84 35	CAMBUS	Formal	1	Yearly	7.5t ALL	To be re-assessed
A87 400	BROADFORD	Formal	1	Yearly	17.0t ALL	To be re-assessed
A887 80	LAGAIN BHAIN	Other & Formal	1	6 monthly	17.0t ALL	Currently propped. To be replaced
A887 100	ALLT NA H-INNSE BEAG	Formal	1	Yearly	17.0t ALL	To be replaced

Culvert Reference	Culvert Name	Monitoring				Comment
		Interim Measures (Formal/Other)	Class (BD 79/06 App. C)	Interval	Details	
A82 600 C10	CLIFTON	Formal	1	Yearly	17.0t ALL	Structure to be reconstructed

Retaining Wall Reference	Retaining Wall Name	Monitoring				Comment
		Interim Measures (Formal/Other)	Class (BD 79/06 App. C)	Interval	Details	
A82 1060 W99	ALTRUA WALL	Formal	1	Yearly	0.1t ALL	To be repaired
A84 90 W0	KILMAHOG	Formal	1	Yearly	38.0t ALL	To be repaired
A84 90 W15	PASS HOUSE	Formal	1	6 monthly	38.0t ALL	To be reconstructed
A86 40 W75	AUCHMORE 2	Formal	1	6 monthly	3.0t ALL	To be reconstructed
A86 200 W65	CRUINNICHIDH	Formal	1	6 monthly	3.0t ALL	To be reconstructed
A99 40 W30	ULBSTER RB	Formal	1	Yearly	0.1t ALL	To be re-assessed

This is Annex 7.6/K to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/K – List of Structures with Known Defects Requiring Monitoring that are not Sub-Standard

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/K – List of Structures with Known Defects Requiring Monitoring that are not Sub-Standard

Structure Reference	Structure Name	Monitoring				Comment
		Interim Measures	Class	Interval	Details	
A82 1370	EIREIGE					Visual inspection for movement.
A82 1390	BORLUM					
A82 480	DUBH EAS NORTH					Monitoring the weathering steel.
A86 60	LAGGAN					Monitoring the weathering steel.
A87 210	CLACHAN DUICH			2 yearly		Monitor to determine the rate of corrosion to sheet pile cofferdams around pier footings.
A9 1000	SPEY RIVER					Monitoring the weathering steel.
A9 1190	DULNAIN					Monitoring the weathering steel.
A9 1210	SLOCHD BEAG					Monitoring the weathering steel.
A9 1230	FINDHORN					Monitoring the weathering steel.
A9 1290	DAVIOT NEW					Monitoring the weathering steel.
A9 1755	LOTH RIVER NEW					Visual inspection of longitudinal cracking.
A9 340	ALMOND					Monitoring of previous defects.
A9 410	RIVER BRAAN					Monitoring the weathering steel.
A9 450	RIVER TAY			During PI		LPR corrosion monitoring probes installed in the cantilever slabs to determine suitability of the DCI corrosion inhibitor.
A9 550	CLUNIE			2 yearly		Visual inspection of the compression flange stiffeners.

Structure Reference	Structure Name	Monitoring				Comment
		Interim Measures	Class	Interval	Details	
A9 590	KILLIECRANKIE VIA NB					Monitor as per maintenance manual
A9 600	KILLIECRANKIE VIA SB					Monitor as per maintenance manual
A9 640	ALLT GIRNAIG					Monitoring the weathering steel.
A9 670	ESSANGAL					Monitoring the weathering steel.

Culvert Reference	Culvert Name	Monitoring				Comment
		Interim Measures	Class	Interval	Details	
A887 50 C64	ALLT RUADH					Monitor structural and road settlement.

Retaining Wall Reference	Retaining Wall Name	Monitoring				Comment
		Interim Measures	Class	Interval	Details	
A82 1380 W45	BOGLASHIN RC ANCH PL			During PI/GI		Identify early signs of movement or bulging of the masonry facing
A9 580 W36	KILLIECRANKIE D/H LB	Other		2 yearly		Monitor load cells of anchored retaining walls.
A9 580 W82	KILLIECRANKIE C/R CB	Other		2 yearly		Monitor load cells of anchored retaining walls.
A9 580 W83	KILLIECRANKIE U/H RA	Other		2 yearly		Monitor load cells of anchored retaining walls.

This is Annex 7.6/L to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/L – Strengthening and Replacement Programme for the Sub-Standard Structures

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/L – Strengthening and Replacement Programme for Sub-Standard Structures

Structure Ref. No.	Structure Name	Proposed Year of Works				Comments
		2012/13	2013/14	2014/15	2015/16	
A82 620	ALLT CHONOGLAIS					Works in 2011/12
A82 670	ALLT MOLACH	x				To be replaced.
A82 680	ALLT NAN GUIBHAS	x				To be replaced.
A82 690	CREAGDUBH	x	x	x	x	To be replaced.
A82 770	ALLTANRIGH	x	x	x		To be replaced.
A82 800	ACHTRIOCHTAN	x	x	x	x	To be replaced.
A82 830	ALLT FHIODHAN	x	x			To be replaced.
A830 130	GLENFINNAN					To be re-assessed.
A84 35	CAMBUS					To be re-assessed.
A87 340	BUNAN					To be re-surfaced
A87 400	BROADFORD	x	x			To be re-assessed.
A87 440	LOCH AINORT					To be re-assessed.
A87 600	LON NA H'IOLAINN	x				To be strengthened
A887 100	ALLT NA H-INNSE BEAG		x			To be replaced.
A887 40	BHLAIRAIDH					To be re-assessed.
A887 80	LAGAIN BHAIN	x				To be replaced.
A82 600 C10	CLIFTON	x				To be strengthened
A82 1060 W99	ALTRUA WALL	x	x			To be replaced.
A83 90 W25	ARDGENAVAN SOUTH 2					To be re-assessed
A83 160	TIGH CLADICH					To be repaired

Structure Ref. No.	Structure Name	Proposed Year of Works				Comments
		2012/13	2013/14	2014/15	2015/16	
W86	SOUTH					
A84 90 W0	KILMAHOG					To be repaired
A84 90 W15	PASS HOUSE	x			x	To be repaired
A86 40 W75	AUCHMORE 2	x	x			To be replaced.
A86 200 W65	CRUINNICHIDH					Currently being monitored.
A87 480 W42	SCONSER SHED		x			To be repaired
A99 40 W30	ULBSTER RB					To be re-assessed

Notes:

1. The Proposed Year of Works is subject to the availability of funding and may change at the discretion of the Director.

This is Annex 7.6/M to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/M – Structures with Bridge Access Gantries and or Runway Beams

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/M – Structures with Bridge Access Gantries and or Runway Beams

Structure Reference Number	Structure Name	Access Gantry	Runway Beams	Comments
A9 530	TUMMEL BRIDGE	No	Yes	Runway beams not used since first installed
A9 550	CLUNIE BRIDGE	Yes	Yes	Gantry and runway beams last used in 1994
A9 1350	KESOCK BRIDGE	Yes	Yes (see note)	Gantry runs on rails on girder flange. Gantry used regularly
A9 1785	HELMSDALE BRIDGE	No	Yes	Runway beams not used since first installed
A82 870	BALLACHULISH BRIDGE	Yes (see note)	Yes	Gantry inoperable. Runway beams last used in 1996
A828 10	CONNEL BRIDGE	Yes (see note)	Yes	Gantry inoperable. Runway beams subject to repair
A828	CREAGAN BRIDGE	No	Yes	Runway beams commissioned in 2000

Table 7.7/M.B – Structures in the North West Unit Which Require Their Access Gantries and or Runway Beams to Remain Certified at All Times During the Contract

Structure Reference Number	Structure Name	Access Gantry	Runway Beams	Comments
A9 1350	KESOCK BRIDGE	Yes	Yes	-

All gantries and or runway beams should be certified if they are to be used and have not previously been used for 12 months.

This is Annex 7.6/N to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/N – List of Bridges with Agreement with Third Parties that Effect Existing and Future Management, Maintenance and Replacement

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/N – List of Bridges with Agreement with Third Parties that Effect Existing and Future Management, Maintenance and Replacement

Structure Ref No.	Structure Name
A9 1330	RAIGMORE NAIRN RAIL
A9 1340	RAIGMORE PERTH RAIL
A9 1680	STRATHSTEVEN RAIL
A82 560	EUICH RAIL
A82 990	BASE CAMP NEW RAIL
A87 270	KYLE STATION RAIL
A828 180	BALLACHULISH HOSPITAL
A830 210	ARIENISKILL RAIL
A830 285	POLNISH NEW RAIL

Notes:

1. All structures above carry the trunk road over an operational railway line, except the Ballachulish Hospital structure. This structure carries the trunk road over a non-operational railway line.
2. The bridge agreements for the structures are held with The Director.

This is Annex 7.6/O to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/O – List of Bridges with Signed Low Headroom

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/O – List of Bridges with Signed Low Headroom

Bridge Code	Bridge Name	Actual Minimum Headroom
A82 840	BALLACHULISH HARBOUR	4.94
A9 1210	SLOCHD BEAG	3
A9 1459	KILDARY	4.35

This is Annex 7.6/P to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/P – List of Structures subject to Frequent Bridges Strikes with dates of Incidents Since 2001

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/P – List of Structures subject to Frequent Bridges Strikes with dates of Incidents Since 2001

Structure Ref No.	Structure Name	Damage Description	Date
A9 1300	INSHES OVERBRIDGE	Scrapes to steel beam flange.	08/11/2002
A9 1459	KILDARY UNDERBRIDGE	Concrete soffit damage.	08/05/2003
A82 870	BALLACHULISH	Damage to uplink box girder.	17/04/2007
A9 1459	KILDARY UNDERBRIDGE	PC Concrete Beam Damaged.	05/06/2007
A828 10	CONNEL BRIDGE	Beam 43 damaged.	18/07/2007
A828 10	CONNEL BRIDGE	Minor scrape.	27/07/2007
A828 10	CONNEL BRIDGE	Beam Damage.	18/03/2008
A82 1230	ABERCHALDER SWING BR	Beam Soffit Damage.	25/08/2008

This is Annex 7.6/Q to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/Q – List of Structures Added to the Unit After Commencement of Service Date

ANNEX 7.6/Q – List of Structures Added to the Unit After Commencement of Service Date

Structure Reference Number	Structure Name	Date Added to Unit
Bridges < 10m Span		
A83 620	BALLOCHAGEACHAN	1st July 2014
A83 570	DALMORE	1st July 2014
A83 650	BARRMAINS	1st July 2014
A83 600	CHLEIT	1st July 2014
A83 710	TANGY NORTH	1st July 2014
A83 520	RONACHAN NORTH LODGE	1st July 2014
A83 730	KILKENZIE	1st July 2014
A83 597	BEACHMEANACH	1st July 2014
A83 530	RONACHAN SOUTH LODGE	1st July 2014
A83 640	PATCHAN	1st July 2014
A83 660	CLEONGART	1st July 2014
A83 750	AUCHALEEK	1st July 2014
A83 560	RHUNAHORINE	1st July 2014
A83 670	DRUMORE	1st July 2014
A83 480	WHITEHOUSE NORTH	1st July 2014
A83 550	ACHNADRIAN	1st July 2014
A83 680	KILLOCRAW	1st July 2014
A83 470	REDHOUSE	1st July 2014
A83 510	CLACHAN SOUTH	1st July 2014
A83 690	TANGY TAVIL NORTH	1st July 2014
A83 539	BALLOCHROY OLD	1st July 2014
A83 740	CRAIGS	1st July 2014
A83 580	TAYINLOAN	1st July 2014
A83 590	KILLEAN	1st July 2014
A83 540	BALLOCHROY	1st July 2014
A83 610	MUASDALE	1st July 2014
A83 500	CLACHAN NORTH	1st July 2014
Bridge Span >10m < 50m		
A83 630	GLENBARR	1st July 2014
A83 720	TANGY	1st July 2014
Retaining Walls		
A83 610 W90	BALLOCHAGAECHAN	1st July 2014
A83 620 W10	BALLOCHAGEACHAN SOUTH	1st July 2014
A83 670 W21	BELLOCHANTUY	1st July 2014
A83 680 W70	KILLOCRAW	1st July 2014
A83 690 W91	LAGALGARVE	1st July 2014
A83 700 W86	TANGY NORTH	1st July 2014
A83 720 W12	TANGY SOUTH	1st July 2014
A83 720 W54	BALLEVIN	1st July 2014
A83 750 W60	DRUMORE GARDENS	1st July 2014
A82 540 W25	TIGH NA STRUITH CULVERT 8	7th June 2016
Culverts		
A83 530 C20	CORRIECHREVIE	1st July 2014
Underpasses		

Structure Reference Number	Structure Name	Date Added to Unit
A82 520 C70	WEST HIGHLAND WAY	7th June 2016

This is Annex 7.6/R to Schedule 7 Part 6 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 6

MANAGEMENT AND MAINTENANCE OF STRUCTURES

ANNEX 7.6/R – List of Structures Removed from the Unit After Commencement of ServiceDate

ANNEX 7.6/R – List of Structures Removed from the Unit After Commencement of Service Date

Structure Reference Number	Structure Name	Date Removed from the Unit
Bridges < 10m Span		
Bridges Span >10m < 50m		
Bridges Span >50m		
Gantries		

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 7

STRUCTURES WITH PARTICULAR REQUIREMENTS

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 7

STRUCTURES WITH PARTICULAR REQUIREMENTS

1. INTRODUCTION

1.1 General

- 1.1.1 In addition to the requirements of Schedule 7 Part 6, the Operating Company shall inspect, monitor, test, manage and maintain the Structures with particular requirements listed in Annex 7.7/A of this Part, in accordance with the manuals and associated inspection schedules listed in Annex 7.7/B of this Part.
- 1.1.2 No later than 150 Working Days after the Commencement of Service Date, the Operating Company shall supply the Director with an electronic copy of all documents (including maintenance manuals) which have been transferred to it by the previous operating company. The Operating Company shall notify the Director of any documents listed in Annex 7.7/B of this Part which were not transferred and of any further documents which it requires.
- 1.1.3 The Operating Company shall review annually the documents listed in Annex 7.7B of this Part for each of the Structures listed in Annex 7.7/A of this Part.
- 1.1.4 Following the annual review of the documents, the Operating Company shall update them to meet the requirements of current legislation, subject to the prior approval of the Director, and where amendments are required to reflect works carried out.
- 1.1.5 Electronic versions of updated documents shall be issued annually to the Director by the Operating Company.
- 1.1.6 The Operating Company shall issue an inspection report for each Structure in a General Inspection format to the Director by 31 January in the calendar year following the inspections of each Structure. The annual inspection report shall cover the matters identified in the maintenance manual including any mechanical and electrical installations. Copies of periodic inspection and test Certificates shall be provided with the reports where applicable. Separate reports shall be provided for Access Systems that remain certified for use.
- 1.1.7 The Operating Company shall provide a Principal Inspection Report at six yearly intervals, or as otherwise indicated in Annex 7.7/A of this Part, that includes detailed summaries of the inspection reports. Principal Inspection reports shall include priority ranking of Defects that have been identified. The Principal Inspection report shall be provided by 30 November of the year in which the Principal Inspection cycle becomes due.
- 1.1.8 The Operating Company shall enter all Inspection reports and related data directly into the structures management function of the Integrated Roads Information System in a format agreed with the Director within 10 Working Days of their production.
- 1.1.9 For the Structures listed in Annex 7.7/A of this Part, the Operating Company shall upload a summary Defect report into the structures management function of the Integrated Roads Information System in a format agreed with the Director within 10 Working Days of its production.
- 1.1.10 Subject to an Order, special Inspections shall be undertaken by the Operating Company.

This is Annex 7.7/A to Schedule 7 Part 7 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 7

STRUCTURES WITH PARTICULAR REQUIREMENTS

ANNEX 7.7/A – Structures with Particular Requirements

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 7

STRUCTURES WITH PARTICULAR REQUIREMENTS

ANNEX 7.7/A – Structures with Particular Requirements

1. Structures with Particular Requirements

The structures listed within the tables below have particular requirements which the Operating Company shall carry out in addition to those duties set down in Schedule 7 Part 6. These requirements shall be read in conjunction with the bridge maintenance and operations manuals in the Annex following this section.

Table 1.1.1.A – Structures on the Trunk Road

Structure Reference Number	Structure Name
A87 290	Skye Bridge
A87 280	Carrich Bridge
A87 245	Dornie New
A9 1350	Kessock Bridge
A828 9	Connel South Approach
A828 10	Connel Bridge
A828 11	Connel North Approach
A9 590	Killiecrankie Viaduct NB
A9 600	Killiecrankie Viaduct SB
A9 580: W36, W53, W82, W83	Killiecrankie Retaining Structures
A9 1230	Findhorn Bridge
A9 1360	Cromarty Bridge
A9 1585	Dornoch Bridge
A82 870	Ballachulish Bridge
A85 520	Falls of Cruachan E
A85 530	Falls of Cruachan
A85 540	Falls of Cruachan W
A82 1190	Laggan Swing Bridge
A82 1230	Aberchalder Swing Bridge
A82 1250	Fort Augustus Swing Bridge
A830 20	Banavie Swing Bridge

Table 1.1.1.B – Structures which are the property of British Waterways

Structure Reference Number	Structure Name
A82 1490	Tomnahurich Swing Bridge
A83 240	Ardrihaig Swing Bridge

Table 1.1.1.C – Structures not on the Trunk Road

Structure Reference Number	Structure Name
A9 1600	Mound Sluices

2. Skye Bridge

2.1.1 Constructed in 1995 this structure shown in Figure 2.1.1.A and whose location is denoted within Figure 2.1.1.B links the Isle of Skye to the Kyle of Lochalsh via the A87 trunk road. This three span structure comprises reinforced concrete piers supporting a haunched cantilever post tensioned hollow box superstructure.

The two approach spans are each 125 metres in length with the central 250 metres section spanning the navigation channel below. The deck has an overall length of 588 metres. Electrical supply cabinets and distribution board for the structure is located within the Skye Tollhouse Building together with a standby emergency generator.

Figure 2.1.1.A – A87 290 Skye Bridge

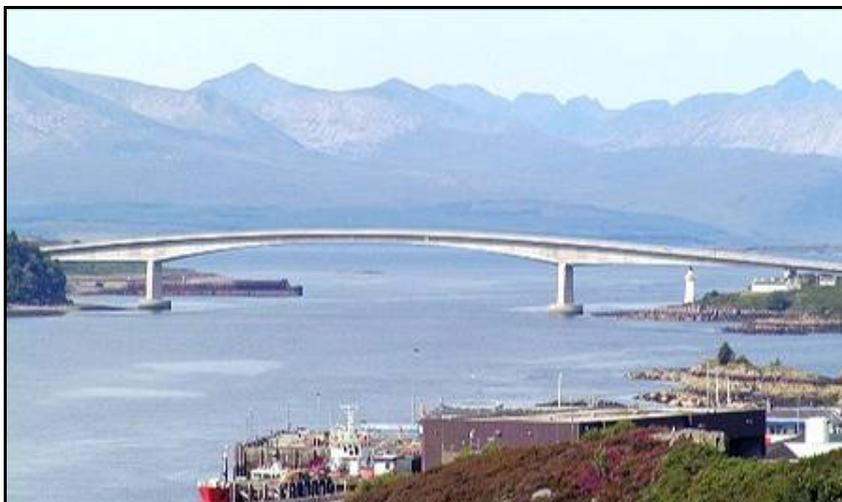
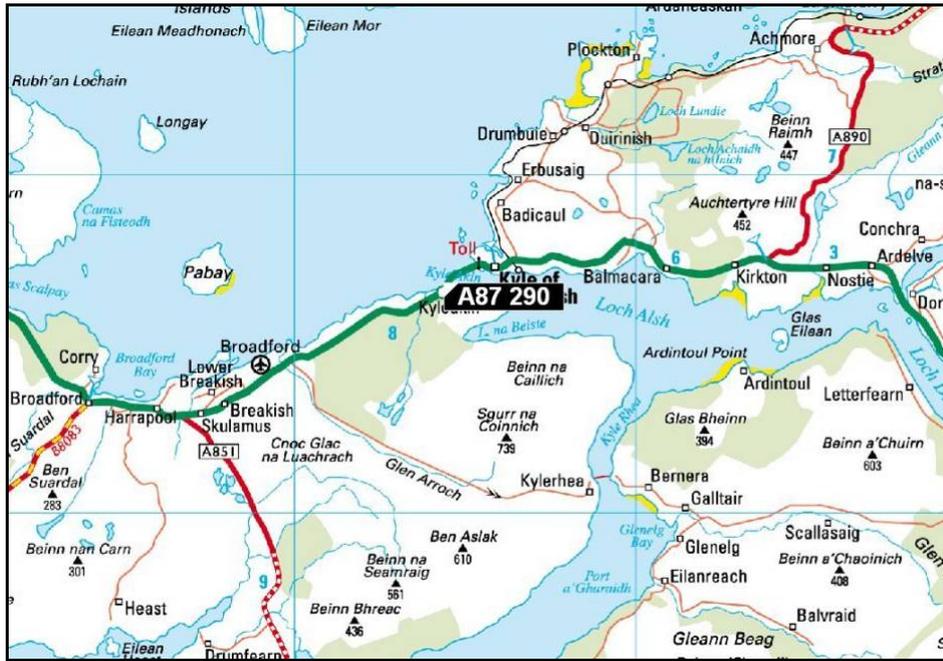


Figure 2.1.1.B – Skye Bridge Location



2.2 Particular Requirements for the A87 290 Skye Bridge

2.2.1 The Operating Company shall train sufficient staff to maintain the electrical equipment on this structure specifically:

- (i) Internal deck box lighting, and
- (ii) Navigation lights.

2.2.2 The Operating Company shall also monitor:

- (i) the bentonite slurry between the north pier and surrounding caisson.

2.2.3 In addition to structural inspections and maintenance requirements the Operating Company is advised that the year in which the first inspection will be due shall be as referred to in this annex.

Table 2.2.3.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
A87 290	Skye Bridge	2010 PI	2016	2012

2.2.4 The Operating Company is advised that a detailed inspection regime as outlined within the Maintenance Manual for this structure may necessitate the inspection of specific elements on a more frequent timeframe. Where applicable, details shall be contained within the Maintenance Manual.

2.2.5 A summary defect report is required for this structure.

3. Carrich Bridge

3.1.1 Constructed in 1995 this structure shown in Figure 3.1.1.A and whose location is denoted within Figure 3.1.1.B carries the A87 trunk road over tidal water west of the Kyle of Lochalsh on the approach to the Skye Bridge.

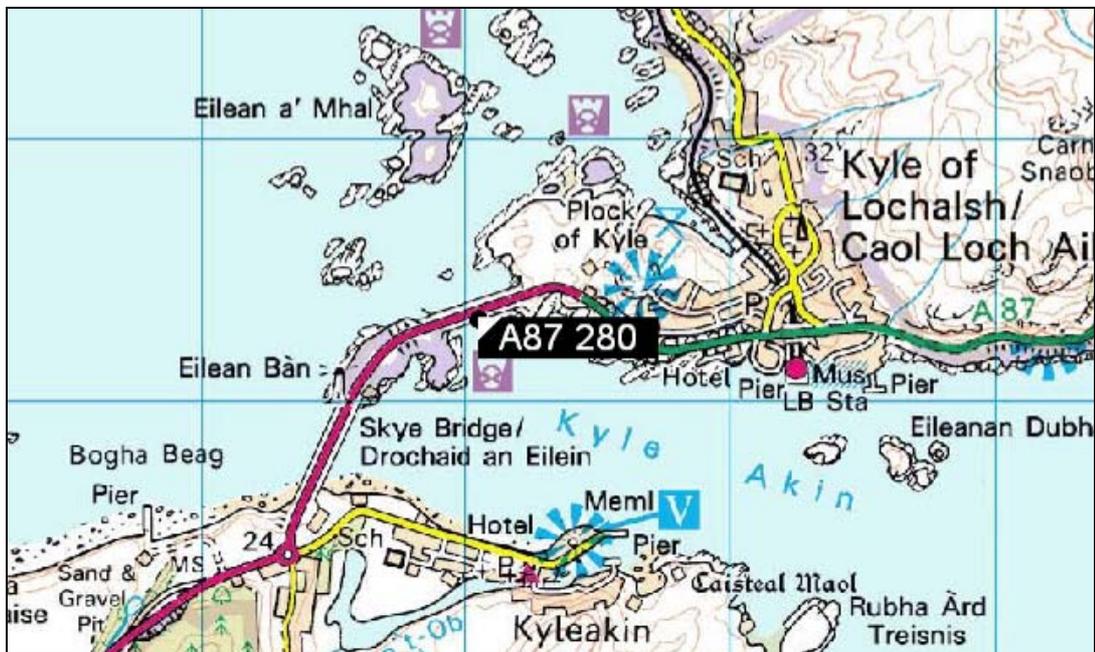
This eight span structure comprises a post tensioned box beam segmentally constructed and supported upon reinforced concrete abutments and columns. The structure is founded upon rock.

The span lengths by the abutments are 20.80 metres whilst the remaining spans are 26.00 metres each. The overall deck length is 197.60 metres.

Figure 3.1.1.A – A87 280 Carrich Bridge



Figure 3.1.1.B – Carrich Bridge Location



3.2 Requirements for A87 280 Carrich Bridge

3.2.1 In addition to the requirements of Schedule 7 Part 6 the Operating Company is advised that the year in which the first inspection shall be due shall be as referred to in this annex.

Table 3.2.1.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
A87 280	Carrich Bridge	2010 PI	2016	2012

4. Dornie New

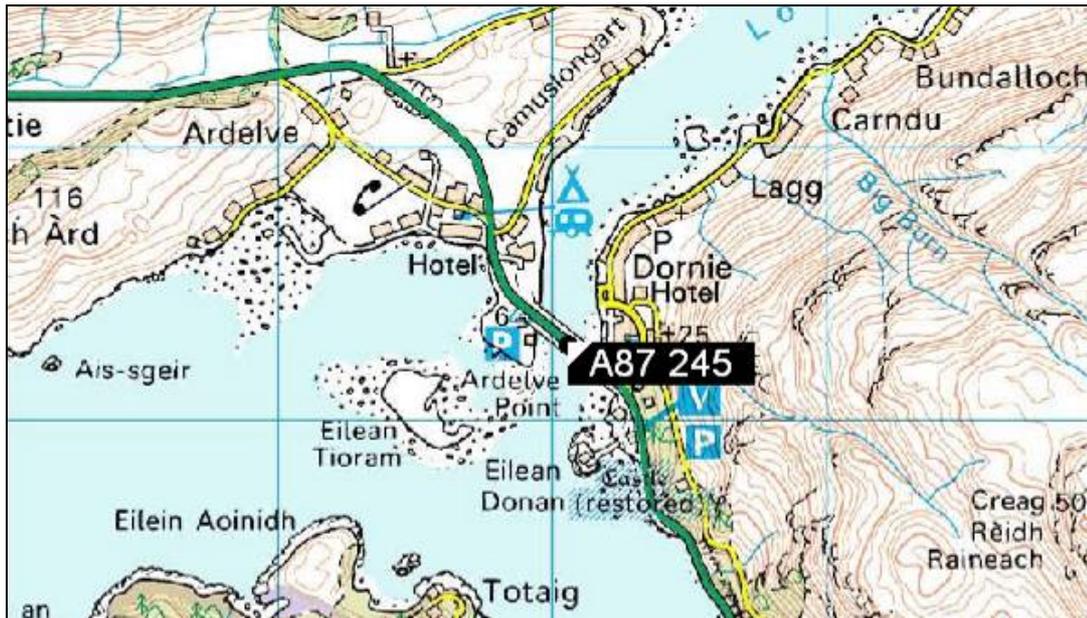
4.1.1 Constructed in 1991 this ten span structure shown in Figure 4.1.1.A and whose location is denoted within Figure 4.1.1.B is of composite construction and carries the A87 across tidal water.

Comprising precast pre-tensioned M-beams and a reinforced concrete deck slab the superstructure has an over all length of 265 metres and is simply supported upon articulated bearings above reinforced concrete columns and abutments. Each of the spans is 26.00 metres in length.

Figure 4.1.1.A – A87 245 Dornie New



Figure 4.1.1.B – Dornie New Location



4.2 Requirements for A87 245 Dornie New

- 4.2.1 In addition to the requirements of Schedule 7 Part 6 the Operating Company is advised that the year in which the first inspection shall be due shall be as referred to in this annex.

Table 4.2.1.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
A87 245	Dornie New	2010 PI	2016	2012

5. Kessock Bridge

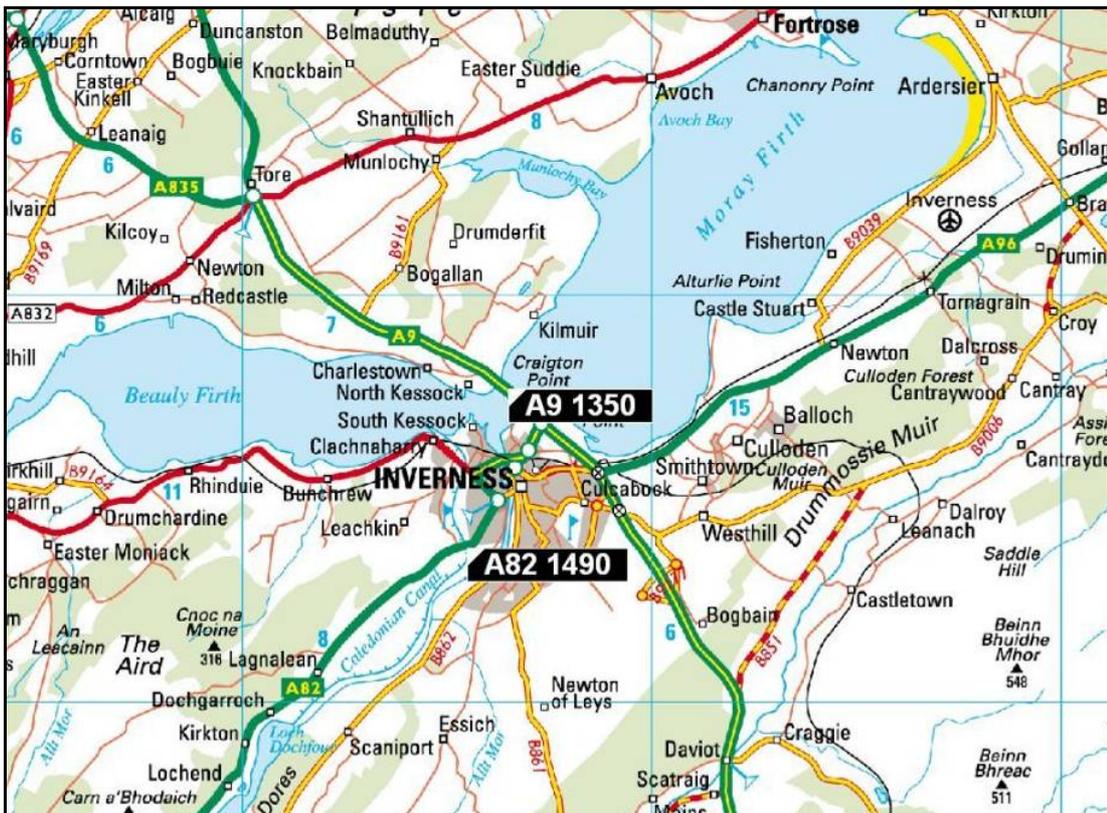
- 5.1.1 Constructed in 1982 this thirteen span structure shown in Figure 5.1.1.A and whose location is denoted within Figure 5.1.1.B is a cable stayed bridge that carries the A9 trunk road across the Beaully Firth by Inverness.

Comprising reinforced concrete columns above cutwater plinths and abutments, the substructure supports 1052 metres of continuous steel deck with two lanes in each direction and footways either side. The principal span 240 metres in length is supported upon two reinforced concrete piers beneath twin 45.00 metre high single cell welded steel box pylons by means of steel wire cables.

Figure 5.1.1.A – A9 1350 Kessock Bridge



Figure 5.1.1.B – Kessock Bridge Location



5.2 Requirements for the A9 1350 Kessock Bridge

5.2.1 The Operating Company is advised that a detailed inspection regime as outlined within the Maintenance Manual for this structure may necessitate the inspection of specific elements on a more frequent timeframe. Where applicable, details shall be contained within the Maintenance Manual.

5.2.2 In addition to the requirements of Schedule 7 Part 6 for the structure, there are additional requirements that include the following elements:

- (i) Mass dampers.
- (ii) Seismic buffers.
- (iii) Pendel bearings.
- (iv) Cable anchorages.
- (v) Pylons and deck panels for steel defects.

(vi) Fendering for ship impact.

Electrical installations include navigation lights and internal lighting to the pylons. The existing gantry from the original construction remains in use, although a new gantry is under consideration.

The mastic asphalt deck surfacing is life expired, with replacement surfacing planned for 2012 at the earliest.

5.2.3 A summary defect report is required for this structure.

6. Connel South Approach

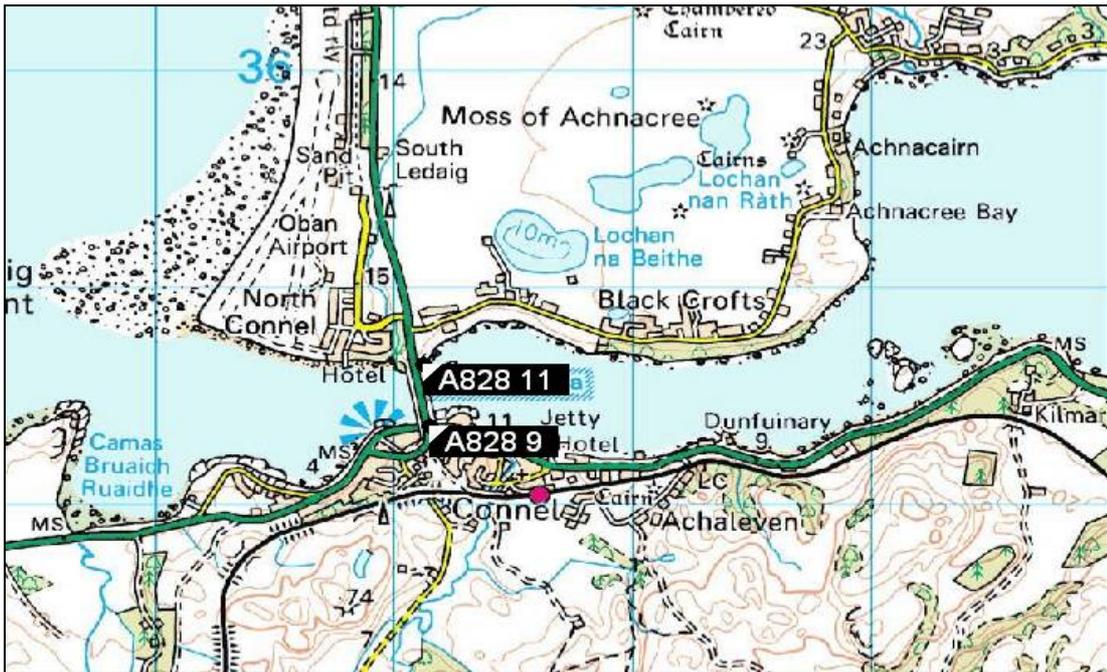
6.1.1 Constructed in 1903 the south approach to Connel Bridge shown Figure 6.1.1.A and whose location is denoted within Figure 6.1.1.B is a three span masonry arch carrying the A828 trunk road across the A85.

Comprising three spans of 11.75, 11.80 and 11.80 metres the overall deck length is 46.70 metres. The structure is founded upon rock and has a minimum clearance height of 9.10 metres.

Figure 6.1.1.A – A828 9 Connel South Approach



Figure 6.1.1.B – Connel South Approach Location



6.2 Requirements for A828 9 Connel South Approach

- 6.2.1 The Operating Company should carry out inspection and management operations of this structure in conjunction with those for the A828 10 Connel Bridge.
- 6.2.2 In addition to the requirements of Schedule 7 Part 6 the Operating Company is advised that the year in which the first inspection shall be due shall be as referred to in this annex.

Table 6.2.2.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
A828 9	Connel South Approach	2008 GI	2011	2013

7. Connel Bridge

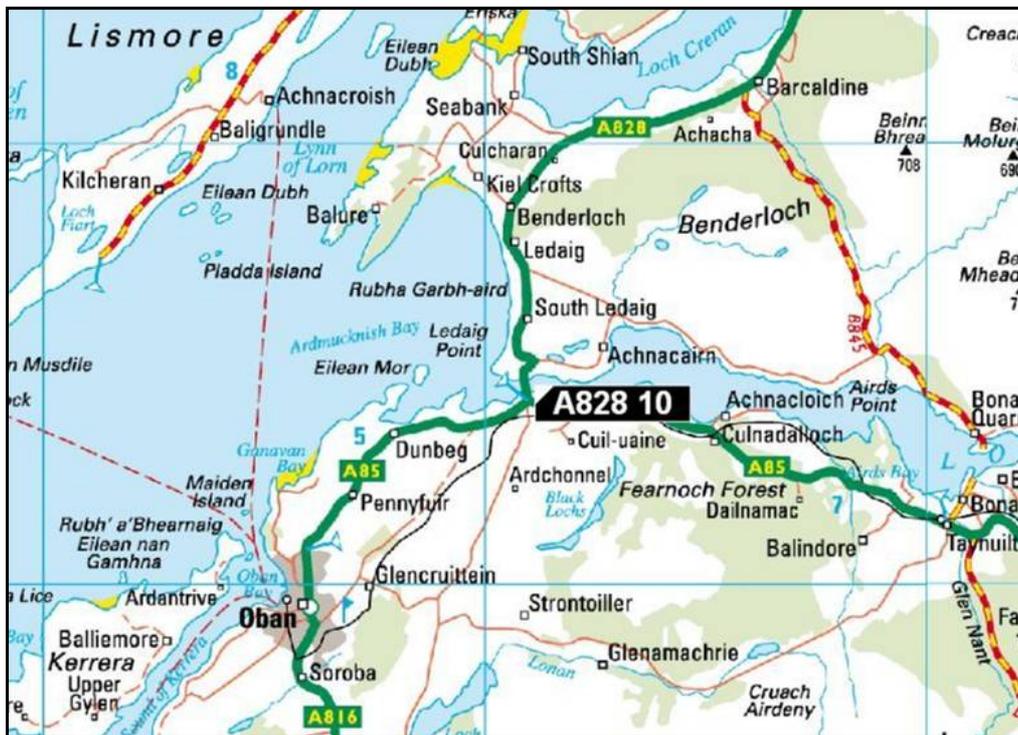
- 7.1.1 Constructed in 1903 the structure shown in Figure 7.1.1.A and whose location is denoted within Figure 7.1.1.B carries the A828 trunk road across Loch Etive.

This three span structure has two identical cantilever steel trusses supporting a centrally suspended span. The overall length is 223.50 metres with the approach spans anchored on their landward sides by vertical ties into masonry anchorage piers.

Figure 7.1.1.A – A828 10 Connel Bridge



Figure 7.1.1.B – Connel Bridge Location



7.2 Requirements for the A828 10 Connel Bridge

- 7.2.1 The Operating Company is advised that a detailed inspection regime as outlined within the Maintenance Manual for this structure may necessitate the inspection of specific elements on a more frequent timeframe. Where applicable, details shall be contained within the Maintenance Manual.
- 7.2.2 The Operating Company is advised that the current inspection gantry lies abandoned below the structure and it is not intended to replace it. Therefore alternative means of access to the deck soffit and bridge bearings is now required.

The operating company shall therefore deploy all methods as his disposal to undertake such works including roped access.

7.2.3 When undertaking inspections the Operating Company shall also include the following:

- (i) Check for localised breakdown of the paint system.
- (ii) Check for loss of section.
- (iii) Check for rusted rivets/bolts at connections.
- (iv) Check for vehicle impact damage.
- (v) Check on integrity and seals of access covers.
- (vi) Removal of debris.
- (vii) Clearance of drainage.
- (viii) Inspection of the precast deck soffit.

7.2.4 Electrical installations include navigation lights and advance warning overhead vehicle detection system on approaches to the bridge.

7.2.5 A summary defect report is required for this structure.

8. Connel North Approach

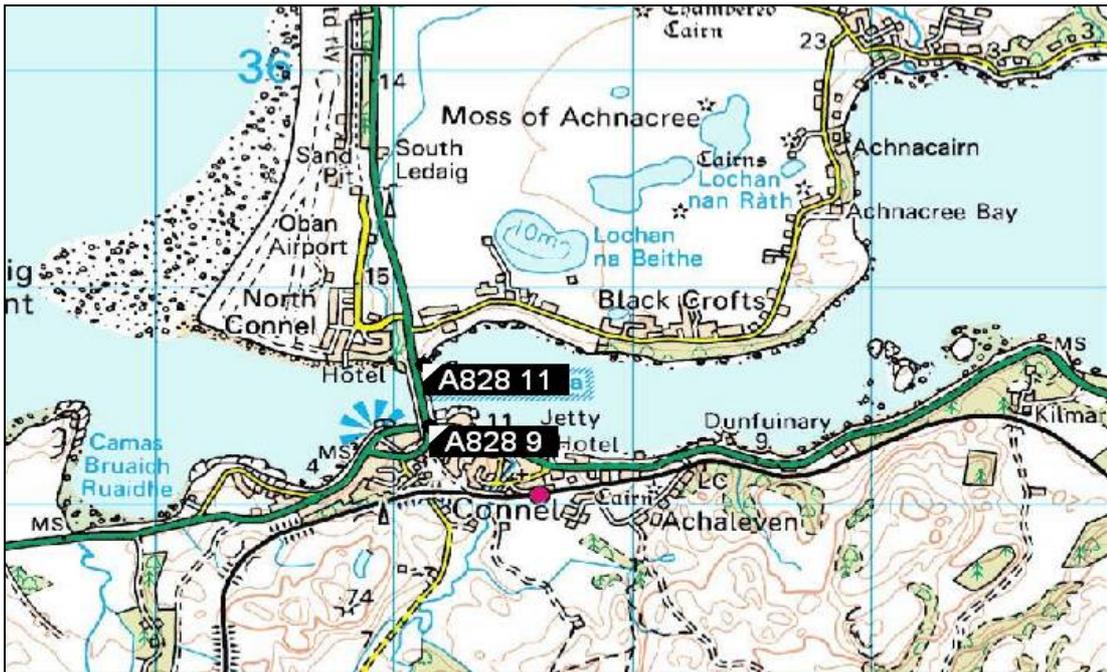
8.1.1 Constructed in 1903 the north approach to Connel Bridge shown Figure 8.1.1.A and whose location is denoted within Figure 8.1.1.B is a three span masonry arch carrying the A828 trunk road across the north bank of Loch Etive.

Comprising three spans of length 11.67, 11.80 and 11.80 metres the overall deck length is 46.70 metres. Founded upon rock the minimum arch height is 15.74 metres.

Figure 8.1.1.A – A828 11 Connel North Approach



Figure 8.1.1.B – Connel North Approach Location



8.2 Requirements for A828 11 Connel North Approach

- 8.2.1 The Operating Company should carry out inspection and management operations of this structure in conjunction with those for the A828 10 Connel Bridge.
- 8.2.2 In addition to the requirements of Schedule 7 Part 6 the Operating Company is advised that the year in which the first inspection shall be due shall be as referred to in this annex.

Table 8.2.2.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
A828 11	Connel North Approach	2008 GI	2011	2013

9. Killiecrankie Viaduct NB

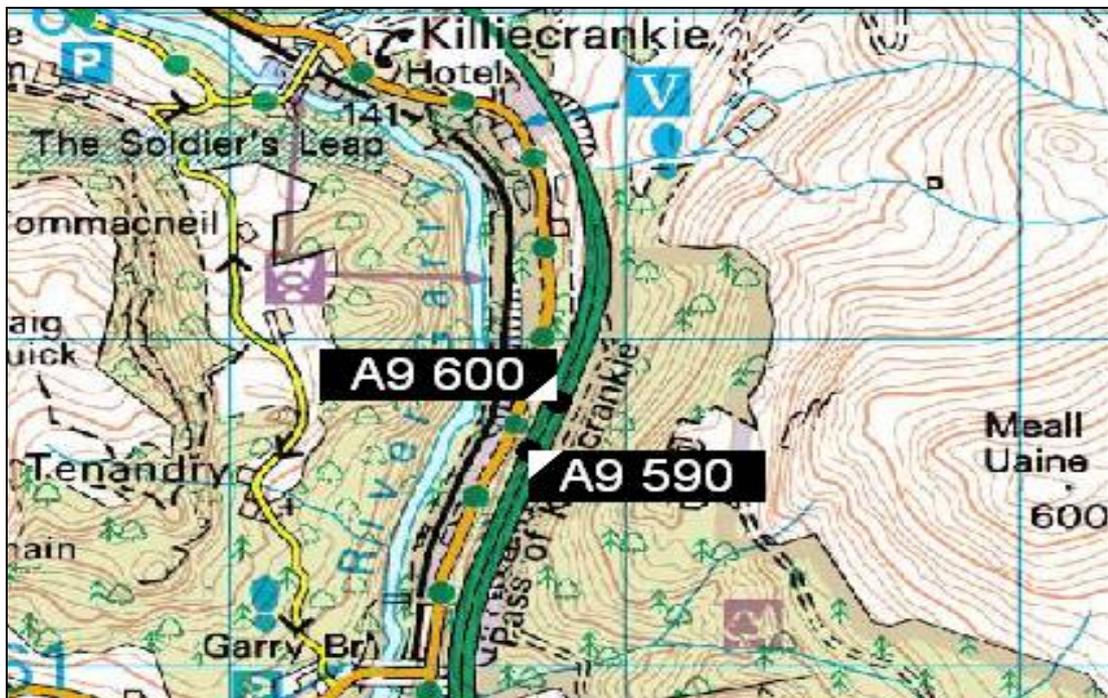
- 9.1.1 Constructed in 1986 the structure shown in Figure 9.1.1.A and whose location is denoted within Figure 9.1.1.B carries the A9 trunk road north bound towards Killiecrankie.

Comprising forty one spans of 15.00 metres the structure is founded upon rock with spread footings. These support the precast pretensioned beams and insitu deck above the integral cross heads. At the interface articulation is afforded by mechanical bearings. The deck has an overall length of 615 metres.

Figure 9.1.1.A – A9 590 Killiecrankie Viaduct North Bound



Figure 9.1.1.B – Killiecrankie Viaduct North Bound Location



9.2 Requirements for A9 590 Killiecrankie Viaduct North Bound

9.2.1 In addition to the requirements of Schedule 7 Part 6 the Operating Company is advised that the year in which the first inspection shall be due shall be as referred to in this annex.

Table 9.2.1.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
A9 590	Killiecrankie Viaduct NB	2010 GI	2014	2012

9.2.2 The Operating Company is advised that in addition to the above inspection programme, the schedule for operating and maintaining this structure is listed within Annex 7.7/B.

10. Killiecrankie Viaduct South Bound

10.1.1 Constructed in 1986 the structure shown in Figure 10.1.1.A and whose location is denoted within Figure 10.1.1.B carries the A9 trunk road south bound from Killiecrankie.

Comprising nineteen spans of 15.00 metres the structures are founded upon rock with spread footings. These support the precast pretensioned beams and insitu deck above the integral crossheads. At the interface articulation is afforded by mechanical bearings. The deck has an overall length of 285 metres.

Figure 10.1.1.A – A9 600 Killiecrankie Viaduct South Bound



Figure 10.1.1.B – Killiecrankie Viaduct South Bound Location



10.2 Requirements for A9 600 Killiecrankie Viaduct South Bound

10.2.1 In addition to structural inspections and maintenance requirements the Operating Company is advised that the year in which the first inspection shall be due shall be as referred to in this annex.

Table 10.2.1.B – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
A9 600	Killiecrankie Viaduct SB	2010 GI	2014	2012

10.2.2 The Operating Company is advised that in addition to the above inspection programme, the schedule for operating and maintaining this structure is listed within Annex 7.7/B.

11. Killiecrankie Retaining Structures

11.1.1 Constructed in 1986 these four retaining walls whose location are denoted within Figures 11.1.1.A and 11.1.1.B comprise reinforced concrete, faced with gabions or cast stone as denoted within the table below. The walls are founded upon bedrock and are of varying length and height.

Table 11.1.1.A – Killiecrankie Retaining Walls

Reference	Wall Name	Facing	Length	Max Height	Min Height
A9 580 W36	Killiecrankie D/H LB	Cast stone	367	11.00	2.40
A9 580 W53	Killiecrankie RA	GAB Gabions	115	5.00	1.00
A9 580 W82	Killiecrankie C/R CB	Cast stone	325	11.00	3.00
A9 580 W83	Killiecrankie U/H RA	Cast stone	322	10.00	3.00

Figure 11.1.1.A – A9 W82 and W36 Retaining Structure Locations



Figure 11.1.1.B – A9 W83 and W53 Retaining Structure Locations



11.2 Requirements for A9 580 Retaining Structures

- 11.2.1 In addition to structural inspections and maintenance requirements the Operating Company is advised that the year in which the first inspection shall be due shall be as referred to in this annex.

Table 11.2.1.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
A9 580 W36	Killiecrankie D/H LB	2009 PI	2015	2011
A9 580 W53	Killiecranke Gab RA	2009 PI	2015	2011
A9 580 W82	Killiecrankie C/R CB	2009 PI	2015	2011
A9 580 W83	Killiecranke U/H RA	2009 PI	2015	2011

11.2.2 The Operating Company is advised that in addition to the above inspection programme, the schedule for operating and maintaining this structure is listed within Annex 7.7/B.

12. Findhorn Bridge

12.1.1 Constructed in 1976 this structure shown in Figure 12.1.1.A and whose location is denoted within Figure 12.1.1.B is situated due south of Inverness and carries the A9 over two access roads situated either side of a flood plane.

Comprising five spans ranging from 45.00 to 53.00 metres the overall deck length is 249 metres. The beam and slab superstructure is supported on 48 No bearings upon reinforced concrete supports which in turn are founded on steel piles.

Figure 12.1.1.A – A9 1230 Findhorn Bridge



Figure 12.1.1.B – Findhorn Bridge Location



12.2 Requirements for A9 1230 Findhorn Bridge

12.2.1 In addition to the requirements of Schedule 7 Part 6 the Operating Company is advised that the year in which the first inspection shall be due shall be as referred to in this annex.

Table 12.2.1.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
A9 1230	Findhorn Bridge	2009 GI	2013	2011

13. Cromarty Bridge

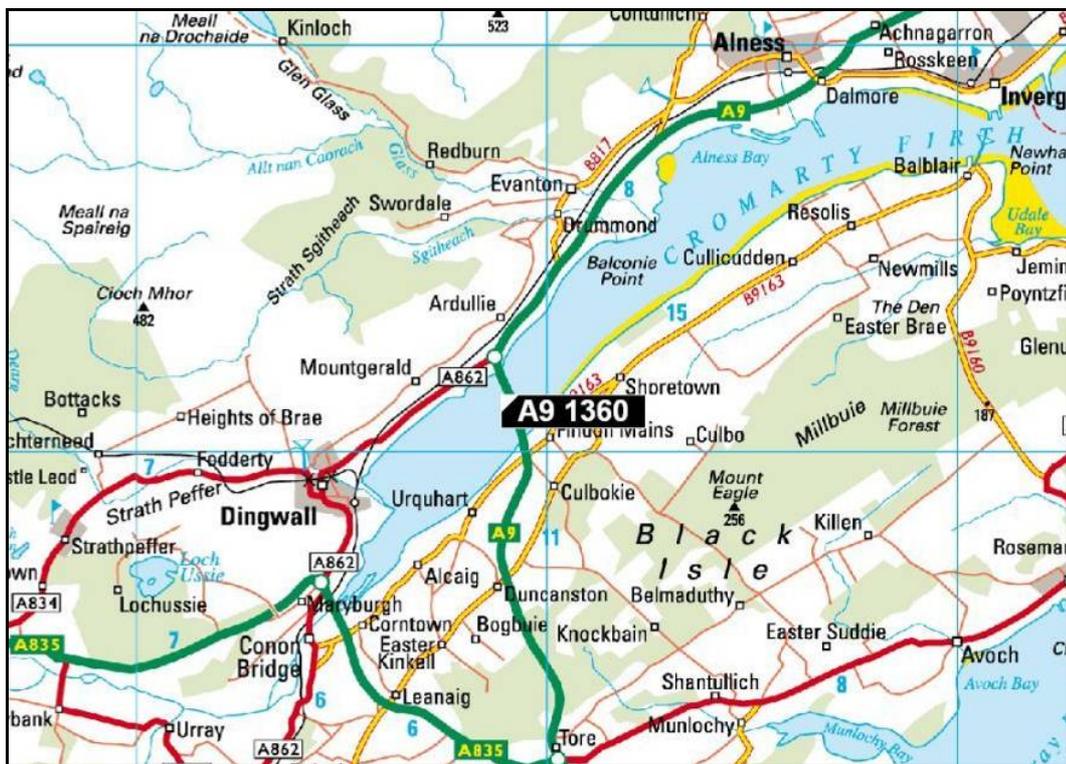
13.1.1 Constructed in 1979 the structure shown in Figure 13.1.1.A and whose location is denoted within Figure 13.1.1.B carries the A9 trunk road across the Cromarty Firth.

This sixty eight span composite structure has an overall length of 1464 metres and a width of 11.30 metres and supports a single carriageway with pedestrian pavements on either side. The deck comprises pre-stressed pre-tensioned beams and reinforced concrete upon reinforced concrete columns and end abutments.

Figure 13.1.1.A – A9 1360 Cromarty Bridge



Figure 13.1.1.B – Cromarty Bridge Location



13.2 Requirements for the A9 1360 Cromarty Bridge

13.2.1 The Operating Company is advised that this structure is in distress as a result of poor detailing. Low lying in a marine environment makes it vulnerable to chloride attack. As a consequence this structure is exhibiting very serious early deterioration requiring:

- (i) new joints,
- (ii) new parapets,
- (iii) re-waterproofing,
- (iv) re-surfacing,
- (v) concrete repairs to deck and pier crossheads, and
- (vi) chloride and alkali silica reaction treatment.

Concerns with the extent of deterioration of the aluminium parapet led to the installation of a Varioguard steel barrier across the whole bridge in 2008 as a temporary measure, to ensure public safety.

The Operating Company is advised that during the course of this contract, intervention works will most likely be undertaken.

- 13.2.2 In addition to the requirements of Schedule 7 Part 6 the Operating Company is advised that the year in which the first inspection shall be due shall be as referred to in this annex.

Table 13.2.2.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
A9 1360	Cromarty Bridge	2008 PI	2014	2012

14. Dornoch Bridge

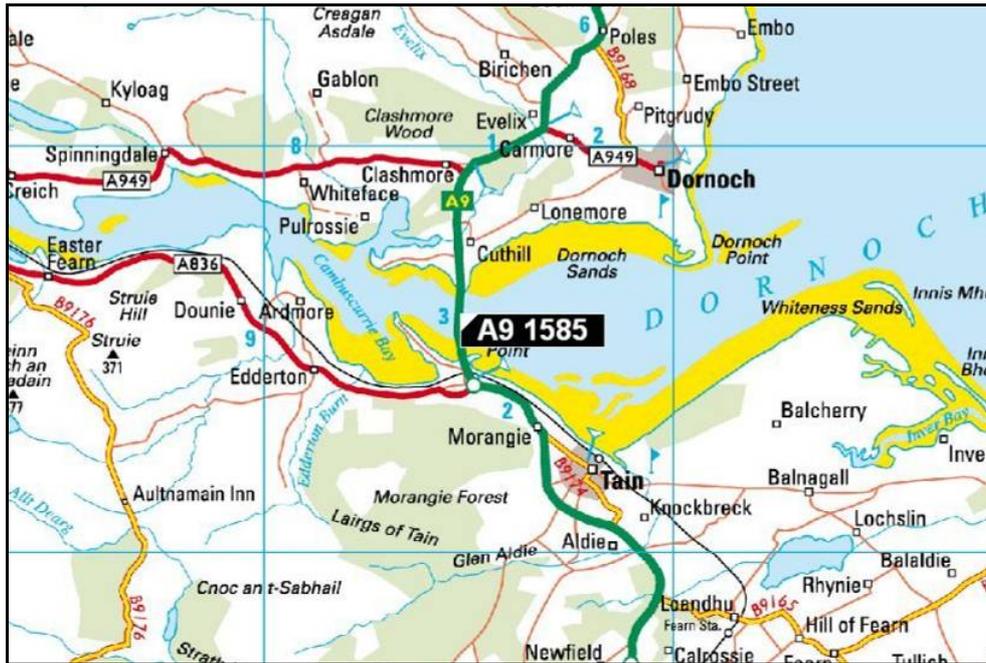
- 14.1.1 Constructed in 1991 the structure shown in Figure 14.1.1.A and whose location is denoted within Figure 14.1.1.B carries the A9 trunk road across the Dornoch Firth estuarial crossing.

Comprising twenty one spans the structure is a post tensioned box supported on tapering reinforced concrete columns and abutments. With an overall length of 890 metres and a width of 13.20 metres the structure supports a single carriageway with pedestrian pavements on either side.

Figure 14.1.1.A – A9 1585 Dornoch Bridge



Figure 14.1.1.B – Dornoch Bridge Location



14.2 Requirements for the A9 1585 Dornoch Bridge

- 14.2.1 The Operating Company shall undertake underwater inspections to inspect the condition of the piers and the sea bed around the foundations in accordance with the Design Manual for Roads and Bridges at a maximum of six yearly intervals.
- 14.2.2 The Operating Company shall also survey the piers every two years to determine if displacement in any direction or vertical settlement has taken place since the previous survey.
- 14.2.3 Electrical installations include navigation lights and internal lighting within the deck.
- 14.2.4 In addition to the requirements of Schedule 7 Part 6 the Operating Company is advised that the year in which the first inspection shall be due shall be as referred to in this annex.

Table 14.2.4.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
A9 1585	Dornoch Bridge	2007 PI	2013	2012

- 14.2.5 The Operating Company is advised that in addition to the above inspection programme, the schedule for operating and maintaining this structure is listed within Annex 7.7/B.

15. Ballachulish Bridge

- 15.1.1 Constructed in 1975 the structure shown in Figure 15.1.1.A and whose location is denoted within Figure 15.1.1.B carries the A82 trunk road across the Ballachulish narrows close to the mouth of Loch Leven.

This three span steel truss structure is supported on reinforced concrete piers and full height end abutments. The deck has an overall length of 294 metres and supports a single carriageway with concrete verges on either side. The deck width is 11.20 metres.

Figure 15.1.1.A – A82 870 Ballachulish Bridge

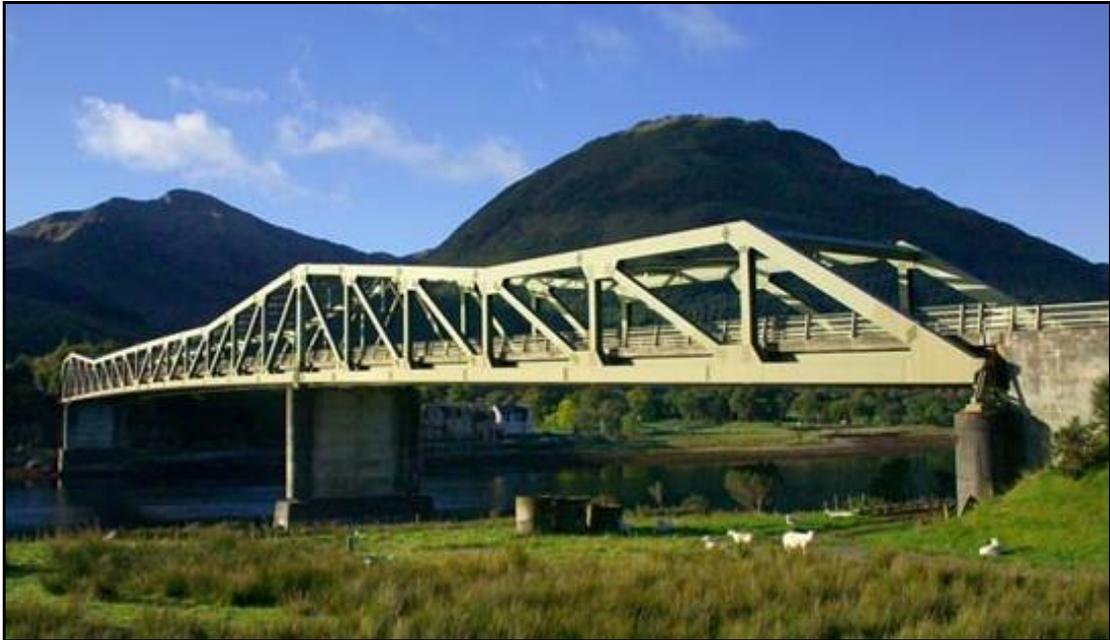
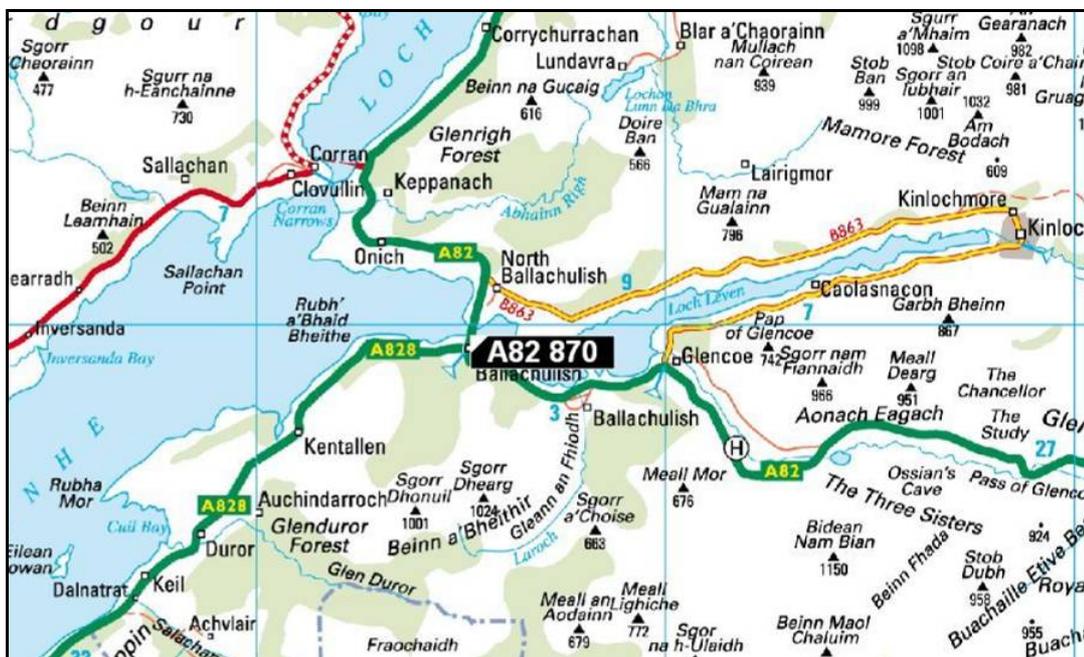


Figure 15.1.1.B – Ballachulish Bridge Location



15.2 Requirements for the A82 870 Ballachulish Bridge

- 15.2.1 The Operating Company is advised that a detailed inspection regime as outlined within the Maintenance Manual for this structure may necessitate the inspection of specific elements on a more frequent timeframe. Where applicable, details shall be contained within the Maintenance Manual.

- 15.2.2 The Operating Company shall undertake a structural and protective coating condition survey on a yearly basis. The central ties require particular inspection where surface water from the deck is emerging at the abutment face above the ties causing minor corrosion. Defects in the surface coatings shall be repaired by surface preparation and re-coating.
- 15.2.3 Inspections of the South Pier will require the use of a temporary access gantry. This may be supported on the permanent runway beams beneath the bridge deck, as the through trussed box girder renders the use of a bridge inspection vehicle impractical. The OC shall procure the required gantry and ensure that the necessary certification is in place for the gantry and runway beams prior to bringing into use.
- 15.2.4 Inspections for the bearings will require the use of a temporary installed gantry, as described above or scaffold erection.
- 15.2.5 In addition to the requirements of Schedule 7 Part 6 the Operating Company is advised that the year in which the first inspection shall be due shall be as referred to in this annex.

Table 15.2.5.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
A82 870	Ballachulish Bridge	2010 GI	2014	2012

- 15.2.6 The Operating Company is advised that in addition to the above inspection programme, the schedule for operating and maintaining this structure is listed within Annex 7.7/B.
- 15.2.7 A summary defect report is required for this structure.

16. Falls of Cruachan E

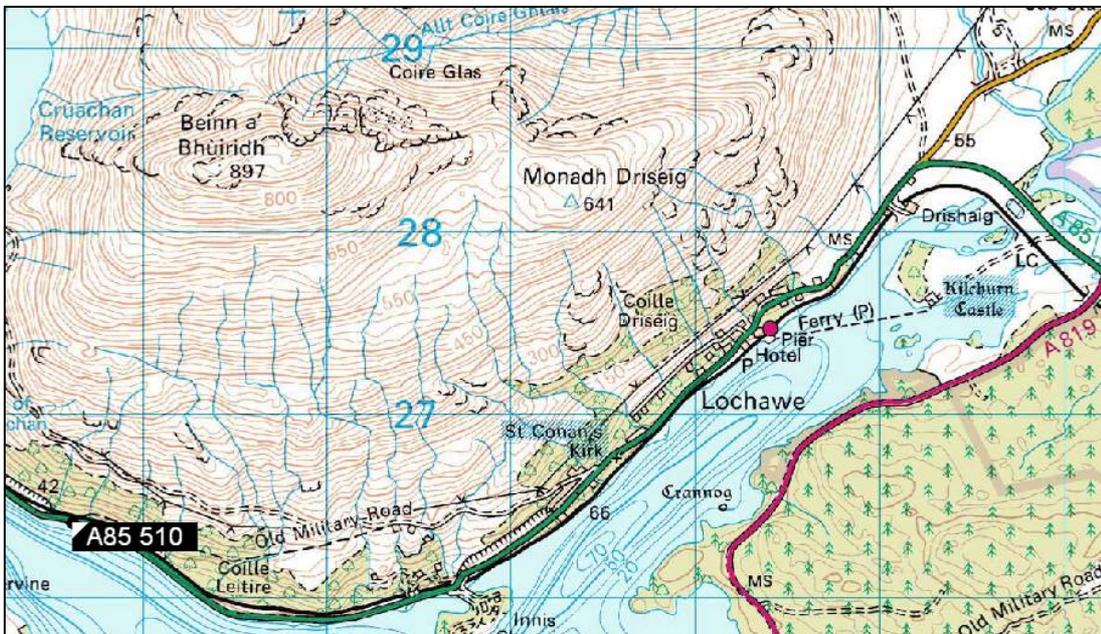
- 16.1.1 Constructed in 1972 this single span structure shown in Figure 16.1.1.A and whose location is denoted within Figure 16.1.1.B is situated near the Falls of Cruachan Rail Station and carries the A85 trunk road over an inland loch.

With a single span of 64.0 metres, the structural form comprises a post tensioned monolithic box with edge cantilevers, simply supported upon unreinforced elastomeric bearings above bankseat abutments. Spread footings from the base of the abutments which are founded on rock. The minimum headroom clearance is 3.0m.

Figure 16.1.1.A – A85 520 Falls of Cruachan E



Figure 16.1.1.B – Falls of Cruachan E Location



16.2 Requirements for A85 520 Falls of Cruachan E

16.2.1 In addition to the requirements of Schedule 7 Part 6 the Operating Company is advised that the year in which the first inspection shall be due shall be as referred to in this annex.

Table 16.2.1.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
A85 520	Falls of Cruachan E	2010 PI	2016	2012

17. Falls of Cruachan

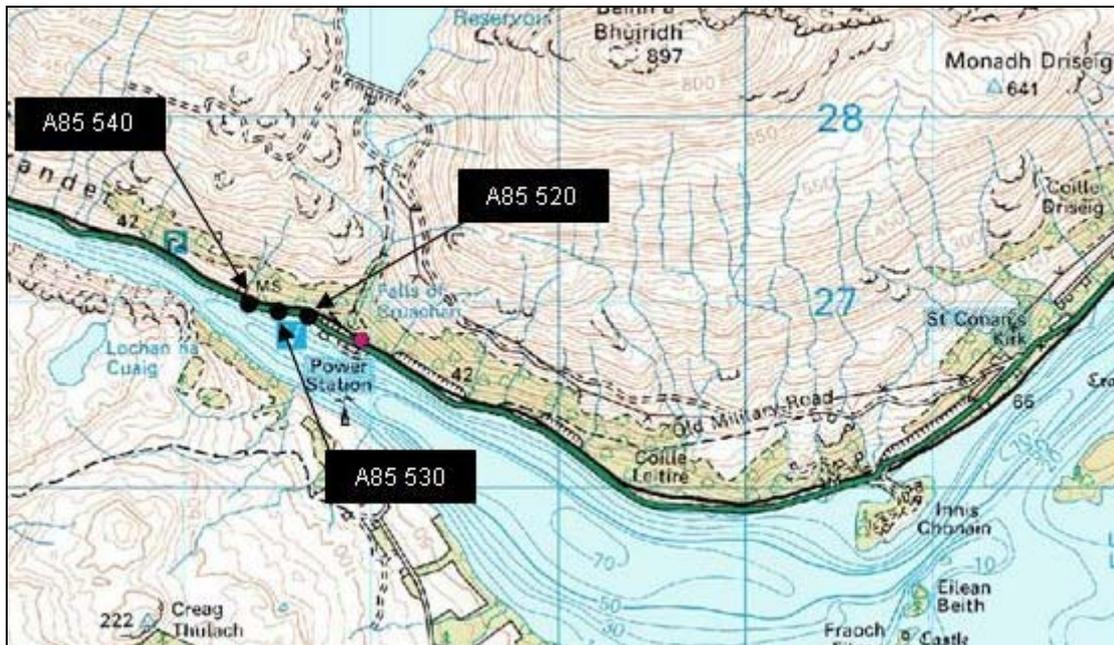
17.1.1 Constructed in 1972 this twenty two span structure shown in Figure 17.1.1.A and whose location is denoted within Figure 17.1.1.B is situated near the Falls of Cruachan Rail Station and carries the A85 trunk road over an inland loch.

Comprising spans of varying length (8.80 metres minimum, 15.20 metres maximum) the structural form is made up of precast reinforced concrete beams composite with the reinforced concrete deck slabs. The deck is simply supported upon unreinforced elastomeric bearings above full height cantilever abutments at both ends and reinforced concrete columns between. The minimum headroom clearance is 2.0m.

Figure 17.1.1.A – A85 530 Falls of Cruachan



Figure 17.1.1.B – Falls of Cruachan Location



17.2 Requirements for A85 530 Falls of Cruachan

17.2.1 In addition to the requirements of Schedule 7 Part 6 the Operating Company is advised that the year in which the first inspection shall be due shall be as referred to in this annex.

Table 17.2.1.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
A85 530	Falls of Cruachan	2010 PI	2016	2012

18. Falls of Cruachan W

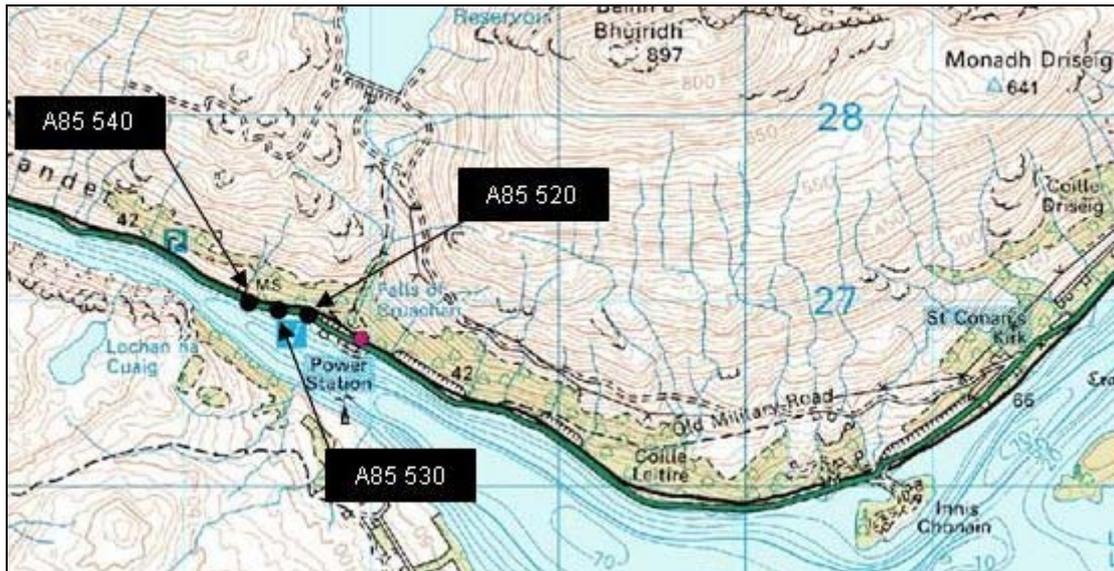
18.1.1 Constructed in 1972 this nine span structure shown in Figure 18.1.1.A and whose location is denoted within Figure 18.1.1.B is situated near the Falls of Cruachan Rail Station and carries the A85 trunk road over an inland loch.

Comprising spans of 7.30m the continuous reinforced concrete deck with edge cantilevers is supported upon reinforced concrete piers with minimum headroom of 3.0m.

Figure 18.1.1.A – A85 540 Falls of Cruachan W



Figure 18.1.1.B – Falls of Cruachan W Location



18.2 Requirements for A85 540 Falls of Cruachan W

18.2.1 In addition to the requirements of Schedule 7 Part 6 the Operating Company is advised that the year in which the first inspection shall be due shall be as referred to in this annex.

Table 18.2.1.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
A85 540	Falls of Cruachan W	2010 PI	2016	2012

19. Laggan Swing Bridge

19.1.1 Constructed in 1936 the structure shown in Figure 19.1.1.A and whose location is denoted within Figure 19.1.1.B has an opening span of 35 metres and carries the two lane A82 trunk road across the Caledonian canal by Laggan.

The superstructure is an all-welded steel deck supported by two main edge girders.

The swing bridge is an hydraulically power operated swing bridge with the control room housed in the gate house adjacent to the structure.

Figure 19.1.1.A – A82 1190 Laggan Swing Bridge

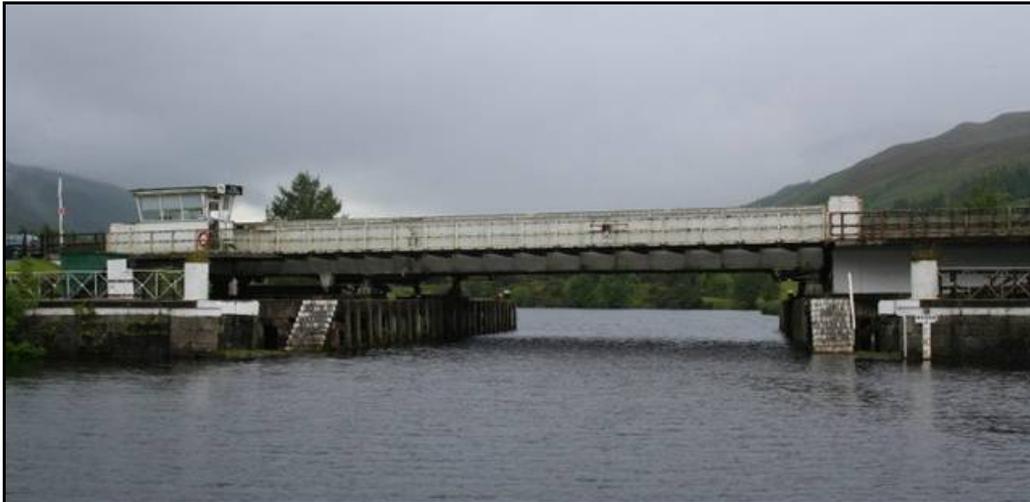
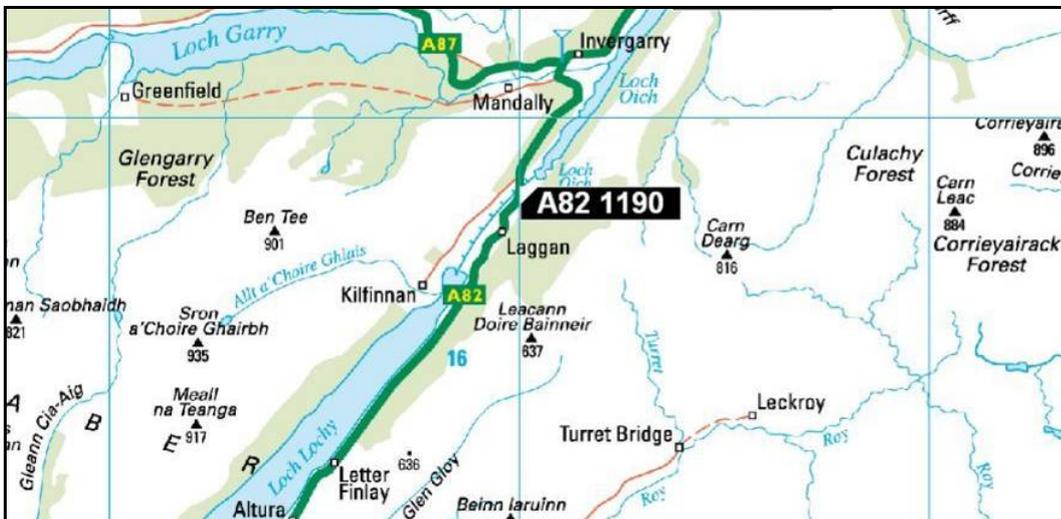


Figure 19.1.1.B – Laggan Swing Bridge Location



19.2 Requirements for the A82 1190 Laggan Swing Bridge

- 19.2.1 The Operating Company is advised that a detailed inspection regime as outlined within the Maintenance Manual for this structure may necessitate the inspection of specific elements on a more frequent timeframe. Where applicable, details shall be contained within the Maintenance Manual.
- 19.2.2 The additional requirements for this structure include:
- (i) Electrical/mechanical hydraulic installations.
 - (ii) Bridge operating equipment and enclosures.
 - (iii) Vehicle barriers and wig wags.
- 19.2.3 This swing bridge is subject to an agreement between the Scottish Ministers and British Waterways whereby British Waterways operates the swing bridge at its own expense as required to permit the passage of vessels through the canal.
- 19.2.4 In accordance with the maintenance manual, the Operating Company is advised that annual civil and structural inspections of this structure is required in addition to monthly maintenance of the mechanical and electrical equipment.

19.2.5 The Operating Company shall carry out the weighing and calibration of the balance of the superstructure and counterweights of the swing bridge every six years.

If the weighing and calibration checks show that adjustments are necessary the Operating Company shall subject to an Order carry out the rebalancing of superstructures and counterweights.

19.2.6 The Operating Company is advised that whilst British Waterways are responsible for carrying out a monthly full functional test of this bridge using standby emergency generators and hydraulic power-packs, it is the Operating Companies responsibility to direct and oversee these monthly tests in addition to providing the mechanical and electrical personnel to assist British Waterways in this work.

The Operating Company shall provide an observer approved by the Scottish Ministers to witness the swing bridge monthly tests thus ensuring the Scottish Ministers interests are protected. This individual shall be either the Major Bridges Manager or a Chartered Civil Engineer. The Operating Company shall also maintain monthly records of the results and observations made to be compiled into an annual certificate issued to the Director on the structures functionality.

19.2.7 The Operating Company shall liaise with British Waterways and permit access to the Unit for British Waterways to operate the swing bridge and when required to permit the passage of vessels through the canals and to carry out other work associated with the swing bridge.

19.2.8 The Operating Company shall liaise with British Waterways with regard to the operation of the swing bridge and shall ensure that any Operations to be carried out by the Operating Company or work by British Waterways on or near the swing bridges shall be undertaken in a manner that will minimise disruption to trunk road users.

19.2.9 The Operating Company shall ensure that:

- (i) no work shall be carried out on the swing bridge without prior written consent of British Waterways, or
- (ii) within 50 metres of the wig-wag barriers at the swing bridge without prior liaison and consultation with British Waterways.

19.2.10 The Operating Company shall notify British Waterways as described below when carrying out its Operations in accordance with any other provisions of this Contract including but not limited to the following:

- (i) The Operating Company shall notify British Waterways immediately of any inspections and maintenance requirements affecting the Structure.
- (ii) The Operating Company shall notify British Waterways immediately of any incident affecting the structure.
- (iii) The Operating Company shall notify British Waterways in writing immediately of any damage or claims for damages affecting the Structures.

19.2.11 A summary defect report is required for this structure.

- 20.2.2 The additional requirements for this structure include:
- (i) Electrical/mechanical hydraulic installations.
 - (ii) Bridge operating equipment and enclosures.
 - (iii) Vehicle barriers and wig wags.
- 20.2.3 This swing bridge is subject to an agreement between the Scottish Ministers and British Waterways whereby British Waterways operates the swing bridge at its own expense as required to permit the passage of vessels through the canal.
- 20.2.4 In accordance with the maintenance manual, the Operating Company is advised that annual civil and structural inspections of this structure is required in addition to monthly maintenance of the mechanical and electrical equipment.
- 20.2.5 The Operating Company shall carry out the weighing and calibration of the balance of the superstructure and counterweights of the swing bridge every six years.
- 20.2.6 If the weighting and calibration checks show that adjustments are necessary the Operating Company shall subject to an Order carry out the rebalancing of superstructure and counterweights.
- 20.2.7 The Operating Company is advised that whilst British Waterways are responsible for carrying out a monthly full functional test of this bridge using standby emergency generators and hydraulic power-packs, it is the Operating Companies responsibility to direct and oversee these monthly tests in addition to providing the mechanical and electrical personnel to assist British Waterways in this work.
- The Operating Company shall provide an observer approved by the Scottish Ministers to witness the swing bridge monthly tests thus ensuring the Scottish Ministers interests are protected. This individual shall be either the Major Bridges Manager or a Chartered Civil Engineer The Operating Company shall also maintain monthly records of the results and observations made to be compiled into an annual certificate issued to the Director on the structures functionality.
- 20.2.8 The Operating Company shall liaise with British Waterways and permit access to the Unit for British Waterways to operate the swing bridge and when required to permit the passage of vessels through the canals and to carry out other work associated with the swing bridge.
- 20.2.9 The Operating Company shall liaise with British Waterways with regard to the operation of the swing bridge and shall ensure that any Operations to be carried out by the Operating Company or work by British Waterways on or near the swing bridges shall be undertaken in a manner that will minimise disruption to Trunk Road users.
- 20.2.10 The Operating Company shall ensure that:
- (i) no work shall be carried out on the swing bridge without prior written consent of British Waterways, or
 - (ii) within 50 metres of the wig-wag barriers at the swing bridge without prior liaison and consultation with British Waterways.

20.2.11 The Operating Company shall notify British Waterways as described below when carrying out its Operations in accordance with any other provisions of this Contract including but not limited to the following:

- (i) The Operating Company shall notify British Waterways immediately of any inspections and maintenance requirements affecting the Structure.
- (ii) The Operating Company shall notify British Waterways immediately of any incident affecting the structure.
- (iii) The Operating Company shall notify British Waterways in writing immediately of any damage or claims for damages affecting the Structures.

20.2.12 A summary defect report is required for this structure.

21. Fort Augustus Swing Bridge

21.1.1 Constructed in 1932 the structure shown in Figure 21.1.1.A and whose location is denoted within Figure 21.1.1.B carries the A82 trunk road across the Caledonian Canal by Fort Augustus.

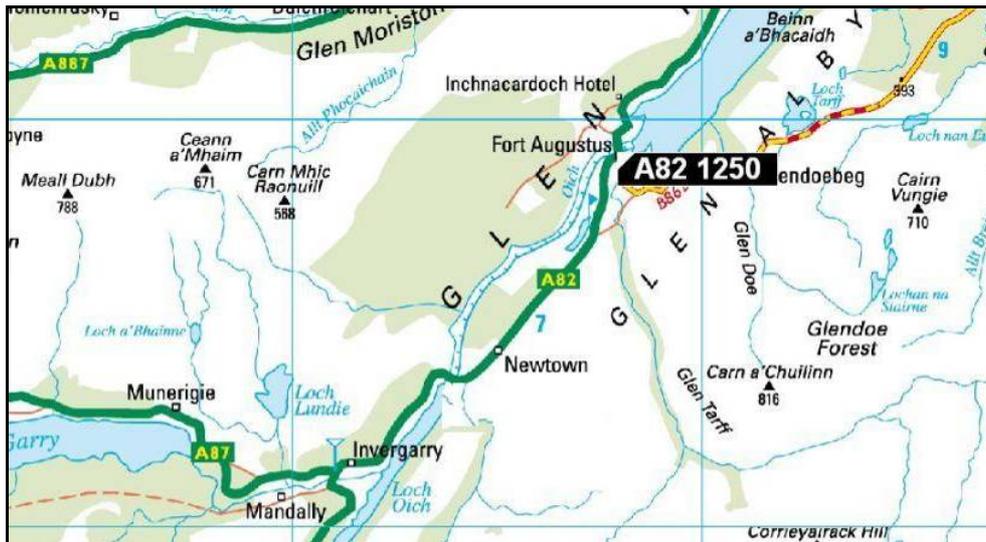
The swing bridge is comprised of an all-welded steel deck carriageway supported by two main edge girders with an opening span of 27.00 metres.

The swing bridge is an hydraulically power operated swing bridge with the control room housed in the gatehouse adjacent to the structure.

Figure 21.1.1.A – A82 1250 Fort Augustus Swing Bridge



Figure 21.1.1.B – Fort Augustus Swing Bridge Location



21.2 Requirements for the A82 1250 Fort Augustus Swing Bridge

21.2.1 The Operating Company is advised that a detailed inspection regime as outlined within the Maintenance Manual for this structure may necessitate the inspection of specific elements on a more frequent timeframe. Where applicable, details shall be contained within the Maintenance Manual.

21.2.2 The additional requirements for this structure include:

- (i) Electrical/mechanical hydraulic installations.
- (ii) Bridge operating equipment and enclosures.
- (iii) Vehicle barriers and wig wags.

21.2.3 This swing bridge is subject to an agreement between the Scottish Ministers and British Waterways whereby British Waterways operates the swing bridge at its own expense as required to permit the passage of vessels through the canal.

21.2.4 In accordance with the maintenance manual, the Operating Company is advised that annual civil and structural inspections of this structure is required in addition to monthly maintenance of the mechanical and electrical equipment.

21.2.5 The Operating Company shall carry out the weighing and calibration of the balance of the superstructure and counterweights of the swing bridge every six years.

If the weighing and calibration checks show that adjustments are necessary the Operating Company shall subject to an Order carry out the rebalancing of superstructure and counterweights.

21.2.6 The Operating Company is advised that whilst British Waterways are responsible for carrying out a monthly full functional test of this bridge using standby emergency generators and hydraulic power-packs, it is the Operating Companies responsibility to direct and oversee these monthly tests in addition to providing the mechanical and electrical personnel to assist British Waterways in this work.

The Operating Company shall provide an observer approved by the Scottish Ministers to witness the swing bridge monthly tests thus ensuring the Scottish Ministers interests are protected. This individual shall be either the Major Bridges Manager or a Chartered Civil Engineer. The Operating Company shall also maintain

monthly records of the results and observations made to be compiled into an annual certificate issued to the Director on the structures functionality.

- 21.2.7 The Operating Company shall liaise with British Waterways and permit access to the Unit for British Waterways to operate the swing bridge and when required to permit the passage of vessels through the canals and to carry out other work associated with the swing bridge.
- 21.2.8 The Operating Company shall liaise with British Waterways with regard to the operation of the swing bridge and shall ensure that any Operations to be carried out by the Operating Company or work by British Waterways on or near the swing bridges shall be undertaken in a manner that will minimise disruption to trunk road users.
- 21.2.9 The Operating Company shall ensure that:
- (i) no work shall be carried out on the swing bridge without prior written consent of British Waterways, or
 - (ii) within 50 metres of the wig-wag barriers at the swing bridge without prior liaison and consultation with British Waterways.
- 21.2.10 The Operating Company shall notify British Waterways as described below when carrying out its Operations in accordance with any other provisions of this Contract including but not limited to the following:
- (i) The Operating Company shall notify British Waterways immediately of any inspections and maintenance requirements affecting the Structure.
 - (ii) The Operating Company shall notify British Waterways immediately of any incident affecting the structure.
 - (iii) The Operating Company shall notify British Waterways in writing immediately of any damage or claims for damages affecting the Structures.
- 21.2.11 A summary defect report is required for this structure.

22. Banavie Swing Bridge

- 22.1.1 Constructed in 1971 the structure shown in Figure 22.1.1.A and whose location is denoted within Figure 22.1.1.B carries the A830 trunk road across the Caledonian Canal.

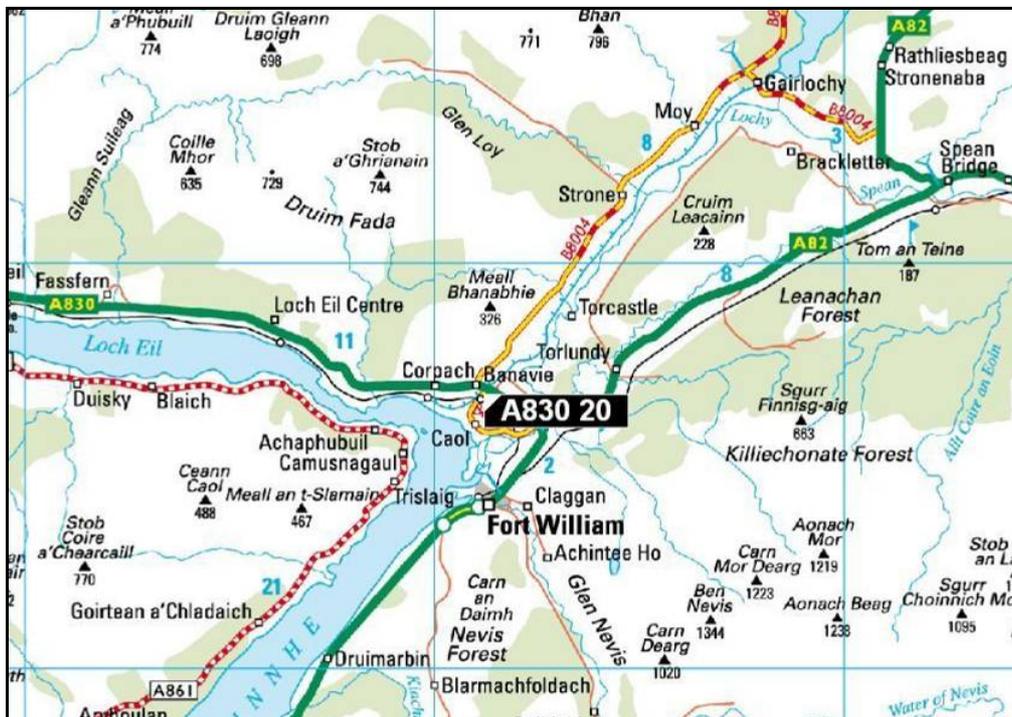
Supported by two main edge girders the deck is of welded construction, providing a span of 36.00 metres.

Operated by a newly installed electric motor, and hydraulic system the swing bridge control room is housed in the gate house adjacent to the structure.

Figure 22.1.1.A – A830 20 Banavie Swing Bridge



Figure 22.1.1.B – Banavie Swing Bridge Location



22.2 Requirements for the A830 20 Banavie Swing Bridge

22.2.1 The Operating Company is advised that a detailed inspection regime as outlined within the Maintenance Manual for this structure may necessitate the inspection of specific elements on a more frequent timeframe. Where applicable, details shall be contained within the Maintenance Manual.

22.2.2 The additional requirements for this structure include:

- (i) Electrical/mechanical hydraulic installations.
- (ii) Bridge operating equipment and enclosures.
- (iii) Vehicle barriers and wig wags.

- 22.2.3 This swing bridge is subject to an agreement between the Scottish Ministers and British Waterways whereby British Waterways operates the swing bridge at its own expense as required to permit the passage of vessels through the canal.
- 22.2.4 In accordance with the maintenance manual, the Operating Company is advised that annual civil and structural inspections of this structure is required in addition to monthly maintenance of the mechanical and electrical equipment.
- 22.2.5 The Operating Company shall carry out the weighing and calibration of the balance of the superstructure and counterweights of the swing bridge every six years.
- If the weighing and calibration checks show that adjustments are necessary the Operating Company shall subject to an Order carry out the rebalancing of superstructure and counterweights.
- 22.2.6 The Operating Company is advised that whilst British Waterways are responsible for carrying out a monthly full functional test of this bridge using standby emergency generators and hydraulic power-packs, it is the Operating Companies responsibility to direct and oversee these monthly tests in addition to providing the mechanical and electrical personnel to assist British Waterways in this work.
- The Operating Company shall provide an observer approved by the Scottish Ministers to witness the swing bridge monthly tests thus ensuring the Scottish Ministers interests are protected. This individual shall be either the Major Bridges Manager or a Chartered Civil Engineer. The Operating Company shall also maintain monthly records of the results and observations made to be compiled into an annual certificate issued to the Director on the structures functionality.
- 22.2.7 The Operating Company shall liaise with British Waterways and permit access to the Unit for British Waterways to operate the swing bridge and when required to permit the passage of vessels through the canals and to carry out other work associated with the swing bridge.
- 22.2.8 The Operating Company shall liaise with British Waterways with regard to the operation of the swing bridge and shall ensure that any Operations to be carried out by the Operating Company or work by British Waterways on or near the swing bridges shall be undertaken in a manner that will minimise disruption to trunk road users.
- 22.2.9 The Operating Company shall ensure that:
- (i) no work shall be carried out on the swing bridge without prior written consent of British Waterways or
 - (ii) within 50 metres of the wig-wag barriers at the swing bridge without prior liaison and consultation with British Waterways.
- 22.2.10 The Operating Company shall notify British Waterways as described below when carrying out its Operations in accordance with any other provisions of this Contract including but not limited to the following:
- (i) The Operating Company shall notify British Waterways immediately of any inspections and maintenance requirements affecting the Structure.
 - (ii) The Operating Company shall notify British Waterways immediately of any incident affecting the structure.

- (iii) The Operating Company shall notify British Waterways in writing immediately of any damage or claims for damages affecting the Structures.

22.2.11 A summary defect report is required for this structure.

23. Tomnahurich Swing Bridge

23.1.1 Constructed in 1937 the structure shown in Figure 23.1.1.A and whose location is denoted within Figure 23.1.1.B carries the A82 trunk road over the Caledonian Canal by Inverness.

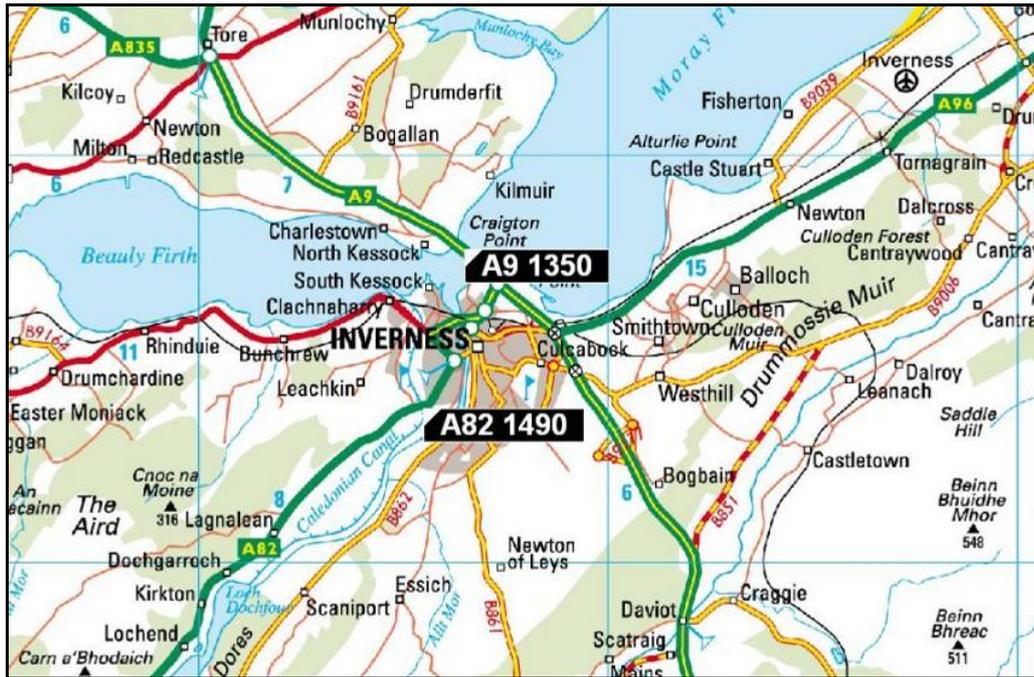
The swing bridge control room is housed in the gate house adjacent to the structure.

The Operating Company is advised that this structure is currently the property of British Waterways however it is envisaged at some future date the ownership will be transferred to the Scottish Ministers.

Figure 23.1.1.A – A82 1490 Tomnahurich Swing Bridge



Figure 23.1.1.B – Tomnahurich Swing Bridge Location



23.2 Requirements for the A82 1490 Tomnahurich Swing Bridge

- 23.2.1 British Waterways shall be responsible for the maintenance and operation of this swing bridge.
- 23.2.2 The Operating Company shall liaise with British Waterways and permit access to the Unit for British Waterways to operate the swing bridge and when required to permit the passage of vessels through the canals and to carry out other work associated with the swing bridges.
- 23.2.3 British Waterways shall be responsible for carrying out a monthly full functional test of this bridge using standby emergency generators and hydraulic powerpacks.
- The Operating Company shall provide an observer approved by the Scottish Ministers to witness the swing bridge monthly tests thus ensuring the Scottish Ministers interests are protected. This individual shall be either the Major Bridges Manager or a Chartered Civil Engineer. The Operating Company shall also maintain monthly records of the results and observations made to be compiled into an annual certificate issued to the Director on the structures functionality.
- 23.2.4 The Operating Company shall liaise with British Waterways with regard to the operation of the this swing bridge and shall ensure that any Operations to be carried out by the Operating Company or work by British Waterways on or near the swing bridges shall be undertaken in a manner that will minimise disruption to Trunk Road users.
- 23.2.5 The Operating Company shall ensure that no work shall be carried out within 50 metres of the wig-wag barriers of this swing bridge without prior liaison and consultation with British Waterways.

23.2.6 The Operating Company shall notify British Waterways as described below when carrying out its Operations in accordance with any other provisions of this Contract including but not limited to the following:

- (i) The Operating Company shall notify British Waterways immediately of any inspections and maintenance requirements affecting the Structure.
- (ii) The Operating Company shall notify British Waterways immediately of any incident affecting the Structure.
- (iii) The Operating Company shall notify British Waterways in writing immediately of any damage or claims for damages affecting the Structure.

23.2.7 A summary defect report is required for this structure.

24. Ardrishaig Swing Bridge

24.1.1 Constructed in 1986 the structure shown in Figure 24.1.1.A and whose location is denoted within Figure 24.1.1.B carries the A83 trunk road over the Crinan Canal at Ardhishaig

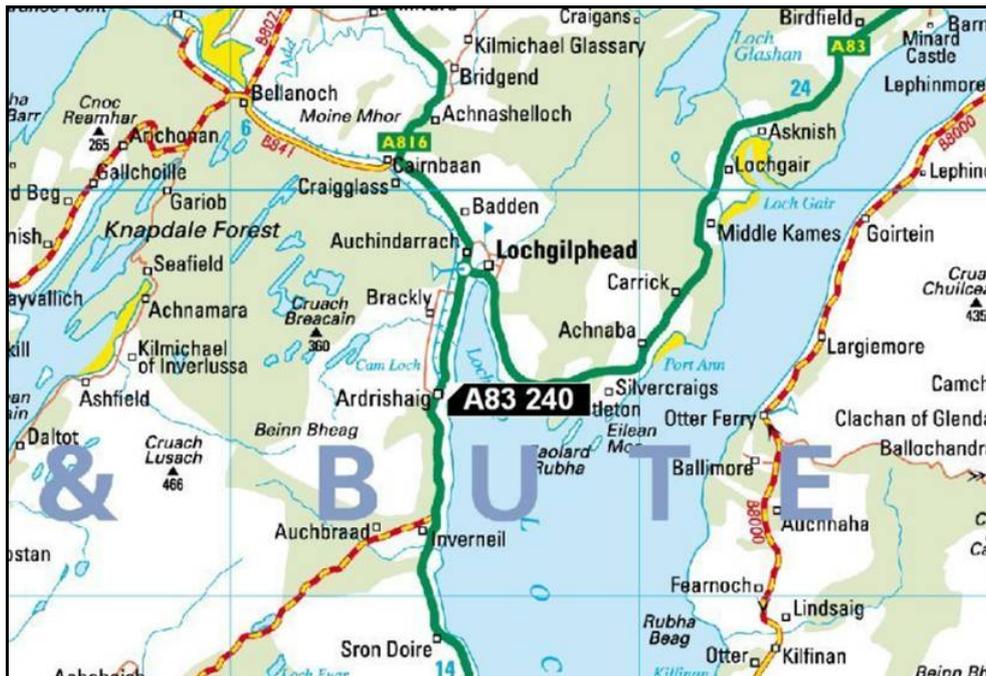
The swing bridge control room is housed in the gate house adjacent to the structure.

The Operating Company is advised that this structure is currently the property of British Waterways however it is envisaged at some future date the ownership will be transferred to the Scottish Ministers.

Figure 24.1.1.A – A83 240 Ardrishaig Swing Bridge



Figure 24.1.1.B – Ardrishaig Swing Bridge Location



24.2 Requirements for the A83 240 Ardrishaig Swing Bridge

- 24.2.1 British Waterways shall be responsible for the maintenance and operation of this swing bridge.
- 24.2.2 The Operating Company shall liaise with British Waterways and permit access to the Unit for British Waterways to operate the swing bridge and when required to permit the passage of vessels through the canals and to carry out other work associated with the swing bridges.
- 24.2.3 British Waterways shall be responsible for carrying out a monthly full functional test of this bridge using standby emergency generators and hydraulic powerpacks.

The Operating Company shall provide an observer approved by the Scottish Ministers to witness the swing bridge monthly tests thus ensuring the Scottish Ministers interests are protected. This individual shall be either the Major Bridges Manager or a Chartered Civil Engineer. The Operating Company shall also maintain monthly records of the results and observations made to be compiled into an annual certificate issued to the Director on the structures functionality.
- 24.2.4 The Operating Company shall liaise with British Waterways with regard to the operation of the this swing bridge and shall ensure that any Operations to be carried out by the Operating Company or work by British Waterways on or near the swing bridges shall be undertaken in a manner that will minimise disruption to Trunk Road users.
- 24.2.5 The Operating Company shall ensure that no work shall be carried out within 50 metres of the wig-wag barriers of this swing bridge without prior liaison and consultation with British Waterways.

24.2.6 The Operating Company shall notify British Waterways as described below when carrying out its Operations in accordance with any other provisions of this Contract including but not limited to the following:

- (i) The Operating Company shall notify British Waterways immediately of any inspections and maintenance requirements affecting the Structure.
- (ii) The Operating Company shall notify British Waterways immediately of any incident affecting the Structure.
- (iii) The Operating Company shall notify British Waterways in writing immediately of any damage or claims for damages affecting the Structure.

24.2.7 A summary defect report is required for this structure.

25. Mound Sluices

25.1.1 Constructed in 1816 the structure shown in Figure 25.1.1.A and whose location is denoted within Figure 25.1.1.B is an historic multi arch masonry bridge that carried the A9 trunk road until 1940 and is now by-passed by the reinforced concrete mound bridge.

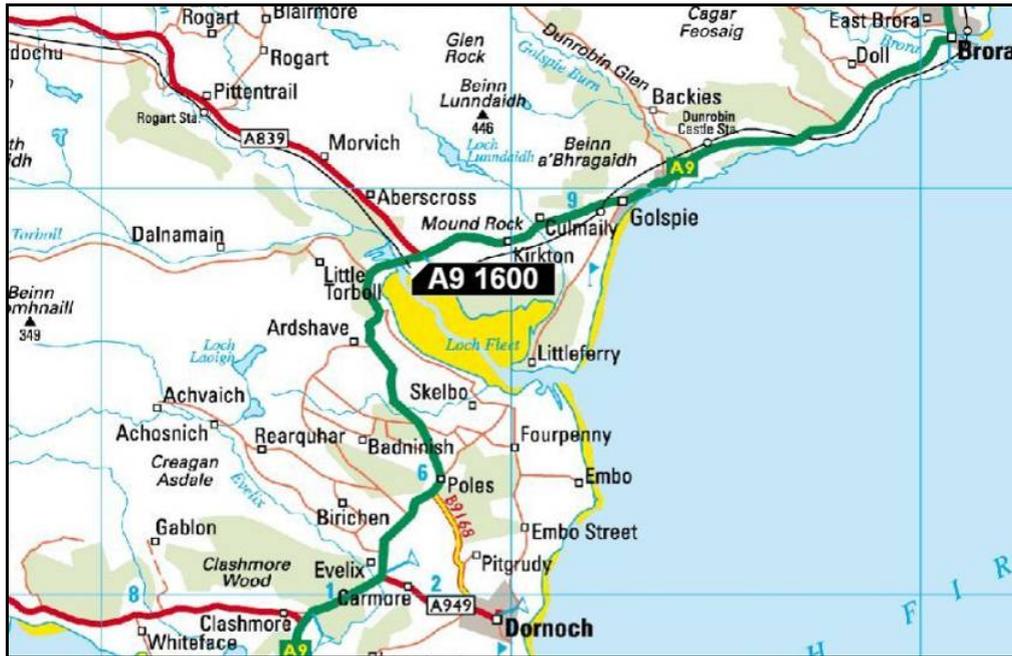
The sluices structure is a six span single carriageway with an overall length of 40.8 metres and deck width of 5.50 metres. The masonry arches are supported by solid wall piers with full height stone gravity abutments.

The Operating Company is advised that whilst the Scottish Ministers are responsible for maintaining the mound bridge and sluices, Highland Regional Council is responsible for maintaining the carriageway.

Figure 25.1.1.A – A9 1600 Mound Sluices



Figure 25.1.1.B – Mound Sluices Location



25.2 Requirements for the A9 1600 Mound Sluices

25.2.1 The Operating Company is advised that under normal conditions the sluice gates are self-operating being closed by the head of sea water on a rising tide and opened by the head of impounded fresh water on a falling tide.

Under conditions of exceptionally heavy rainfall sometimes combined with snowmelt insufficient fresh water escapes through the sluices in a tidal cycle and the improved agricultural land upstream of the sluices can become flooded.

25.2.2 The Operating Company shall train sufficient staff to manually operate the sluices to ensure that whenever called upon by affected landowners the sluices are operated within 2 hours of receiving the request.

25.2.3 The Operating Company shall provide affected landowners with their 24 hour helpline telephone number.

25.2.4 In carrying out their duties the Operating Company is required to liaise with:

- (i) Scottish Environmental Protection Agency.
- (ii) British Waterways.
- (iii) Local Authority.
- (iv) Affected Land Owners.
- (v) Stakeholders.

25.2.5 In addition to the requirements of Schedule 7 Part 6 the Operating Company is advised that the year in which the first inspection shall be due shall be as referred to in this annex.

Table 25.2.5 – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
A9 1600	Mound Sluices	2009 GI	2012	2014

25.2.6 The Operating Company is advised that in addition to the above inspection programme, the schedule for operating and maintaining the winch, chains and bolts of this structure is listed within Annex 7.7/B.

25.2.7 A summary defect report is required for this structure.

This is Annex 7.7/B to Schedule 7 Part 7 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 7

STRUCTURES WITH PARTICULAR REQUIREMENTS

ANNEX 7.7/B – Documents for Structures with Particular Requirements

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 7

STRUCTURES WITH PARTICULAR REQUIREMENTS

ANNEX 7.7/B – Documents for Structures with Particular Requirements

These documents are Reference Documents.

Structures on the Trunk Road

A87 290 Skye Bridge

1. A87 Skye Bridge - Operations Manual
 2. A87 Skye Bridge - Maintenance Manual
 3. A87 Skye Bridge - Wind Management Plan
 4. A87 Skye Bridge - Inspection Schedule
-

A87 280 Carrich Bridge

1. A87 Carrich Viaduct - Maintenance Manual
-

A87 245 Dornie New

Presently no Maintenance Manual exists for this structure

A9 1350 Kessock Bridge

1. A9 Kessock Bridge - Maintenance Manual - Volume 1 of 4 Section A - Substructure
 2. A9 Kessock Bridge - Maintenance Manual - Volume 2 of 4 Section B - Superstructure
 3. A9 Kessock Bridge - Maintenance Manual - Volume 3 of 4 Section C - Services
 4. A9 Kessock Bridge - Maintenance Manual - Volume 4 of 4 Section D - Appendices
 5. A9 Kessock Bridge - Maintenance Gantry Scissor Lift - Operations, Inspection and Maintenance
 6. A9 Kessock Bridge - Wind Management Plan
 7. A9 Kessock Bridge - Inspection Schedule
-

A828 9 Connel South Approach

Refer to the A828 10 Connel Bridge - Maintenance Manual

A828 10 Connel Bridge

1. A828 Connel Bridge - Maintenance Manual
 2. A828 Connel Bridge - Inspection Schedule
-
-

A828 11 Connel North Approach

Refer to the A828 10 Connel Bridge - Maintenance Manual

A9 590 Killiecrankie Viaduct North Bound

1. A9 Perth Killiecrankie to Inverness Trunk Road Improvement North of Calvine Stage 2 Maintenance Manual
 2. A9 Killiecrankie - Inspection Schedule
-
-

A9 600 Killiecrankie Viaduct South Bound

1. A9 Perth Killiecrankie to Inverness Trunk Road Improvement North of Calvine Stage 2 Maintenance Manual
 2. A9 Killiecrankie - Inspection Schedule
-
-

A9 580 Retaining Structures

1. A9 Perth Killiecrankie to Inverness Trunk Road Improvement North of Calvine Stage 2 Maintenance Manual
 2. A9 Killiecrankie - Inspection Schedule
-
-

A9 1230 Findhorn

Presently no Maintenance Manual exists for this structure

A9 1360 Cromarty Bridge

Presently no Maintenance Manual exists for this structure

A9 1585 Dornoch Bridge

1. A9 Dornoch Bridge Maintenance Manual
-
-

A82 870 Ballachulish Bridge

1. A82 Ballachulish Bridge Inspection and Maintenance Manual
-
-

A85 520 Falls of Cruachan E

Presently no Maintenance Manual exists for this structure

A85 530 Falls of Cruachan

Presently no Maintenance Manual exists for this structure

A85 540 Falls of Cruachan W

Presently no Maintenance Manual exists for this structure

A82 1190 Laggan Swing Bridge

1. Operator & Maintenance Instruction Manual for Laggan Swing Bridge - Electrical Section
 2. Swing Bridge - Inspection Schedule
-
-

A82 1230 Aberchalder Swing Bridge

1. Operating and Maintenance Manual for British Waterways Aberchalder Bridge Volume 1 – Mechanical
 2. Operating and Maintenance Manual for British Waterways Aberchalder Bridge Volume 2 – Electrical
 3. Swing Bridge - Inspection Schedule
-
-

A82 1250 Fort Augustus Swing Bridge

1. A82 Fort Augustus Canal bridge Schedule of Monthly Inspections - Electrical and Mechanical
 2. A82 Fort Augustus Canal Bridge Inspection and Maintenance Schedule - Structural
 3. A82 Fort Augustus Swing Bridge Operations and Maintenance Manual Vol 1 - General
 4. A82 Fort Augustus Swing Bridge Operations and Maintenance Manual Vol 2 - Electrical
 5. Swing Bridge - Inspection Schedule
-

A830 20 Banavie Swing Bridge

1. Banavie Swing Bridge – Safety, Operational and Maintenance Manual
 2. Swing Bridge - Inspection Schedule
-

Structures the Property of British Waterways

A82 1490 Tomnahurich Swing Bridge

Maintenance Manual held by British Waterways

A83 240 Ardrishaig Swing Bridge

Maintenance Manual held by British Waterways

Structures not on the Trunk Road

A9 1600 Mound Sluices

1. Mound Sluices Inspection Schedule
-

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 8

SEVERE WEATHER SERVICES

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 8

SEVERE WEATHER SERVICES

1. INTRODUCTION

1.1 General

- 1.1.1 This Part identifies the planning activities the Operating Company shall undertake in preparation for Incident Response Operations relating to Severe Weather events.
- 1.1.2 The Operating Company shall undertake planning activities for Severe Weather events relating to the Winter Service in accordance with the requirements of Schedule 7 Part 2.
- 1.1.3 The requirements of this Part shall be undertaken as part of the Incident Response Plan and Incident Response Operations stated in Schedule 7 Part 3.
- 1.1.4 The Operating Company shall include documented procedures in its Management System to deliver the requirements of this Part.

2. PLANNING ARRANGEMENTS FOR SEVERE WEATHER EVENTS

2.1 General

- 2.1.1 The Operating Company's planning activities for responding to Severe Weather events shall include the development and use of management plans, processes and systems. The Operating Company shall establish such arrangements in advance of a Severe Weather event occurring to enhance its Incident Response Operations and mitigation activities as stated in Schedule 7 Part 3.

2.2 Information Gathering and Impact Assessment

- 2.2.1 The Operating Company shall establish its arrangements for gathering and processing information on the key characteristics of any Severe Weather event that occurs or is predicted to occur within the Unit. Such information shall include the nature and severity of the Severe Weather event and its potential impact on the operation of the Unit.
- 2.2.2 The Operating Company shall procure the services of an expert weather forecasting service to assist it with the prediction and management of Severe Weather events. This expert weather forecasting service shall be operational seven days a week during Normal Working Hours to provide specific, timely and accurate weather forecasts and advance warnings of Severe Weather events predicted to occur within the Unit. Such information shall, as a minimum, be specific to the conditions of the Unit.
- 2.2.3 The expert weather forecasting service for Severe Weather events is in addition to the Winter Service weather forecasting requirements stated in Schedule 7 Part 2.
- 2.2.4 No later than 30 days prior to the Commencement of Service Date, the Operating Company shall submit to the Director for consent, details of its proposed expert weather forecasting service for Severe Weather events.

2.2.5 The Operating Company shall provide suitably trained designated personnel who are able to receive, continuously monitor and interpret information provided by its expert weather forecasting service for Severe Weather events. Such personnel shall be authorised to make key decisions on the implementation of the Operating Company's Incident Response Operations relating to Severe Weather events.

2.3 Liaison and Coordination

2.3.1 No later than 30 days prior to the Commencement of Service Date, the Operating Company shall:

- (i) identify all Operational Partners that have involvement in dealing with Severe Weather events,
- (ii) agree the communication arrangements between itself, the Traffic Scotland Operator and other relevant Operational Partners during a Severe Weather event, and
- (iii) ensure a mutual understanding of the roles and responsibilities of the Operating Company and the relevant Operational Partners during a Severe Weather event.

2.3.2 The Operating Company's procedures contained within its Management System shall include:

- (i) details of all relevant Operational Partners,
- (ii) the arrangements for disseminating accurate, timely and relevant Severe Weather information to the Traffic Scotland Operator and other Operational Partners,
- (iii) the communication arrangements between the Operating Company, the Traffic Scotland Operator and other relevant Operational Partners to be followed during a Severe Weather event, and
- (iv) the roles and responsibilities of the Operating Company and all relevant Operational Partners for dealing with a Severe Weather event.

2.3.3 The Operating Company shall attend regular meetings with all relevant Operational Partners to review and update the communication arrangements and enable the integration of communication systems and technology.

2.4 Information Management and Dissemination

2.4.1 The Operating Company shall establish and record within its Management System, the arrangements for managing and disseminating Severe Weather information to relevant Operational Partners during the implementation of its Incident Response Operations in Schedule 7 Part 3.

3. SEVERE WEATHER MANAGEMENT PLANS

3.1 General

3.1.1 The Operating Company shall execute the management, implementation, review and updating of all Severe Weather management plans and related Incident Response Operations.

- 3.1.2 Subject to an Order, the Operating Company shall develop new Severe Weather management plans at new Disruption Risk Sites. The Operating Company shall submit such plans to the Director for consent.
- 3.1.3 All Severe Weather management plans shall contain details of the arrangements for Incident Response Operations and mitigation activities at the Disruption Risk Sites where Severe Weather has been identified as a cause of disruption. Such plans shall include actions for dealing with high winds, flooding and landslides as stated in this Part.
- 3.1.4 All Severe Weather management plans shall contain details of any Mutual Aid arrangements.
- 3.1.5 Severe Weather management plans shall form part of Operating Company's Disruption Risk Management Plan as stated in Schedule 7 Part 3.

3.2 Wind Management Plans

- 3.2.1 No later than 30 days prior to the Commencement of Service Date, the Director will provide the Operating Company with details of existing wind management plans.
- 3.2.2 Subject to an Order, the Operating Company shall develop additional wind management plans at Disruption Risk Sites where high winds have been identified as a cause, or potential cause, of disruption to the operation of the Unit.
- 3.2.3 The Operating Company shall ensure all wind management plans are produced in accordance with Transport Scotland's *High Winds Strategy and National Winds Management Guidelines* and shall take account of other relevant Operational Partners' wind management strategies.
- 3.2.4 Each wind management plan shall contain the arrangements for implementing the Operating Company's Incident Response Operations and mitigation activities for any wind related Severe Weather event that occurs or is predicted to occur at the Disruption Risk Site.
- 3.2.5 The Operating Company's expert weather forecasting service for Severe Weather events shall provide real-time wind speed data at all sites subject to a wind management plan. Such data shall be made available to the Director and the Traffic Scotland Operator.
- 3.2.6 The Operating Company shall review and update all wind management plans at the same time as undertaking the review and update of the Incident Response Plan as stated in Schedule 7 Part 3 and submit any proposed revisions to the Director for consent.

3.3 Flooding Management Plans

- 3.3.1 Subject to an Order, the Operating Company shall develop flooding management plans at Disruption Risk Sites where flooding has been identified as a cause, or potential cause, of disruption to the operation of the Unit.
- 3.3.2 Each flooding management plan shall detail arrangements for implementing the Operating Company's Incident Response Operations and mitigation activities for any flooding related Severe Weather event that occurs or is predicted to occur at the Disruption Risk Site.
- 3.3.3 The Operating Company's shall use its expert weather forecasting service for Severe Weather events to assist in the planning and implementation of its

programme for inspections and patrols of Disruption Risks Sites where flooding has been identified as a cause of the disruption. Such inspections and patrols shall be undertaken in accordance with Schedule 7 Part 1.

- 3.3.4 The Operating Company shall review and update all flooding management plans at the same time as undertaking the review and update of the Incident Response Plan as stated in Schedule 7 Part 3 and submit any proposed revisions to the Director for consent.

3.4 Landslides Management Plans

- 3.4.1 Subject to an Order, the Operating Company shall develop landslide management plans for Disruption Risk Sites where landslides have been identified as a cause, or potential cause, of disruption to the operation of the Unit, including those identified in the Transport Scotland's *Landslide Study Report*. The Operating Company shall ensure all landslide management plans take account of other relevant Operational Partners' landslide management strategies.
- 3.4.2 Each landslide management plan shall detail arrangements for implementing the Operating Company's Incident Response Operations and mitigation activities for any landslide related Severe Weather event that occurs or is predicted to occur at the Disruption Risk Site.
- 3.4.3 When exceptional rainfall events are predicted, the Operating Company shall use its expert weather forecasting service for Severe Weather events to assist in the planning and execution of additional inspections and patrols in areas identified as being prone to landslides.
- 3.4.4 The Operating Company shall review and update all landslide management plans at the same time as undertaking the review and update of the Incident Response Plan as stated in Schedule 7 Part 3 and submit any proposed revisions to the Director for consent.

4. INCIDENT RESPONSE OPERATIONS FOR SEVERE WEATHER EVENT

4.1 General

- 4.1.1 When the Operating Company becomes aware of a Severe Weather event occurring or predicted to occur within the Unit, it shall commence its Incident Response Operations in accordance with the requirements of Schedule 7 Part 3 and implement the arrangements stated in the relevant Severe Weather management plan.
- 4.1.2 The Operating Company's mitigation activities shall include short- and long-term activities aimed at minimising or eliminating the vulnerability and exposure of the Unit and its users to the risks from the types of Severe Weather event detailed in paragraph 3 of this Part. The mitigation activities to be undertaken shall be stated in the relevant Severe Weather management plan. All mitigation activities shall be undertaken in accordance with the Operating Company's Disruption Risk Management Plan, which shall be prepared and maintained by Operating Company in accordance with the Disruption Risk Manual as stated in Schedule 7 Part 3.

4.2 Records

- 4.2.1 All information required by the Operating Company to deliver the requirements of this Part shall be collected and stored in accordance with the requirements stated in Schedule 7 Part 3 and Schedule 5 Part 2.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 8 PART 1

ABNORMAL INDIVISIBLE LOAD ROUTEING

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 8 PART 1

ABNORMAL INDIVISIBLE LOAD ROUTEING

1. INTRODUCTION

1.1 General

1.1.1 Movement of abnormal indivisible loads and abnormal vehicles is regulated and controlled by:

- (i) *The Road Vehicles (Construction and Use) Regulations 1986* (SI 1986 No 1078),
- (ii) *The Road Vehicles (Authorised Weight) Regulations 1998* (SI 1998 No 3111),
- (iii) *The Road Vehicles (Authorisation of Special Types) General Order 2003* (SI 2003 No 1998) hereinafter referred to as *Special Types General Order 2003*, and
- (iv) *Section 44 of the Road Traffic Act 1988*,

and any statutory amendment or re-enactment thereof.

1.1.2 The Operating Company shall, on behalf of the Director, act as the main contact for all communication and correspondence relating to the routing and movement of abnormal indivisible loads within the Unit. The Operating Company shall inform the Director of all proposed and agreed movements of abnormal indivisible loads within the Unit.

1.1.3 Movement of certain abnormal indivisible loads requires authorisation from the Department of Transport. Hauliers and companies are required to obtain authorisation for movements of abnormal indivisible loads with dimensions or weights as described in parts B and C of Annex 8.1/A of this Part.

Hauliers and companies moving abnormal indivisible loads, are required to give notice to the Police and all road and bridge authorities who have responsibility for the proposed route in accordance with the timescales specified in parts B and C of Annex 8.1/A of this Part.

1.1.4 Movement of certain loads, as stated in parts B and C of Annex 8.1/A of this Part, requires an escort. Hauliers are permitted to undertake the self escorting of abnormal indivisible loads and abnormal vehicles within certain limits. The Operating Company shall inform all hauliers and companies intending to undertake the self escorting of abnormal indivisible load of the need to comply with Highways Agency publication *Code of Practice – Self-Escorting of Abnormal Loads and Abnormal Vehicles*. The Operating Company shall comply with this guidance when executing any Operations that may involve self escorting of abnormal indivisible loads and abnormal vehicles.

1.1.5 The Association of Chief Police Officers in Scotland has published a notice to all hauliers wishing to self-escort any abnormal indivisible loads on roads in Scotland. A copy of such notice is contained in Annex 8.1/B of this Part. The Operating

Company shall bring this notice to the attention of all hauliers and companies seeking the routing and movement of abnormal indivisible loads within the Unit.

1.1.6 The Operating Company shall include documented procedures for the effective management of abnormal indivisible load routing within its Management System, including its Quality Plan.

1.1.7 The Operating Company's Abnormal Load Routing Manager shall supervise and co-ordinate the duties to be undertaken by the Operating Company specified in this Part.

1.2 Load Routing and Co-ordination

1.2.1 The Director has a duty to provide a statutory abnormal indivisible load routing and coordination service throughout Scotland to hauliers and companies on behalf of the Department of Transport. The Operating Company shall provide advice on the routing of abnormal indivisible loads to the Director, and on behalf of the Director, when required.

1.2.2 The Operating Company shall provide a routing and coordination service for hauliers and industry for abnormal indivisible loads movements that take place on the Trunk Road within the geographical area of the Unit.

The Operating Company shall liaise with:

- (i) adjoining local road authorities,
- (ii) Police,
- (iii) Network Rail,
- (iv) British Rail Property Board,
- (v) British Waterways,
- (vi) Statutory Undertakers, and
- (vii) other concerned organisations,

as required, in order to advise on or identify a suitable route for the movement of abnormal indivisible loads and abnormal vehicles.

When any such movement requires statutory authorisation, the Operating Company shall advise the haulier or company accordingly. No later than three Working Days after advising the haulier or company of the need for statutory authorisation, the Operating Company shall refer the application or enquiry, together with a suggested abnormal indivisible load route, to the Director.

1.2.3 Any advice that the Operating Company gives to hauliers or companies shall be based on such Records as the Operating Company may possess or to which the Operating Company has access. The Operating Company shall inform hauliers and companies that by advising or commenting on a proposed abnormal indivisible load route:

- (i) the Operating Company and Director shall not assume responsibility of any kind in connection with the movement of the relevant abnormal indivisible load or abnormal vehicle, and

- (ii) in following any advice provided, the owner and the operator of the vehicle shall not be relieved of any of obligations or liabilities under the relevant legislation.

2. ROUTE ASSESSMENT

2.1 Management and Records

- 2.1.1 The Operating Company shall use the Director's structures management function of the Integrated Roads Information System database, as referred to in Schedule 7 Part 6, and follow the procedures set out in the structures management function of the Integrated Roads Information System user manual to identify Structures that may be affected by the movement of an abnormal indivisible load.
- 2.1.2 The Operating Company shall update the data held within the structures management function of the Integrated Roads Information System in accordance with the requirements of Schedule 7 Part 6.
- 2.1.3 In undertaking a route assessment, the Operating Company shall take account of the guidance contained in the structures management function of the Integrated Roads Information System on the effects of heavy load movements across over-bridges, under-bridges and Structures within the Unit. The Operating Company shall record in the structures management function of the Integrated Roads Information System, data on the vehicles used in the movement of abnormal indivisible loads.

The Operating Company shall keep Records of the assessment of abnormal vehicle movements and the approved abnormal indivisible load route for each abnormal indivisible load. However, neither the results of the assessment nor the approved abnormal indivisible load route taken shall be recorded within the structures management function of the Integrated Roads Information System.

2.2 Roads and Structures

- 2.2.1 In accordance with paragraph 2.1 and Appendix 8.1/A of this Part, the Operating Company shall assess the proposed movement of vehicles with heavy, wide, long or high abnormal indivisible loads to determine the suitability of Structures and Trunk Roads to accommodate such vehicles.
- 2.2.2 The Operating Company shall examine the Records available in the structures management function of the Integrated Roads Information System or other such documents or databases available to the Operating Company.
- 2.2.3 The Operating Company shall not carry out structural assessments as part of its duties under this Part. When it is identified that a Structure may require further structural assessment to establish its capability to carry the proposed load, the Operating Company shall bring this to the immediate attention of the Director.

Subject to the haulier or company reaching agreement with the Director on a further structural assessment, the Operating Company shall provide assistance to the haulier or company or its agent by giving access to relevant drawings, calculations and other appropriate Records held by the Operating Company.

2.3 Recommendations and Checks

- 2.3.1 The Operating Company shall make recommendations in writing to the Director, on the suitability of a proposed movement of abnormal indivisible loads and abnormal

vehicles within the timescale specified within Annex 8.1/A of this Part. This timescale is required in order to allow authorisation by the Department for Transport on behalf of the Director.

The Director shall issue a copy of the notifications and authorisation to the Operating Company. The Operating Company shall immediately check all notifications and authorisations issued and no later than five Working Days after checking, bring any discrepancies to the attention of the appropriate organisation.

2.4 High Loads

2.4.1 The Operating Company shall provide advice to the Director, hauliers and the industry on the passage of high loads. In order that the maximum possible use is made of the Trunk Road network, except where signed height restrictions are in force, the overall laden height of a vehicle should not exceed 4.95 metres (16'3").

2.4.2 No later than 28 days before the Commencement of Service Date, the Director shall provide to the Operating Company a grid of high load routes within Scotland. These high load routes shall be for load heights up to 5.48 metres (18ft), with further information provided on routes that can accommodate 6.09 metres (20ft) high loads.

The Operating Company shall immediately notify the Director of any changes that need to be made to the abnormal load pinch point grid of high load routes.

2.4.3 The Operating Company shall ensure that no activity for which it is responsible reduces the existing height clearances available on Trunk Roads unless consented to in writing by the Director.

2.5 Electronic Service Delivery for Abnormal Loads

2.5.1 During the Contract Period, the Director may introduce a new system, known as the electronic service delivery for abnormal loads.

2.5.2 When the system for electronic service delivery for abnormal loads is introduced, the Operating Company will be required to:

- (i) implement the use of this system through document procedures contained within the Management System,
- (ii) use this system for the remainder of the Contract Period,
- (iii) update data used in indicative capacity appraisals to identify potential problem Structures, and
- (iv) add information to the system about any constraints that may impact on an abnormal indivisible load route.

3. INDEMNIFICATION

3.1.1 The Operating Company shall, on behalf of the Director, request indemnification, in the format specified in the Specification of the *Special Types General Order 2003*, from any haulier or company whose abnormal indivisible loads are expected to travel within the Unit.

3.1.2 The Operating Company shall immediately notify the Director if it has not received any requested indemnity in advance of any movement of abnormal indivisible loads.

- 3.1.3 The Operating Company shall keep the indemnity forms received at its Central Office and shall prepare and maintain a list of hauliers and companies for whom indemnity forms are held. Indemnity forms shall be kept for a minimum period of 12 months after the indemnified movement has taken place. Should the 12 month period extend beyond the Contract Expiry Date, any indemnity forms held by the Operating Company shall be passed to any incoming operating company.

This is Annex 8.1/A to Schedule 8 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 8 PART 1

ABNORMAL INDIVISIBLE LOAD ROUTEING

ANNEX 8.1/A – A Guide to Notification and Authorisation

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 8 PART 1

ABNORMAL INDIVISIBLE LOAD ROUTEING

ANNEX 8.1/A – A Guide to Notification and Authorisation of Abnormal Indivisible Load Movements

The following is a guide to notification and authorisation requirements for the movement of abnormal indivisible loads:

A. Dimensions within "Construction & Use Regulations"

Laden dimensions **not** exceeding:

2.90m (9'6") overall width, 18.75m (61'6") rigid length or 40,000kgs (40t) gross weight	No requirement for notice to Transport Scotland, the Police or for notice with indemnity to Road & Bridge Authorities
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The Secretary of State's authorisation is not required for the movement of abnormal indivisible loads with laden dimensions as stated above.

B. Dimensions within "Special Types General Order"

Laden dimensions in excess of "Construction & Use Regulations" but **not** exceeding:

6.1m (20'0") overall width *	2 Clear Working Days notice to Police
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* Secretary of State "VR1" authorisation is required for the movement of abnormal indivisible loads **with an overall width in excess of 5.0m (16'5") but not exceeding 6.1m (20'0")**. **The VR1 authorisation requires 10 days notice to the Highways Agency in addition to the timeframe stated above.**

30.0m (98'4") rigid length	2 Clear Working Days notice to Police
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80,000kgs (80t) gross weight	2 Clear Working Days notice with indemnity to Road & Bridge Authorities
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over 80,000kgs (80t) but not exceeding 150,000kgs (150t) gross weight	5 Clear Working Days notice with indemnity to Road & Bridge Authorities and 2 Clear Working Days notice to Police
--	--

C. Dimensions requiring Special Order

Laden dimensions exceeding:

6.1m (20'0") overall width** 5 Clear Working Days notice with indemnity
to Road & Bridge Authorities **and**
5 Clear Working Days notice to Police

**** Secretary of State "HA form BE 16" authorisation is required for the movement of loads with an overall width in excess of 6.1m (20'0"). The BE16 authorisation requires 8 weeks notice to the Highways Agency in addition to the timeframes outlined above**

30.0m (98'4") rigid length*** 5 Clear Working Days notice with indemnity
to Road & Bridge Authorities **and**
5 clear Working Days notice to Police

***** Secretary of State "HA form BE 16" authorisation is required for the movement of loads with an overall length in excess of 30.0m (98'5"). The BE16 authorisation requires 8 weeks notice to the Highways Agency in addition to the timeframes outlined above**

150,000kgs (150t) gross weight 5 Clear Working Days notice with indemnity
and/or 16,500kgs (16.5t) per axle**** to Road & Bridge Authorities **and**
5 Clear Working Days notice to Police

****** Secretary of State "HA form BE 16" authorisation is required for the movement of loads with an overall weight exceeding 150,000kgs (150t) and/or 16,500kgs (16.5t) per axle. The BE16 authorisation requires 8 weeks notice to the Highways Agency in addition to the timeframes outlined above**

Secretary of State's "Special Order" authorisation is required for the movement of abnormal indivisible loads with laden dimensions as stated above.

NOTES

1. At present there is no legislation governing the overall laden height of a vehicle but in order that the maximum possible use is made of the motorway and Trunk Road network the overall laden height should not exceed 4.95m (16'3").
2. "Clear Working Days notice" excludes Saturdays, Sundays, bank holidays or public holidays.
3. The Transport Scotland Bridges Section offers an advisory service to the operating companies on the routing of abnormal indivisible loads on the Trunk Road network, including those loads within the laden dimensions stated in Part A of this Annex which do not require the Secretary of State's authorisation or notification to Transport Scotland.

This is Annex 8.1/B to Schedule 8 Part 1 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 8 PART 1

ABNORMAL INDIVISIBLE LOAD ROUTEING

ANNEX 8.1/B – The Association of Chief Police Officers in Scotland – Notification to Hauliers

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 8 PART 1

ABNORMAL INDIVISIBLE LOAD ROUTEING

ANNEX 8.1/B – The Association of Chief Police Officers in Scotland – Notification to Hauliers



NOTICE TO HAULIERS

ACPOS ABNORMAL LOADS WORKING GROUP

ACPOS Road Policing Standing Committee have endorsed the principle of self escorting abnormal indivisible loads on motorways and linking dual carriageways and on other roads deemed suitable by individual Chief Constables.

The self escorting of abnormal indivisible loads is acceptable only in the following circumstances:

- The Haulier complying with the Department for Transport/Highways Agency Code of Practice.
- The Haulier must give written notice at the time of notification that the self escort personnel will not engage in the direction or control of traffic.
- The Haulier must give an assurance that they will not operate or move abnormal indivisible loads on urban motorways during peak traffic flows.

ROAD SAFETY UNDERPINS THE POLICY RELATIVE TO SELF ESCORTING. HAULIERS MUST ENSURE THAT THE SAFETY OF ALL ROAD USERS IS AT THE FOREFRONT OF SELF ESCORTING ACTIVITIES.

The draft code of conduct refers to Level 2 accredited persons. Level 2 accredited persons will not apply in Scotland. Chief Officers in England and Wales do not intend to accredit any individuals to Level 2 as referred to in the DfT Highways Agency Code of Practice.

The police service in Scotland are not forcing any haulier to self escort. Self escorting is an option available to all the hauliers using motorways and the linking dual carriageway network in Scotland. The savings in time will no doubt make self escorting very attractive to Hauliers. As a result of the "no escort" policy being adopted by the police service in England and Wales from 1 January 2004, many private companies have been set up as providers of abnormal load escorts. Such companies are in the process of contacting individual police forces seeking some form of endorsement for their company. Scottish Forces will not enter into any form of agreement with private abnormal load escort companies. The relevant legislation refers to the haulier and no provision is made for any agent or other person acting on behalf of the haulier. The onus relative to notification and indemnity rests with the haulier and with no other person.

The Association of Chief Police Officers in Scotland Road Policing Standing Committee are not requiring Hauliers to be members of any organisations or trade associations before they can operate self escorting.

It is essential that all Hauliers have insurance cover for the task of self escorting.

The onus for route planning and notification to both the Police and Roads Authorities remains with the Haulier.

Should any further information relative to the policy be required, contact should be made with the undersigned during normal office hours.

**Inspector Simon Bradshaw
Road Policing Management Support
Police Scotland
Fife Div HQ
Detroit Road
Glenrothes
KY6 2RJ**

E-mail: simon.bradshaw@scotland.pnn.policeuk

Tel: 01592 418828

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 8 PART 2

DEVELOPMENT MANAGEMENT

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 8 PART 2

DEVELOPMENT MANAGEMENT

1. PLANNING APPLICATIONS

1.1 Consultation with the Scottish Ministers

1.1.1 Planning authorities are required to consult with the Scottish Ministers under Regulation 25 and Schedule 5 paragraph 5 of *The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2008* before granting planning permission for a development.

1.1.2 An electronic planning system has been introduced nationally for planning in Scotland with applications being logged via an online portal. Transport Scotland has developed a parallel electronic online system to record, review, respond and monitor all planning applications. This system is the development management function of the Integrated Roads Information System.

1.2 Notice to Consider

1.2.1 The planning authority is required to give the Scottish Ministers not less than 14 days' notice of its intention to consider and determine a planning application.

1.3 Assistance with Response

1.3.1 The Operating Company shall appoint a Planning Application Officer in accordance with the requirements of Schedule 5 Part 4 who shall assist the Director in responding to planning authorities on any planning application.

1.4 System for Processing Planning Applications

1.4.1 The Operating Company shall comply with the development management function of the Integrated Roads Information System for processing planning applications described in paragraph 1.4.2 of this Part.

1.4.2 The procedure for processing of planning applications is:

- (i) the Operating Company shall use the development management function of the Integrated Roads Information System to complete its responses online within five Working Days of receipt of all documentation relating to the planning application, for the Director's consideration,
- (ii) planning applications, including details and enclosures (such as plans), are uploaded by the planning authority onto the national online planning system on the planning authorities' web pages and an electronic notification is issued to the Director and the Operating Company,
- (iii) the development management function of the Integrated Roads Information System will prompt the Operating Company to complete its relevant actions in the required timescale in order to assist in the process of responding to the planning application, and

- (iv) the Operating Company shall inform the Director immediately, via email, if the applicant for planning permission has any connection with the Operating Company or any of its members or associates, including:
- (a) sub-consultants,
 - (b) contractors,
 - (c) sub-contractors, and
 - (d) any parent company or local authority partner of the Operating Company,

which might cause a conflict of interest.

The Director shall inform the Operating Company, via email, should he consider it inappropriate for the Operating Company to consider the planning application further. The Director shall then appoint others to deal with such applications,

- (v) the Operating Company shall ensure that the planning authority has provided all the information required to allow the planning application to be properly assessed. Where insufficient information is available to the Operating Company to process the application, the Operating Company will highlight this via the development management function of the Integrated Roads Information System.

The development management function of the Integrated Roads Information System will then generate a request to the planning authority to supply the required information as soon as possible. The development management function of the Integrated Roads Information System will also indicate that all the information is not available to the Operating Company. The time for the Operating Company to make the response shall be extended automatically by the development management function of the Integrated Roads Information System until all the required information is available,

- (vi) the development management function of the Integrated Roads Information System will reference applications geographically in order that they can be displayed on a digital map to which the Director and the Performance Audit Group have access at all times.

Where historical information is available, the Operating Company shall use this information to advise the Director of any previous planning applications in the vicinity of any new planning application. The Operating Company shall take into account any advice relating to historical planning applications that is relevant to the vicinity of the new planning application.

Where historical information on planning applications is not held by the Operating Company, the Director shall arrange for any available information to be passed to the Operating Company as an Electronic Copy and the Operating Company shall upload the information to the development management function of the Integrated Roads Information System,

- (vii) the Operating Company shall inspect the Trunk Road in the vicinity of the location relevant to any planning application and consider any potential implications.

The Operating Company shall submit an inspection report, via the development management function of the Integrated Roads Information System, to the Director which shall include relevant details such as:

- (a) visibility,
- (b) traffic flow,
- (c) accident record, as recorded on the Director's accident database,
- (d) speed limit, and
- (e) any other relevant considerations.

The Operating Company shall make comments and recommendations on the application to the Director, via the development management function of the Integrated Roads Information System, taking into account all the details available from the inspection and Records.

The Operating Company's recommendations to the Director shall adopt, where appropriate, the standard planning consultation responses referred to in Scottish Executive Circular 4/1998 – *The Use of Conditions in Planning Permissions*,

- (viii) on receipt of the planning application, the Operating Company shall review the Disability Discrimination Act database and advise the Director of any barriers to accessibility in the vicinity of the planning application via the development management function of the Integrated Roads Information System,
- (ix) the Operating Company shall provide photographs taken in the vicinity of the site of the planning application. The photographs shall be taken in a sufficiently competent manner and be of sufficient scope and quality to assist the Director in coming to a recommendation. Particular attention shall be given to the quality of the photographs provided during the winter months when the daylight hours are restricted.

The Operating Company shall upload the photographs in the correct file size and format specified by the development management function of the Integrated Roads Information System.

- 1.4.3 The advice to the planning authority on each planning application shall be issued by the Director via the development management function of the Integrated Roads Information System and will take into account the comments and recommendations of the Operating Company. The advice given by the Director to the planning authority will be available to the Operating Company via the development management function of the Integrated Roads Information System.

1.5 Transportation Assessments

- 1.5.1 The Operating Company shall notify the Director, via the development management function of the Integrated Roads Information System, within one Working Day of receipt of any planning applications which require a transportation appraisal or assessment, as referred to in the *Development Planning and Management Transport Appraisal Guidance* published by the Scottish Government.

The audit of a transportation appraisal or assessment submitted by the developer will usually be carried out by the Development Management Branch of the Trunk Road and Bus Operations.

The Director will manage such planning applications but the Operating Company shall be required to complete the necessary responses and comments and take the necessary photographs in accordance with paragraph 1.4.2 of this Part.

1.6 Local Planning Public Inquiries and Local Development Plans

1.6.1 From time to time, planning applications may result in local planning public inquiries being held. Assistance for these will normally be provided by term consultants directly employed by the Director. However, where assistance is required from the Operating Company, this shall be subject to an Order.

Similar arrangements shall be followed regarding assistance for consultation on local development plans.

1.7 Pre-Application Advice

1.7.1 Pre-applications will be registered on the development management function of the Integrated Roads Information System and when prompted to do so by Transport Scotland, the Operating Company shall provide information or advice in relation to them.

1.7.2 Where the Operating Company is asked to provide information or advice on pre-applications, the Operating Company's response to the applicant shall be recorded on the development management function of the Integrated Roads Information System. Where site measurements or checks are required in response to a pre-application, the Director shall notify the Operating Company via the Planning Application and Notification System and the Operating Company shall record the relevant measurement or check information.

1.7.3 At no time shall the Operating Company confirm that a proposal is acceptable to an applicant or its agent, although it may acknowledge the suitability or otherwise of any technical standards. Its response to the applicant shall be referred back to Transport Scotland via the development management function of the Integrated Roads Information System to be qualified as appropriate.

2. WORKS WITHIN THE TRUNK ROAD

2.1 Requirements

2.1.1 The Director's advice on the development management function of the Integrated Roads Information System allows:

- (i) for the inclusion of advice that any planning consent does not carry with it the right to carry out works within a Trunk Road, and
- (ii) that the applicant will consult the Operating Company on terms and conditions under roads legislation, to be agreed between the developer and the Director, before approval is given to the developer to undertake works within a Trunk Road.

2.1.2 Whether planning consent is required or not, where a developer requires to execute works on a Trunk Road, the developer is required to liaise with the Director (and copy to the Operating Company), to obtain authorisation for such works before their

commencement. Subject to an order, the Operating Company shall check the developer's proposals and authorise works if acceptable.

- 2.1.3 Before authorisation is given to a developer to carry out works within a Trunk Road, the Operating Company shall ensure that any plans and detailed proposals of the works have been submitted in sufficient detail for it to satisfy itself that all terms and conditions relating to the design, construction and temporary traffic management of the works and legislative requirements of the *Disability Discrimination Act 2005* have been complied with to allow it to authorise such works.
- 2.1.4 The Operating Company shall undertake whatever inspections and site supervision are necessary to ensure that:
- (i) the works do not cause unnecessary inconvenience to all categories of road user, including motorists, pedestrians, cyclists, motorcyclists and equestrians,
 - (ii) the work undertaken meets the required standards of design, construction and temporary traffic management, and
 - (iii) the works are constructed in accordance with the planning consent.
- 2.1.5 The Operating Company shall update the network referencing when appropriate in accordance with the requirements of Schedule 4 Part 2.
- 2.1.6 The Operating Company's duties, responsibilities and powers, as referred to in paragraphs 2.1.1 to 2.1.5 of this Part, are contained in the relevant sections of the *Roads (Scotland) Act 1984* and are Statutory Functions delegated to the Operating Company under this Contract.
- 2.1.7 The Operating Company shall advise the Director via the development management function of the Integrated Roads Information System in the event of any failure by a developer to comply with the terms and conditions imposed in relation to its work as referred to in this Part.

2.2 Minute or Letter of Agreement

- 2.2.1 For certain works on a Trunk Road required as a result of a planning application, developers may be required by the Director to enter into a minute or letter of agreement with the Scottish Ministers which specifies conditions relating to approvals and consents for any such work and for adoption of the completed works.
- 2.2.2 Subject to an Order, the Operating Company shall assist the Director in drawing up and administering such minutes or letters of agreement, including providing technical and programming advice on the proposals.

3. TRADING WITHIN THE TRUNK ROAD BOUNDARY

- 3.1.1 During each Annual Period, the Operating Company shall check at intervals not exceeding six months, that anyone trading from a lay-by on a Trunk Road within the Unit, or any other location that is within 15 metres of such Trunk Road, has a permit issued by Transport Scotland granting permission to trade at that location, and that they are abiding by all conditions pertaining to that permission.

- 3.1.2 If the Operating Company finds that a person is trading from a Trunk Road lay-by without the permission of Transport Scotland or that the permission letter is not clearly displayed, the Operating Company shall notify its Planning Application Officer immediately. The Planning Application Officer shall inform the Director within five Working Days of such notification and agree actions to be executed by the Operating Company.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 8 PART 3

ROAD SAFETY AND ACCIDENT INVESTIGATION AND PREVENTION

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 8 PART 3

ROAD SAFETY AND ACCIDENT INVESTIGATION AND PREVENTION

1. GENERAL

1.1 Introduction

- 1.1.1 The Operating Company shall support the Director in delivering the Scottish Government's *Road Safety Framework 2009* which includes Transport Scotland's *Strategic Road Safety Plan 2007*. In undertaking its obligations in relation to this Schedule, the Operating Company shall liaise closely and cooperate with the Director and other stakeholders, including the Police, local authorities, Emergency Services and safety camera partnerships.
- 1.1.2 The Operating Company shall appoint a Road Safety Manager in accordance with the requirements of Schedule 5 Part 4 who shall be responsible for the management of all road safety and accident investigation and prevention matters.

2. ROUTE SAFETY FILES

- 2.1.1 The Director shall provide Route Safety Files to the Operating Company no later than 30 days prior to the Commencement of Service Date. An example of the contents of Route Safety Files is provided at Annex 8.3/A of this Part. The Operating Company shall maintain a Route Safety File for each Trunk Road Route to provide a knowledge base to inform prioritisation of accident investigation and prevention works. The Operating Company shall use Route Safety Files to:

- (i) inform future road safety strategies,
- (ii) enable each Route to be considered against the performance of other Routes, and
- (iii) allow road safety targets to be set for that Route.

The Operating Company shall provide a fully updated file to the Director annually on 15 November.

- 2.1.2 Subject to an Order, the Road Safety Manager shall assist the Director in the continuing development and arrangement of Route Safety Groups to consider the performance of individual Trunk Road routes and encourage:

- (i) increased safety and more innovation,
- (ii) development of joint road safety initiatives nationally and in the local area, and
- (iii) a proactive approach to safety engineering.

The Road Safety Manager shall organise a Route Safety Group meeting in each Annual Period, for each Trunk Road Route, at which the relevant Route Safety File shall be presented to stakeholders for discussion.

3. OPERATING COMPANY'S ANNUAL ROAD SAFETY REVIEW

- 3.1.1 The Director shall provide the Operating Company in June each year with a list of accident cluster sites and higher than average accident rate sections within the Unit

that warrant investigation. The lists will consider accidents in the period 1 January to 31 December in the preceding three years and will include sites or sections investigated or treated previously. The list provided is not exhaustive and the Operating Company shall develop liaison procedures with the Police, local authorities and safety camera partnerships to identify and discuss additional sites or sections that may warrant further investigation.

3.1.2 The Operating Company shall investigate the sites and sections listed and provide an Annual Road Safety Review Report to the Director by 15 August. The report shall detail the reasons for selecting, or not selecting, sites and sections for further investigation and shall highlight where sites and sections have already been treated or were previously considered unsuitable for further investigation or treatment.

3.1.3 The Annual Road Safety Review Report shall develop a programme of road safety initiatives which will deliver:

- (i) safer road design,
- (ii) improved speed management,
- (iii) better provision for vulnerable road users, and
- (iv) reduce the frequency and severity of personal injury accidents,

to contribute to achieving the Scottish Governments' casualty reduction targets and shall consider both accident and risk reduction and may include:

- (v) accident black spot treatment,
- (vi) Route improvements, and
- (vii) Prioritised Mass Action Programmes to address known accident types that have been evidenced through the lists of accidents or identified within the Route Safety Files.

3.1.4 The Annual Road Safety Review Report shall demonstrate how the sites identified for further investigation will support the Scottish Government in delivering the 2020 casualty reduction targets detailed in the Scottish Government's *Road Safety Framework 2009*.

3.1.5 The Annual Road Safety Review Report shall consider the performance of all road safety improvements during the three years after their implementation. This shall include details of before and after accident data (including the 36 month after accident data when it becomes available) and assessments of the relative performance of the different mitigation measures implemented in previous years. This shall include those road safety improvements implemented by the previous operating company.

3.1.6 The Annual Road Safety Review Report shall demonstrate how road safety Schemes from the previous year contribute to the casualty reduction targets set in the Scottish Government's *Road Safety Framework 2009* and detail any innovative measures implemented in the previous year.

3.1.7 Based on the findings of the Annual Road Safety Review Report, the Operating Company shall submit to the Director a draft one year programme of Schemes as described in Schedule 4 Part 1.

4. ACCIDENT INVESTIGATION AND PREVENTION

- 4.1.1 Subject to an Order, the Operating Company shall provide an Accident Investigation and Prevention Report for the Director's consent.

The Operating Company's Accident Investigation and Prevention Report shall set out the findings of the nature and cause of accidents and propose remedial measures to address identified causes of accidents. The proposed measures shall be backed by relevant evidence showing an expected accident reduction factor for that type of mitigation measure. The Operating Company shall also propose risk reduction measures to improve the overall safety performance of the network. Risk reduction measures shall be qualified with evidence to demonstrate value for money.

In the case of a Route, the Operating Company shall develop a Route Accident Reduction Plan in discussion and consultation with all affected parties via relevant Route Safety Groups.

- 4.1.2 The Accident Investigation and Prevention Report shall provide sufficient detail including plans, stick diagrams, tables, additional accident data (the Operating Company shall make arrangements with the appropriate Police forces to gain access to plain text information), accident causation factors, estimated costs, collision reduction factors for mitigation measures and an estimated first year rate of return, in a form which enables the Director to consider and review the proposals.

The Accident investigation and Prevention Report shall be prefaced by a Project Plan, a template for which is provided at Annex 8.3/B of this Part.

The Operating Company shall submit the Accident Investigation and Prevention Report to the Director within 25 Working Days of receipt of the Order, or within such other timescale as specified by the Director within any such Order.

5. DETAIL DESIGN AND CONSTRUCTION OF ROAD SAFETY SCHEMES

- 5.1.1 The Director will consider and review the Accident Investigation and Prevention Report. Should the Director decide to proceed with a Scheme, the Director will:

- (i) issue an Order to the Operating Company to undertake the detailed Design, or,
- (ii) issue an Order to the Operating Company to undertake construction, or
- (iii) require the Operating Company to submit draft one year and three year programmes of Schemes as described in Schedule 4 Part 1.

This is Annex 8.3/A to Schedule 8 Part 3 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 8 PART 3

ROAD SAFETY AND ACCIDENT INVESTIGATION AND PREVENTION

ANNEX 8.3/A – Example Route Safety File Contents

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 8 PART 3

ROAD SAFETY AND ACCIDENT INVESTIGATION AND PREVENTION

ANNEX 8.3/A – Example Route Safety File Contents

Preface

Route information

- Description of route
- Character of road
- Key towns/settlements and junctions
- Type of pedestrians that utilise the road
- Type of road
- Capacity issues
- Location of ATC
- Traffic flow (AADF)
- Traffic flows and composition
- Speed limits and safety camera sites
- Road Condition (SCRIM/deflectograph information)
- Structures
- Bend assessment
- Overtaking provisions
- Lay-by provision
- Junction provision
- Junction density
- EuroRAP Rating
- Inspections
- Environmental issues
- Future developments and land issue changes

Accident analysis

- Accident Frequency
- Accident Data
- Accident Rates
- Comparison against Control Data
- Cluster Sites
- Primary Accident Types
- Accident Trends
- 2010 targets performance review
- Road safety performance

Stakeholder Issues

Contacts

Correspondence (requests and frequently asked questions)

Schemes

Strategic Road Safety

Structural Maintenance

Minor improvements and major Schemes

Lighting schemes

Environmental scheme

Technical Projects and Strategy

Traffic Signs

Road / Rail Interfaces

Speed Limits / Traffic Regulation Orders (TRO's)

Safety Audit History

Initiatives

Demonstration projects

Police enforcement strategy

This is Annex 8.3/B to Schedule 8 Part 3 referred to in the foregoing Agreement between Scottish Ministers and BEAR Scotland Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 8 PART 3

ROAD SAFETY AND ACCIDENT INVESTIGATION AND PREVENTION

ANNEX 8.3/B – Project Plan Template

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 8 PART 3

ROAD SAFETY AND ACCIDENT INVESTIGATION AND PREVENTION

ANNEX 8.3/B – Project Plan Template

STRATEGIC ROAD SAFETY PROJECT PLAN SCHEME				
Scheme ID	Unit	TS Road Safety Officer	Work Type	Scheme Opened
Work Code	TS Area Manger	OC Project Manager	FDD	Date Last Saved
Works Location and Approximate length (Link/Section No's)				
Details of the site (description, carriageway conditions)				
Scheme Type / Accident Frequency / Accident Rate		Monitoring	Year	Accident Frequency
		Before – 3 Years		
		After – Year 1		
		After – Year 2		
		After – Year 3		
		Before Ave' Annual		
		After Ave' Annual		
Pavement Condition				
Identified Accident Causation				
Proposed Mitigation Measures (Excluding Pavement Works)				
Pavement Works				
Economic Analysis				
Annual Accident Saving		First Year Rate of Return		
Financial Monitor				
Investigation	Design	Construction	Scheme	
Estimated:	Estimate	Estimated	Estimated:	
Actual:	Actual:	Actual:	Actual:	
List of attached information				
Agreed Record				
AIP Representative		Signature	Date	
SRS Representative		Signature	Date	

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 8 PART 4

SIGNS REQUIRING AUTHORISATION

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 8 PART 4

SIGNS REQUIRING AUTHORISATION

1. REQUIREMENTS

1.1 General

1.1.1 To ensure a consistent national approach, the authorisation of all signs on the Unit shall be the responsibility of the Director, except where otherwise expressly stated in this Part as being the responsibility of the Operating Company.

The Operating Company shall provide advice and recommendations to the Director on the suitability or otherwise of all signing proposals and applications which are:

- (i) submitted directly to the Operating Company, or
- (ii) referred to the Operating Company by the Director.

Such advice and recommendations shall be provided to the Director within 10 Working Days of the Operating Company's receipt of any such proposals and applications.

1.1.2 The Operating Company shall keep an electronic register of all sign proposals and applications received and shall categorise the entries in the register as being related to:

- (i) tourist signposting,
- (ii) temporary traffic signs to special events, or
- (iii) truckstop signposting.

1.1.3 For each proposal and application the electronic register shall contain, as a minimum, the following information for each entry:

- (i) the applicant and owner,
- (ii) the location of the signs,
- (iii) the decision to consent or reject the application,
- (iv) the terms of the agreement, and
- (v) all relevant dates.

All Records shall be cross-referenced to the register entry.

1.1.4 No later than 20 days before the Commencement of Service Date, the Operating Company shall add to the electronic register all incomplete proposals and applications received from the outgoing operating company. The Operating Company shall progress any incomplete proposals and applications in accordance with the requirements of this Part as if the proposal had been made directly to the Operating Company.

1.1.5 The Operating Company shall, provide the Director and Performance Audit Group with direct, remote access to the electronic register and records referred to in this Part at all times. Each entry in the register shall include the relevant Ordnance Survey grid reference.

1.1.6 The Operating Company shall designate an officer to deal with each proposal and application in the register, including all correspondence associated with each proposal or application.

1.1.7 For the purpose of this Part, references to "VisitScotland" mean Scotland's national tourist board or its successor organisation.

1.2 Tourist Signposting

1.2.1 The Operating Company shall comply with the Director's policy on tourist signposting in Transport Scotland's *Trunk Road and Motorway Tourist Signposting Policy and Guidance*.

1.2.2 The Operating Company shall undertake the duties identified in Transport Scotland's *Trunk Road and Motorway Tourist Signposting Policy and Guidance* and associated documentation, including but not limited, to:

- (i) acting as Home Traffic Authority (as defined in Transport Scotland's *Trunk Road and Motorway Tourist Signposting Policy and Guidance*) where access is direct from a Trunk Road,
- (ii) providing full advice on each application under the following headings:
 - (a) road safety aspects of proposed signing,
 - (b) whether it is practical for additional tourist signing to be provided,
 - (c) sign clutter and environmental impact of proposed signing,
 - (d) size of lettering on the signs and acceptable legend,
 - (e) number and location of signs,
 - (f) integration with the local authority's tourist signposting policy,
 - (g) continuity signing on the local road network,
 - (h) inspection of the tourist operator's credentials in respect of tourist signing applications,
 - (i) confirmation that the tourist operator has accreditation from VisitScotland,
 - (j) inspection of and recording of tourist operator's credentials, and
 - (k) other advice as necessary,
- (iii) considering the relevant local authority's tourist signposting policy when making recommendations to the Director on applications,
- (iv) advising VisitScotland of tourist operators which are given tourist signs (brown or otherwise),
- (v) advising the Director when tourist signs are at the end of their serviceable life and identifying their locations,
- (vi) when notified by VisitScotland, advising the Director of signs which no longer have accreditation from VisitScotland, and
- (vii) the operation of flaps and covers on existing and new signs.

1.2.3 The Operating Company shall implement the process for trunk road and motorway tourist signing applications as set out in Transport Scotland's *Trunk Road and Motorway Tourist Signposting Policy and Guidance*.

1.2.4 When responding to applicants the Operating Company shall use the appropriate model letter, together with the relevant schedule, as set out in Transport Scotland's *Trunk Road and Motorway Tourist Signposting Policy and Guidance*.

The Operating Company shall issue to the Director a copy of the signed letter of agreement duly completed by the applicant.

1.2.5 The Operating Company shall ensure the details of each sign and associated road restraint system shall be identified and recorded in the Integrated Roads Information System.

1.3 Temporary Traffic Signs to Special Events

1.3.1 The Operating Company shall undertake the authorisation of temporary traffic signs to any organised event likely to generate significant traffic flows within the Unit. These include but shall not be limited to:

- (i) sporting events,
- (ii) exhibitions,
- (iii) festivals,
- (iv) concerts, and
- (v) public gatherings,

referred to as "special events".

1.3.2 Where a special event requires a carriageway or road closure, the Operating Company shall follow the procedures referred to in the Specification.

1.3.3 The Operating Company shall notify the Director immediately of the details of each request for authorisation for temporary traffic signs to special events.

1.3.4 When making a decision on authorisation of temporary traffic signs, the Operating Company shall:

- (i) follow the document *Provision of Temporary Traffic Signs to Special Events* issued by the Department of Transport in May 1993, and
- (ii) follow the advice issued by the Director.

1.3.5 A decision on each application shall be given to the applicant within 10 Working Days of receipt of the application, except where expressly agreed otherwise by the Director.

1.3.6 The Operating Company shall ensure that temporary traffic signing shall be erected for a limited period to guide traffic to special events.

1.3.7 The Operating Company shall ensure that temporary traffic signs are removed as soon as practicable after conclusion of the special event to which they relate.

If such signs are not removed by 48 hours after the end of the special event they shall be treated as unauthorised signs in accordance with paragraph 1.4 of this Part.

1.4 Unauthorised Signs

- 1.4.1 The Operating Company shall identify and advise the Director of any unauthorised signs outwith the Unit that may cause a distraction to road users in order for the Director to notify the local planning authority responsible for authorising such signs.
- 1.4.2 The Operating Company shall identify and advise the Director of any unauthorised signs that are placed within the Unit. The Operating Company shall take all reasonable steps to determine the ownership of any such unauthorised signs.
- 1.4.3 Where an unauthorised sign is located within the Unit and the ownership of the sign is known, the Operating Company shall follow the guidance provided by the Director.
- 1.4.4 The Operating Company shall notify the owner in writing:
- (i) of the location of the relevant unauthorised sign,
 - (ii) of a prescribed date, not less than 20 Working Days from the date of notification, by which time the owner is to collect the unauthorised sign, and
 - (iii) that the Operating Company may dispose of the relevant unauthorised sign if it is not collected by the owner by the prescribed date.

Should the unauthorised sign not be collected by the prescribed date stated in the notification, the Operating Company shall remove and dispose of the relevant unauthorised sign and inform the owner in writing.

- 1.4.5 Where ownership of the unauthorised sign cannot be determined, the Operating Company shall remove the sign as soon as practicable to a suitable storage area provided by the Operating Company where it shall be held for 25 Working Days before being disposed of by the Operating Company.

Should the owner identify themselves during the 25 Working Day period following removal of the sign, the Operating Company shall:

- (i) advise the owner of the location where the unauthorised sign can be collected, and
 - (ii) agree a suitable time to allow the owner to collect the unauthorised sign.
- 1.4.6 The Operating Company shall keep Records of all actions and transactions related to the requirements of paragraphs 1.4.1 to 1.4.5 of this Part.

1.5 Election Advertisements on Trunk Roads

- 1.5.1 The placing of election advertisements within the Unit is not permitted. Any registered political party, registered third party or election candidate who approaches the Operating Company seeking authorisation for election advertisements shall be informed of this policy.
- 1.5.2 Should the Operating Company become aware of any election advertisements placed within the Unit, the Operating Company shall:
- (i) immediately remove the election advertisements to a suitable storage area provided by the Operating Company for collection by the owner,
 - (ii) notify the owner in writing that the election advertisements have been removed and the location where they can be collected by a prescribed date, not less than 10 Working Days from the date of the notification, and

- (iii) dispose of any election advertisements not collected by the owner by the prescribed date.

1.5.3 The Operating Company shall keep Records of all actions related to the requirements of paragraphs 1.5.1 and 1.5.2 of this Part.

1.6 Truckstop Signposting

1.6.1 The Operating Company shall adhere to the Director's policy on truckstop facilities signposting as contained within Transport Scotland's *Signposting of Truckstop Facilities from Motorways and Other Trunk Roads – Policy and Guidance*.

1.6.2 The Operating Company shall follow the evaluation process defined within part II of Transport Scotland's *Signposting of Truckstop Facilities from Motorways and Other Trunk Roads - Policy and Guidance*.

1.6.3 The Operating Company shall liaise with local road authority and the applicant as necessary for the implementation of approved signing schemes.

1.6.4 The Operating Company shall provide the Director with the application together with its assessment and report required in accordance with Transport Scotland's *Signposting of Truckstop Facilities from Motorways and other Trunk Roads - Policy and Guidance* and other associated documentation.

1.6.5 The Operating Company shall:

- (i) consider the relevant local authority's signposting policy when making recommendations to the Director on applications,
- (ii) advise the Director when truckstop signs are at the end of their serviceable life and identify their locations, and
- (iii) consult with the Director and following receipt of his consent, remove signs which are agreed not to be required due to the truckstop facility no longer being in operation or as a result of a failure on the part of the truckstop facility provider to comply with its agreement with Transport Scotland.

1.6.6 The Operating Company shall ensure the details of each sign and associated road restraint system are identified and recorded in the Integrated Roads Information System.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 9 PART 1

SPECIFICATION FOR OPERATIONS (1)

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 9 PART 1

SPECIFICATION FOR OPERATIONS

PREAMBLE TO THE SPECIFICATION

1. The Specification for Operations shall be the Specification for Highway Works, published by The Stationery Office (formerly HMSO) as Volume 1 of the Manual of Contract Documents for Highway Works, as modified and extended by the following:
 - (i) Appendix 0/1: Contract-specific Additional, Substitute and Cancelled Clauses, Tables and Figures,
 - (ii) Appendix 0/2: Contract-specific minor alterations to existing Clauses, Tables and Figures,
 - (iii) the Numbered Appendices listed in Appendix 0/3,
 - (iv) Appendix 0/5: Special national alterations of the Overseeing Organisation of Scotland, Wales or Northern Ireland.

Appendix 0/4 contains a list of the drawings.
2. The relevant publication date of each page of the Specification for Highway Works is given in the Schedule of Pages and Relevant Publication Dates.
3. An Additional clause as indicated by a suffix 'A' in Appendix 0/5 is an alteration originating from the Overseeing Organisation of Scotland, Wales or Northern Ireland. An Additional clause as indicated by a suffix 'AR' in Appendix 0/1 is a Contract-specific alteration.
4. A Substitute clause as indicated by a suffix 'S' in Appendix 0/5 is an alteration originating from the Overseeing Organisation of Scotland, Wales or Northern Ireland. A Substitute clause as indicated by a suffix 'SR' in Appendix 0/1 is a Contract-specific alteration.
5. A Cancelled clause as indicated by a suffix 'C' in Appendix 0/5 is an alteration originating from the Overseeing Organisation of Scotland, Wales or Northern Ireland. A Cancelled clause indicated by a suffix 'CR' in Appendix 0/1 is a Contract-specific alteration.
6. Insofar as any of the Numbered Appendices may conflict or be inconsistent with any provision of the Specification for Highway Works the Numbered Appendices shall always prevail. Additionally, Numbered Appendices 0/1 and 0/2 shall take precedence over Numbered Appendix 0/5.
7. Any reference in this Contract to a clause number or Appendix shall be deemed to refer to the corresponding Substitute clause number or Appendix listed in Appendix 0/1, 0/2 or 0/5.
8. Where a clause is altered any original Table/Figure referred to in the clause shall apply unless the Table/Figure is also altered. Where a Table/Figure is altered any reference in a clause to the original Table/Figure shall apply to the altered Table/Figure.

9. Where a clause in the Specification relates to work goods or materials which are not required for the Operations it shall be deemed not to apply.
10. Any Appendix referred to in the Specification which is not used shall be deemed not to apply.
11. Where a clause in the Specification is prefixed by an # this indicates that this particular clause has a substitute National Alteration for one or more of the Overseeing Departments of Scotland, Wales or Northern Ireland. Substitute or additional National clauses shall be used within countries to which they specifically apply and they are deemed to replace corresponding clauses in the main text of the Specification as appropriate. The substitute National clauses are located at the end of the relevant Series together with the additional National clauses of the Overseeing Organisations.
12. Subject to the provisions of paragraph 13 below and other Parts of the Scottish Ministers' Requirements, the roles and functions of the Overseeing Organisation shall be undertaken by the Director or, if waived by the Director, the Operating Company.
13. Where the Specification provides for the Overseeing Organisation to require a test, waive the requirement for a test or alter testing frequency, the Operating Company shall exercise such decisions in accordance with the Scottish Ministers' Requirements stated in this Contract.
14. In this Specification any reference to the Contractor shall be deemed to be a reference to the Operating Company unless otherwise stated.

SPECIFICATION FOR HIGHWAY WORKS

Schedule of Pages and Relevant Publication Dates

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000	3F	May 2005
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100	10, N5 to N6F	Nov 2008
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400	1 to 6, 8, 10 to 13F	November 2007
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500	20, 23 ,24 ,26	November 2004
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500	1, 13, 16 to 19, 21	November 2005
500	3, 12, 22, N1F	May 2006
500	2, 4, 5, 15, 27	November 2006
500	6 to 11, 25	November 2007
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600	2, 27 to 32, 34 to 36, N1	November 2005
600	1, 5 to 26, S1, S3F	November 2006
600	3, 4, 42 to 49, 51 to 68F, S2, N2, N3 and N4F	November 2007
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700	1, 10, 12 to 15, 17 to 25, 27 to 34F	November 2007

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700	4, 16, 26, N2	August 2008
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800	7	May 2004
800	4 to 6, 8	November 2004
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900	2 to 5, 9 to 22, 24 to 26, 28 to 67F	August 2008
900	1, 6 to 8, S1F	November 2008
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1200	6 to 7, N1 to N4F	November 2007
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1300	N2F	November 2003
1300	3, 4	November 2004
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1300	2, 11, N1	May 2006
1400	2, N1F	May 2001
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1700	1, 16 to 21, 22F	May 2006
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1800	2 to 3, 5, 7, 10 to 12F	November 2005
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Appendix G	1F	May 2004
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Appendix H	3	November 2006
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APPENDIX 0/1 – CONTRACT-SPECIFIC ADDITIONAL, SUBSTITUTE AND CANCELLED CLAUSES TABLES AND FIGURES INCLUDED IN THIS CONTRACT

List of Additional Clauses, Tables and Figures

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171AR	Not used	N/A
172AR	Not used	N/A
173AR	Not used	N/A
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Additional Clauses and Tables

Clause No.		Title and Written Text
070AR		Disability Discrimination Act
	1	The Operating Company shall follow the guidance given in the <i>Disability Discrimination Act: Good Practice Guide for Roads (September 2009)</i> in all Operations.
	2	Where the guidance given in the <i>Disability Discrimination Act: Good Practice Guide for Roads (September 2009)</i> conflicts with the <i>Specification for Highway Works</i> , the "good practice guide" shall take precedence.
	3	Compliance with the <i>Good Practice Guide for Roads (September 2009)</i> shall not absolve the Operating Company from any liability under the <i>Disability Discrimination Act</i> .
170AR		Licences Servitudes Wayleaves and Rights of Access
	1	The Operating Company shall gain access to boundary fences and adjacent areas from the Unit.
	2	If, in the opinion of the Operating Company, access from the Unit is impractical then the Operating Company shall notify the Overseeing Organisation of any licences, servitudes, wayleaves or rights of access that are needed to enable the work to be undertaken.
	3	The Operating Company shall not, under any circumstances, gain access across private land without the written permission of the Overseeing Organisation.
171AR		Not used
172R		Not used
173AR		Not used
174AR		Not used
175AR		Operating Company Vehicle
		The Operating Company fleet vehicles used on the Trunk Road Network shall comply with the livery requirements given in Appendix 1/75. As required by clause 4.1.3 of Schedule 1, during each Winter Service Period, all vehicles actively involved in maintenance and management Operations shall be fitted with winter tyres on all wheels. Winter tyres are tyres marketed as such which are designed for enhanced traction and grip at low temperatures.
176AR		Incident Support Unit and Trunk Road Incident Support Service Operatives Uniforms
		Each of the Operating Company's Incident Support Unit and Trunk Road Incident Support Service operatives shall wear the appropriate Incident Support Unit and Trunk Road Incident Support Service operatives' uniform when engaged in Incident Support Unit and Trunk Road Incident Support Service Operations on the Unit. The uniform requirements are given in Appendix 1/76.
370AR		Repairs to and Renewal of Existing Fencing
	1	Repairs to and renewal of existing fences shall comply with the relevant clauses in this Series.

Clause No.		Title and Written Text
	2	Repairs to and renewals of existing fences shall match the existing material and dimensions as far as is practicable.
371AR		Snow Fences
	1	Snow fences shall be in accordance with the recommendations set out in Transport and Road Research Laboratory Report LR 362 "Snow Fences" by L E Hogbin dated January 1970 and shall comply with the quality management schemes detailed in Appendix A.
470AR		Repairs to Safety Barriers
	1	Repairs to safety barrier systems shall comply with the requirements of BS 7669-3 and BS EN 1317-1.
	2	Repairs of safety barrier systems shall be carried out in accordance with TD 19/06 and the manufacturers' latest drawings and instructions.
	3	All accident damage repairs shall be carried out using the same type of safety barrier system as currently exists at the location. The type of post used shall depend on the results from examination of post foundations and, where necessary, loading tests being carried out by the Operating Company in accordance with Annex B of BS 7669-3.
471AR		Repairs to Existing Pedestrian Guardrail
	1	Repairs to existing pedestrian guardrail will generally be the taking down of parts or sections of existing guardrail and the erection in their place of new parts or sections following accident damage or long term deterioration of the guardrail.
	2	When existing posts and concrete footings are removed and new posts and concrete footings are installed in the same location, any remaining voids shall be filled with concrete and the surrounding surface reinstated to match the existing. Concrete shall be mix ST1.
	3	Existing bolts nuts and washers shall not be reused.
	4	Repairs to pedestrian guardrails shall be carried out using panels and posts which match the original installation as closely as possible.
	5	Repaired and renewed pedestrian guardrail shall comply with clause 411.
	6	The Operating Company shall remove damaged sections of guardrail and close the resulting opening using suitable temporary guardrail.
	7	The Operating Company shall make permanent repairs using panels to match existing.
	8	Permanent repairs shall be carried out in accordance with the requirements of Schedule 7 Part 1 Paragraph 2.2 and, in any case, no later than 28 days after the removal of the damaged sections.
472AR		Re-Tensioning Of Safety Barriers
		Tensioned Corrugated Beam Safety Barrier
	1	Tensioned Corrugated Beam Safety Barrier shall be re-tensioned in accordance with BS 7669: Part 3, Section 2.
	2	Tensioning between any two limits shall not proceed until each limit is anchored sufficiently securely to resist the load effects due to tensioning.

Clause No.	Title and Written Text
3	Tensioning shall be undertaken only when the ambient temperature is between 25°C and -5°C.
4	Tensioning assemblies should be located not more than 70.5 metres apart and each installation should incorporate at least one adjuster assembly. If the inspection prior to re-tensioning indicates that additional tensioning assemblies are required, these shall be supplied and fitted by the Operating Company as part of the re-tensioning operation.
5	On completion of tensioning, the centre of each screw securing beams to posts shall not be closer than 25 mm ±2 mm to the end of the slotted hole in the beam.
	Wire Rope Safety Barrier
6	Wire Rope Safety Barrier shall be re-tensioned in accordance with BS 7669: Part 3, Section 2.5.
7	Tensioning between any two limits shall not proceed until each limit is anchored sufficiently securely to resist the load effects due to tensioning.
8	Tensioning shall be undertaken only when the ambient temperature is between 30°C and -10°C.
9	The ambient temperature shall be recorded by the Operating Company.
	Tensioned Rectangular Hollow Section Beam Safety Barrier
10	Assembly and tensioning shall be carried out in accordance with BS 7669: Part 3, Section 2.4.
11	Tensioning between any two limits shall not proceed until each limit is anchored sufficiently securely to resist the load effects due to tensioning.
12	Tensioning shall be undertaken only when the ambient temperature is between 10°C and 20°C.
13	Tensioning assemblies shall be located not more than 70.5 m apart and each installation shall incorporate at least one tensioning assembly. If the inspection prior to re-tensioning indicates that additional tensioning assemblies are required, these shall be supplied and fitted by the Operating Company as part of the re-tensioning operation.
473AR	Painting of Pedestrian Guardrails and Handrails
1	Painting of Pedestrian Guardrails and Handrails shall be carried out in accordance with Series 5000 – Maintenance Painting of Steelwork, including clause 5007SE Paint and Similar Protective Coatings as contained in the Manual of Contract Documents for Highway Works.
2	All primed surfaces shall be painted with one coat of undercoating of the colour appropriate to the colour of finishing coat.
3	Two finishing coats shall be applied.
570AR	Rodding Eyes
1	Rodding eyes shall be either a Type 1 single or Type 2 double arrangement.
2	Rodding eyes shall not be used for pipe diameters in excess of 225mm.
3	The connecting pipe shall be laid at an angle of 45° to the horizontal.

Clause No.		Title and Written Text
	4	The connecting pipes shall be surrounded with 150mm concrete mix ST2 for the full depth of the connection and extending 150mm beyond the connection with the main drain.
	5	Covers and frames shall comply with the loading category of BS EN124 as stated in Appendix 5/1 with a clear opening of 150mm or 225mm.
	6	Covers and frames shall be bedded and haunched with mortar to clause 2404 mix designation (ii) and set flush with the surface.
	7	Bedding mortar shall be a maximum of 25mm thick and placed directly on the concrete surround.
		571AR Renewal of Filter Drain Material
	1	Filter drain material shall be renewed by replacing the filter media with Type B material in accordance with Table 5/5 of clause 505.
	2	The depth of the existing material to be removed from within the trench shall be the depth to invert level of the pipe or the depth to the level of the underside of siltation if this is higher than invert level of the pipe. This depth shall be determined in advance of excavation and replacement operations by the excavation of trial pits.
	3	The width of the existing material within the trench to be removed shall be that of the existing drain filter material at the invert level of the pipe or at the level of the underside of siltation if this is higher than invert level of the pipe. This width shall be determined in advance of excavation and replacement operations by the excavation of trial pits.
	4	The trench shall be back-filled up to ground level or where the filter material is to be covered with red chippings to the underside of the red chippings with Type B material in accordance with Table 5/5 of clause 505.
	5	If required, any geotextile membrane present shall be replaced with new material equivalent to that removed.
	6	Where the filter drain is to be completely renewed, it shall be constructed in accordance with Highway Construction Detail drawing Number F2 with Type B material.
	7	Where the existing filter drain material is recycled it shall be tested in accordance with clause 710.
		572AR Closed Circuit Television Surveys
		Definition
	1	For the purposes of this clause, "drain" shall be deemed to include sewers, drains, filter drains, ducts, piped grips, combined drainage and kerb systems and linear drainage channel systems.
		Extent of Survey and Method to be Used
	2	Wherever instructed or ordered to do so, the drains shall be inspected by closed circuit television, all in accordance with Series 9000, MCHW 5.9, Parts 1-5, so that all cracks, blemishes, encrustations, open joints, silt, debris, collapsed sections, roots, vermin and alignment can be observed.
	3	Television cameras shall be drawn by cables and winches self-propelled tractor driven or fixed to rods.
	4	Where the survey of a drain length is stopped by a blockage in the drain, the

Clause No.	Title and Written Text
	drain shall be surveyed in the opposite direction on the other side of the blockage.
	Records
5	<p>The Operating Company shall provide a record on Digital Versatile Disc (DVD) of all drain lengths showing a continuous record of data displayed automatically on the monitor screen containing the following information:</p> <ul style="list-style-type: none"> (i) automatic update of the camera's metreage position in the drain line, (ii) date of survey, (iii) direction of survey, (iv) pipe dimensions, and (v) length/location reference.
6	The DVD recordings shall become the property of the Scottish Ministers.
	Photographs
7	<ul style="list-style-type: none"> (i) Photographs shall be taken of Defects and samples of average condition. (ii) Where colour in-line photography is used, photographs shall be taken at intervals not exceeding 5 metres. (iii) Durable half plate prints shall be provided. (iv) The photographs shall be identified in relation to the metreage of the place taken and shall show clear definition and accurately reflect what is shown on the monitor. (v) The speed of the camera in the drain shall be limited to: 0.10 m/s for drains of diameter less than 200mm, 0.15 m/s for diameters exceeding 200mm but not exceeding 300mm, and 0.20 m/s for those exceeding 300mm.
	Reports
8	<ul style="list-style-type: none"> (i) All reports shall be presented to the Overseeing Organisation in accordance with the format laid down in the Manual of Sewer Condition Classification – 4th Edition, published by the Water Research Council. (ii) Each chamber shall be recorded on a separate sheet except for buried chambers which may be included within a length. (iii) Photographs shall be mounted and shall follow the relevant page of the report. (iv) All dimensions shall be in metric units. (v) The report shall include the depth measured from cover level to invert for every drain in each chamber. (vi) All dimensions shall be in metric units. (vii) The report shall include the depth measured from cover level to invert for every drain in each chamber. (viii) One copy of the report shall be provided within 14 days of completion of each survey or if required by the Overseeing Organisation each section of the survey.

Clause No.		Title and Written Text								
670AR		Siding Out								
	1	Siding out shall be carried out at the edges of carriageways, footways and paved areas but may be extended to more general areas for the breaking up and removal of excessive or hardened dirt or weeds or any other undesirable material on the carriageway, footway or paved surface.								
	3	Footways shall be sided out up to and including any existing footway edging or to a specified width of line.								
	4	Where the sided out edges do not exceed a height of 75mm above the existing footway surface they may be trimmed with a vertical face.								
	5	Where they exceed a height of 75mm above the existing paved surface they shall be trimmed to an approximately 45 degree battered face.								
770AR		Not used								
771AR		Concrete Pavements Repair Systems								
	1	Repair materials to be used on the Trunk Road Network for the repair of concrete pavements shall be approved in the Specification for Highway Works, Volume 0 Section 3, Part 1 SA 1/08, Annex C, Type Approval for Pavement Materials.								
	2	The materials shall be used in accordance with the manufacturer's written instructions and certification procedures.								
970AR		Not used								
971AR		Stone Mastic Asphalt (SMA) Surface Course								
		General								
	1	Stone mastic asphalt shall comply with the general requirements of Series 700 and 900 and the specific requirements of sub-clauses 2 to 39 of this clause.								
	2	Stone mastic asphalt shall be produced in mixing plants (that shall be registered to the BS EN ISO 9001) using 'Sector Scheme for the Production of Asphalt Mixes', described in Appendix A.								
	3	The Design for SMA to clause 971AR shall be to the general requirements of clause 942 and shall specifically comply with the requirements for wheel tracking and sensitivity to water. The Operating Company shall declare target aggregate gradings and binder contents prior to commencement of the Operations.								
	4	The nominal installation depths shall be classified into three categories as given in Table 9/70.								
		TABLE 9/70 – Nominal Installation Depth Classifications								
		<table border="1"> <thead> <tr> <th>Type</th> <th>Type A</th> <th>Type B</th> <th>Type C</th> </tr> </thead> <tbody> <tr> <td>Nominal installation depth (mm)</td> <td><18</td> <td>18 to 25</td> <td>>25</td> </tr> </tbody> </table>	Type	Type A	Type B	Type C	Nominal installation depth (mm)	<18	18 to 25	>25
Type	Type A	Type B	Type C							
Nominal installation depth (mm)	<18	18 to 25	>25							
		Aggregates								
	5	Coarse aggregate shall be crushed rock or crushed slag complying with clause 901.								
	6	The shape of the coarse aggregate shall comply with a maximum flakiness index of Category F125 as defined in BS EN 13043, clause 4.1.6.								

Clause No.		Title and Written Text
7		Fine aggregate shall comply with clause 901 and shall comprise crushed fine aggregate derived from, rock, slag or gravel, which may be blended with not more than 50% of natural sand.
8		<p>The resistance to polishing of the coarse aggregate shall have a minimum declared PSV category specified in Appendix 7/1 in accordance with BS EN 13043, clause 4.2.3.</p> <p>The resistance to abrasion of coarse aggregate shall have a maximum AAV specified in Appendix 7/1 in accordance with BS EN 13043, clause 4.2.</p>
		Filler
9		Added filler aggregate shall be hydrated lime, crushed limestone or Portland Cement, in accordance with the requirements of BS 594-1 and shall be not less than 2% by mass of total aggregate.
		Binder
10		Bitumen shall comply with BS EN 12591 or BS 3690-3 and shall be produced in plants (that shall be registered to BS EN ISO 9001) using 'Sector Scheme for the Supply of Paving Grade Binders', described in Appendix A.
11		The binder shall not be harder than penetration reference 50 (paving grade 40/60).
12		If the deformation resistance requirement in sub-clause 18 of this clause shall not be required, then the binder penetration reference shall be as specified in Appendix 7/1.
		Binder Modifiers
13		<p>Binder modifiers pre-blended with bitumen or binder modifiers, including natural or man-made fibres, which are added or blended with base bitumen, complying with BS EN 12591, of the stated penetration range at the mixing plant, shall have a British Board of Agreement HAPAS Roads and Bridges Certificate.</p> <p>In the event that no such certificates have been issued, binder modifiers, pre-blended modified binders or additives shall not be used without the prior written approval of the Overseeing Organisation.</p>
14		In the event that no British Board of Agreement HAPAS Roads and Bridges Certificates have been issued, the Operating Company shall provide with its Design a data sheet giving details of the properties of the modified binders or additives proposed including those referred to in Appendix 7/1.
		The Operating Company shall provide the rheological product identification data for pre-blended modified binders in accordance with clause 928.
		Mixture
15		The binder drainage of the loose mixture at the target composition at a temperature of 175°C in accordance with Draft for Development (DD) 232: 1996 shall not be more than 0.3% by total mass of mixture.
16		The agreed binder content for the mixture shall be the target binder content \pm 0.6%.
		Job Mixture Approval
17		Details of the design for the proposed mixture from each asphalt mixing plant shall be submitted to the Overseeing Organisation.

Clause No.	Title and Written Text
	<p>The information may be obtained from either a job mixture trial or from the use of the mixture on a previous contract carried out in accordance with this clause, and shall include all the following particulars:</p> <ul style="list-style-type: none"> (i) bitumen penetration reference, (ii) quantities of binder and aggregate, (iii) aggregate source and grading, (iv) proprietary name and generic type of binder modifier, (v) quantity of any binder modifier, including natural or man-made fibres added at the mixer, and (vi) modified binder and mixture data requirements specified in Appendix 7/1.
18	<p>If a modified binder, including any proportion of the modifier, is not fully recovered on analysis for determination of binder content, details of alterations to the test method or the correction necessary to the results, together with supporting data, shall be submitted to the Overseeing Organisation with the design of the proposed mixture for written consent prior to the use of the binder.</p>
19	<p>The mixture shall be submitted to the Overseeing Organisation who shall then approve it in writing as the Job Standard Mixture, provided that:</p> <ul style="list-style-type: none"> (i) the design of the mixture proposed complies with sub-clauses 1 and 3 of this clause, (ii) information has been submitted in accordance with sub-clauses 9 and 10 of this clause, (iii) information submitted in accordance with sub-clause 17 of this clause has been approved in writing by the Overseeing Organisation.
20	<p>If the design for the mixture or constituent materials of a Job Standard Mixture is changed by the Operating Company, details of the revised mixture shall be submitted for written approval in accordance with sub-clause 17 of this clause.</p>
21	<p>Job Mixture trials may be carried out on or off the Site, however material laid for a Job Mixture trial on Site which complies with this Specification may form part of the binder/regulating course in the Permanent Works.</p> <p>If carried out off the Site, trials may be arranged independently or in conjunction with other works.</p>
	<p>Mixing</p>
22	<p>Unless otherwise specified by the supplier of the modified binder, stone mastic asphalt shall be mixed at a temperature in accordance with the requirements of BS 4987-1:2005 for the penetration reference of the bitumen.</p> <p>This shall be done in such manner that a homogeneous mixture of aggregate, filler, bitumen and additive is produced.</p> <p>At the time of mixing the coarse aggregate shall be in a surface dry condition.</p>

Clause No.	Title and Written Text
	Transportation
23	The transportation of Stone Mastic Asphalt shall be in accordance with BS 594987.
	Permanent Works
24	When specified in Appendix 7/1, sampling and testing shall be carried out to establish compliance of material laid in the Permanent Works.
	Sampling from the Laid Material
25	Samples of uncompacted material shall be taken from the paver as near to where the cores shall be taken as is practicable, in accordance with BS EN 12697 Part 27:2001 and BS EN 12697 Part 28:2001.
26	<p>Six 200 mm diameter cores shall be cut, where practical from the centre of the lane, out of material from each mixing plant:</p> <ul style="list-style-type: none"> (i) from material laid specially in a Job Mixture Approval Trial, (ii) from the first 1 km length of stone mastic asphalt from a mixing plant laid in the Permanent Works, or (iii) within three days of laying stone mastic asphalt from a mixing plant in the Permanent Works, where less than 1 km length has been laid whichever occurs first.
27	<p>The 200 mm diameter cores shall be cut within three days of laying the material unless they have been cut under the requirements of sub-clause 26 of this clause.</p> <p>The cores shall be transported as soon as possible to the laboratory.</p> <p>If the storage period is less than four days, the storage temperature shall be within the range 0°C to 25°C.</p> <p>For storage beyond four days, the temperature shall be within the range 0°C to 5°C. Cores shall be stored on a flat face on a horizontal surface, and shall not be stacked.</p> <p>Site storage of cores where unavoidable and conditions of transportation shall be as close as is practicable to the laboratory conditions.</p> <p>The storage temperature and times, including whilst cores are on Site, shall be recorded.</p>
28	<p>Three pairs of 150 mm diameter cores shall be cut at the same metrages as the 200 mm diameter core.</p> <p>One core of each pair shall be taken from the centre of the lane adjacent to the 200 mm diameter core and one whose centre shall be between 500 mm and 1000 mm from the edge of the mat.</p>
29	<p>Cores shall be taken after the stone mastic asphalt has cooled to ambient temperature and not less than 12 hours after laying and before trafficking unless otherwise specified in Appendix 7/1.</p> <p>The walls and base of all holes from which core samples shall have been cut shall be painted with hot bitumen or cold applied polymer modified intermediate or premium grade bitumen emulsion containing normally 60% binder immediately prior to making good.</p>

Clause No.	Title and Written Text
	<p>Core holes shall be backfilled with materials compacted to refusal with a circular headed vibrating hammer in layers not exceeding 75 mm thick.</p> <p>Hot base material shall be similar to existing pavement.</p>
30	<p>In the Permanent Works, after the first 6 cores have been recovered and where the required thickness of the material exceeds 25 mm, for material from each mixing plant, not less than one pair of 200 mm diameter cores shall be cut from the centre of the lane every 1 lane kilometre laid. Where the day's production is less than 1 lane kilometre, not less than one pair of 200 mm diameter cores shall be cut from the centre of the lane.</p>
	<p>Tests and Calculations</p>
31	<p>For each un-compacted sample, the compositional analysis shall be carried out in accordance with BS EN 12697 corrected by any correction factor approved under sub-clause 16 of this clause.</p>
32	<p>Each six consecutive 200 mm diameter cores of material from the same mixing plant shall form a set of cores on a running basis.</p>
	<p>For each set, the wheel-tracking rate and rut depth shall be determined in accordance with the procedure in BS 598-110:1998 at the test temperature specified in Appendix 7/1.</p>
33	<p>For each 150 mm diameter core the bulk density shall be determined in accordance with the procedure in BS EN 12697-6:2003.</p> <p>The bulk density at a chainage shall be the mean from the two cores taken at a chainage.</p> <p>Subsequent to determining the bulk density, the maximum density shall be determined from the pair of the cores in accordance with BS EN 12697-5:2002.</p>
34	<p>The air void content of each pair of 150 mm diameter cores shall be calculated to $\pm 0.1\%$ as follows: $100\% \times$):</p> $\text{Air voids content} = (1 - \frac{\rho}{\rho \text{ Max}}) \times 100 \%$ <p>where: ρ shall be the bulk density in accordance with BS EN 12697-6 (Mg/m³),</p> <p>and $\rho \text{ Max}$ shall be the maximum density in accordance with BS EN 12697-5 (Mg/m³).</p>
	<p>Compliance Requirements</p>
35	<p>When determined in accordance with BS EN 12697-1 and BS EN 12697-2 the compositional analysis shall demonstrate compliance with following:</p> <ul style="list-style-type: none"> (i) the binder content on analysis shall not differ from the target binder content declared by the Operating Company by more than $\pm 0.6\%$, and (ii) the aggregate grading shall not differ from that declared by the Operating Company.
36	<p>Deformation resistance shall be determined in accordance with the requirements of clause 952 and the deformation values specified in Appendix 7/1.</p>

Clause No.		Title and Written Text
	37	<p>The air voids content shall be not more than 6% for a pair of cores at a chainage and shall be not more than 4% for the mean of any six consecutive determinations from pairs of cores from material from the same mixing plant.</p> <p>When the Stone Mastic Asphalt is being used as a regulating course at thicknesses below 30 mm, the appropriate limiting void contents shall be 8% and 6% respectively.</p>
		Reporting Results
	38	<p>Where it is specified in Appendix 1/5 that the Operating Company is responsible for testing, the individual determinations including location of samples and results from all tests, shall be given to the Overseeing Organisation in writing within two weeks of the material having been laid.</p>
		Surface Preparation
	39	<p>Existing surfaces shall be prepared in accordance with the requirements of BS 594987:2007 and Series 700 clauses.</p> <p>Bond coats and tack coats shall be in accordance with clause 920 except that where the thickness of the stone mastic asphalt is less than 20 mm, only polymer modified bond coats shall be used.</p>
		Laying
	40	<p>Unless required otherwise in Appendix 7/1, stone mastic asphalt shall be laid and compacted in accordance with the requirements of clause 901, to the thickness stated in Appendix 7/1.</p>
		Weather Conditions
	41	<p>The weather conditions specified in clause 945 shall not apply to stone mastic asphalt laid in accordance with this clause.</p>
	42	<p>The manufacturer's recommendations for the use of modified binders in various weather conditions for laying and compaction temperatures of the modified stone mastic asphalt shall be submitted to the Overseeing Organisation with details of the modified binder required under sub-clause 9 of this clause and shall include information on early trafficking particularly in hot weather.</p>
		Temporary Trafficking
	43	<p>The Operating Company shall ensure that the pavement material has adequately cooled and hardened in accordance with clause 903, before it is subjected to temporary traffic.</p>
	44	<p>The material shall not be trafficked if its surface temperature exceeds 25°C unless the maximum temperature within the mat has fallen below 35°C.</p>
972AR		Grip Testing
		General Requirements
	1	<p>The surface course skid resistance shall be measured using the Grip Tester braked –wheel fixed-slip device in accordance with BS 7941-2:2000, or equivalent devices possessing appropriate validation shall conform with Table 2.4 Minimum Grip Number of clause 974AR.</p> <p>All surface course materials laid in accordance with clause 974AR shall have Skid Resistance carried out with a Grip Tester in accordance with the requirements for testing using the Grip Tester given in clause 974AR.</p>

Clause No.	Title and Written Text
	Where Proprietary SMA surface courses to Series 900 clause 942 or clause 971AR material are laid in areas of greater than 2000m ² the surface course material shall also be tested using the Grip Tester at four weeks and six months (clause 974AR Table 2.4) for the appropriate site class. The results shall be forwarded to the Overseeing Organisation within seven days of the Grip Test being completed for monitoring purposes.
	Survey Procedure
2	Prior to any testing of the surface course commencing a full calibration check shall be carried out at the nominated reference site at the start of each testing day.
3	All testing sites shall be pre-surveyed by the Operating Company to ensure that start and end points can be identified. These points shall be marked by the Operating Company.
4	Where a site contains multiple lanes, only the near side lane or nearest side lane, excluding the hard shoulder, shall be tested.
5	Each section shall be tested twice with the Grip Tester. If the section average values of these first two tests are within 0.02, then the first run shall be reported as the survey result.
6	After each survey both speed and water flow shall be checked and if out with tolerance for 75% of the section the run shall be repeated. If speed tolerance is out of tolerance due to congestion or other factors occurred on the section, the site shall be revisited when a compliant run can be carried out. Tolerance for speed shall +/- 10% and tolerance for water flow shall be +/- 20%.
7	GPS data shall be recorded and referenced to the Overseeing Organisation IRIS referencing system. GPS data shall have accuracy better than 5m and shall be collected with a minimum update of 0.1 seconds.
	Reporting
8	The Operating Company shall submit to the Overseeing Organisation a printed report in addition to test data provided in an electronic format. Copies of calibration certificates, ongoing calibration results /checks and reference site checks shall be included within this report which shall be forwarded to the Overseeing Organisation within seven days of the Grip Test being completed.
9	<p>The report shall include test data in the following formats:</p> <ul style="list-style-type: none"> (i) Tabular data showing the section average of all valid runs for the survey with the 1st valid run being indicated as the test result. (ii) A colour coded map in the format shown in Figure 2.3. (iii) A graphical output as shown in Figure 2.4.
10	The Operating Company shall submit monthly reports of all test results including details of the location along with the findings to the Overseeing Organisation.
11	Data shall be reported in a format compatible with IRIS, preferably CSV files.

Clause No.	Title and Written Text
	Longer-Term Skid Resistance
12	After two years trafficking and within the SCRIM testing season, skid resistance will be measured by Transport Scotland (via SCRIM) in accordance with HD 28/04 (DMRB 7.3.1).
973AR	Grip Tester
	General
1	Transport Scotland will provide the Grip Tester and, except where otherwise specified, the Operating Company shall maintain and operate it.
2	The Grip Tester will be handed over to the Operating Company by the Commencement of Service Date.
3	The Operating Company shall store the Grip Tester undercover in a secure location.
	Maintenance
4	The operating Company shall maintain the Grip Tester in accordance with the "GripTester MK2 D-TYPE Maintenance Manual", except where otherwise specified.
5	Maintenance referred to in clauses 2.3 (Annual Maintenance) and 2.4 (Calibration) of "Grip Tester MK2 D-TYPE Maintenance Manual" are the responsibility of the supplier and will be paid for by Transport Scotland. The Operating Company shall arrange for this maintenance and delivery and return of the Grip Tester to the supplier.
6	In addition to the requirements of "Grip Tester MK2 D-TYPE Maintenance Manual" the Operating Company shall ensure that the Grip Tester is regularly maintained in a clean and presentable condition ensuring required functionality at all times.
7	The Operating Company shall be responsible for any loss or damage and effecting such additional insurance as may be necessary to cover the risk of such loss or damage from any cause.
	Vehicle
8	The Operating Company shall supply an appropriate vehicle which may be dedicated or multi purpose. The vehicle will be fitted out by the Grip Tester supplier at the expense of Transport Scotland during the Mobilisation Period not later than 30 days prior to the Commencement of Service Date. The Operating Company shall arrange for this fitting out and delivery and return of the vehicle to and from the supplier.
	Staff
9	A minimum of two operatives is required to operate the apparatus, a driver and a Grip Tester operator. The Grip Tester operator shall be appropriately experienced and qualified.
10	Initial training by the supplier of the operatives, and Skid Resistance Manager in terms of operation, maintenance and software use will be arranged at the start of the Mobilisation Period and at the expense of Transport Scotland. Any additional training shall be provided at the expense of the Operating Company.

Clause No.		Title and Written Text
		Operations
11		<p>An annual certification process shall be undertaken for each Grip Tester to be used on the Network. The procedure shall be carried out in accordance with to ASTM E1844 test procedures where network machines are verified against a reference machine. The testing procedure must produce a check that machines are within a +/- 0.02GN tolerance of each other.</p> <p>An additional certification check shall be carried out monthly to ensure that machines continue to read within specification.</p>
12		<p>In addition to pre-survey checks as per section 2.1 of the "Grip Tester MK2 D-TYPE Maintenance Manual", the checks shall be conducted in accordance with clause 974AR, except where otherwise specified.</p>
13		<p>The calibration check is not necessarily required where use relates to the rapid deployment of the Grip Tester to spillage sites. In these instances a simple relative measurement can be obtained to reveal the differential at the spill site by taking measurements either side of the spillage area.</p>
14		<p>The Operating Company shall provide a written procedure for the calibration of the Grip Tester prior to any survey. The procedure will be reviewed and approved by the Overseeing Organisation.</p>
		Apparatus
15		<p>The Operating Company shall provide one laptop along with the appropriate software to operate the apparatus in accordance with the Roadbase Grip Tester Survey Software for Roads User Manual.</p>
16		<p>The supplier will provide three user manuals: Grip Tester Maintenance Manual, Roadbase Grip Tester Survey Manual, and the Grip Tester Automatic Watering System Operations Manual.</p>
974AR		TS2010 Stone Mastic Asphalt (SMA) Surface Course
		General
1		<p>The TS2010 stone mastic asphalt (SMA) shall conform to BS EN 13108-5:2006 where applicable and with TS2010 Surface Course Specification and Guidance Issue 01 (December 2010). Where the requirements of TS2010 Surface Course Specification and Guidance differ from other clauses, standards and specifications, the requirements of TS2010 Surface Course Specification and Guidance shall take precedence.</p>
2		<p>Conformity shall be established in accordance with BS EN 13108-20:2006 and BS EN 13108-21:2006 although formal CE marking is not currently required.</p>
3		<p>The requirements of clauses 901 and 903 apply and the Performance Guarantee shall be to clause 942.15 and 942.16.</p>
4		<p>Any references made to tables in this clause shall be deemed to be references to those in TS2010 Surface Course Specification and Guidance.</p>
1170AR		Red Chipping Paved Areas
1		<p>Red chipping paved areas shall be 14mm nominal size natural red igneous stone in a single layer 80mm thick.</p>

Clause No.		Title and Written Text
1171AR		Relaying of Existing Footways
	1	Relaying of existing footways shall be carried out with materials compatible with the adjacent areas.
1172AR		Artificial Stone Paving or Natural Stone Paving and Precast Concrete Paving Flags and Blocks
	1	Before work commences in any individual existing artificial stone paving, York stone paving or precast concrete flag or block paved footway, the Operating Company shall record the dimensions and number of flags or blocks to be replaced and take photographic records.
	2	The Operating Company shall carefully lift the flags or blocks and set aside.
	3	Flags or blocks not permanently re-laid on the same day as they are lifted shall be stacked in neat piles to a height not exceeding one metre.
1173AR		Laying of Artificial Stone Paving, Natural Stone Paving and Precast Concrete Paving Flags and Blocks
	1	Paving of artificial stone paving, York stone paving or precast concrete paving flags shall be reconstructed to match existing as closely as possible and shall be in accordance with BS 7533.
1174AR		Timber Edging to Footways and Paved Areas
	1	Timber shall be as described in clause 304 and sized to match existing or 75mm x 32mm whichever is the lesser.
	2	Fixing shall be by 50mm x 50mm x 300mm pointed pegs at 600mm centres.
	3	Timber edgings and pegs shall be pressure impregnated with preservative in accordance with clause 311.
1270AR		Passively Safe Sign Posts
	1	Passively safe sign posts shall be in accordance with BS EN 12767: 2007 erected in accordance with the manufacturers instructions.
1271AR		Snow Poles
	1	Snow poles shall be 50mm external diameter aluminium poles 20mm gauge 2.5m long with ends capped and 150mm reflective strips at the top of the pole and 500mm above ground level.
	2	On single carriageways the reflective strips are to be red facing the oncoming adjacent traffic with white on reverse side.
	3	In central reserves on dual carriageways the reflective strips are to be orange on both faces.
	4	Pole foundations shall be 400mm x 400mm x 300mm deep in-situ concrete grade ST2 to clause 2602 finished flush with ground level.
	5	Tops of poles shall be 2.2 metres above the adjacent ground level.
	6	Poles shall be located 1.2 metres from the carriageway edge.
	7	Poles shall be located at 50 metre intervals on each verge at staggered intervals along opposing verges.

Clause No.		Title and Written Text
1370AR		Lamp Disposal
	1	The Operating Company shall collect, transport and dispose of waste lamps in accordance with the requirements of the <i>Waste Electrical and Electronic Equipment Regulations</i> .
1470AR		Temporary Overhead Feed to Lighting Units
	1	No temporary overhead cable shall be installed until the lighting columns involved have been assessed as being suitable for the additional mechanical loading placed on them.
	2	Cables used for any temporary overhead feed to lighting units or luminaries shall consist of sheathed or armoured cables supported by a steel catenary wire and shall be installed in accordance with the requirements of BS7671:2008. The minimum height above ground of the span shall, according to the location, be as follows: (i) 10 metres for motorways, and (ii) 5.8 metres for all other roads and road crossings.
1771AR		Additional Requirements for Concrete and Concrete Repairs
		Storage of Materials
	1	All proprietary materials shall be stored in accordance with the manufacturer's written instructions.
		Records
	2	As repair work proceeds, the Operating Company shall keep records including digital date stamped photographs.
		High Pressure Water Jetting
	3	High pressure water jetting shall use clean and fresh potable water. The Operating Company shall not add antifreeze agents or any other chemicals to water used for jetting activities.
1772AR		Removal of Concrete in Areas to be Repaired
	1	Concrete shall cut and remove from areas specifically identified following inspection and testing.
	2	Concrete shall be removed from the area until sound concrete is reached. Where reinforcement is exposed, concrete shall be removed for a minimum distance of 25mm beyond the rear face of the reinforcement. Where corroded reinforcement is identified, the area of concrete removed shall be extended to expose 100mm of un-corroded reinforcement.
	3	The position and depth of the reinforcement shall be determined by the Operating Company.
	4	The perimeter of the concrete to be removed shall be saw cut perpendicularly to the face of the concrete to a depth of not less than 15mm or to within 10mm of the reinforcement whichever is the lesser. Cut edges shall be abraded.

Clause No.		Title and Written Text
5		Removal of concrete by water jetting shall be carried out by companies registered with the Association of High Pressure Water Jetting Contractors.
6		Where concrete is removed by high pressure water jetting, final trimming of the area may be broken out using other processes.
7		Overbreak of concrete shall be made good using a concrete repair system selected from clause 1774AR.
8		<p>Reinforcement damaged during concrete removal shall be made good.</p> <p>Existing reinforcement which has corroded or is otherwise damaged shall be removed and additional steel reinforcement shall be lapped or welded onto the existing reinforcement.</p> <p>All such welding shall be in accordance with clause 1717.</p> <p>All loose reinforcement shall be securely tied with stainless steel tying wire.</p>
9		The site shall be kept free of debris or standing water arising from the high pressure water jetting and other activities.
10		On completion of removal of concrete, all concrete surfaces and exposed reinforcement which are in contact with repair materials shall be prepared in accordance with clause 1773AR.
1773AR		Surface Preparation
		General Requirements
1		<p>Blast cleaning shall utilise the appropriate grade and particle shape of abrasives.</p> <p>Non-metallic abrasives shall not be recycled.</p>
2		Only clean potable water shall be used for cleaning and rinsing.
		Preparation of Surfaces of Reinforcement
3		<p>All detrimental contamination and corrosion products shall be removed from steel reinforcement.</p> <p>The surfaces shall be free of embedded abrasive particles and corrosion products when viewed through a 10 times illuminated magnifying glass.</p>
4		<p>Dry blast cleaning shall be by a dry air/abrasive system.</p> <p>Wet blast cleaning shall be by a low pressure air/water/abrasive system.</p> <p>The air/water pressure shall be adjustable to a maximum of 14 bar.</p> <p>Within an hour after blast cleaning the treated reinforcement shall be pressure washed with water.</p>
		Preparation of Surfaces of Concrete
5		<p>All cement laitance contaminants and loose friable material shall be removed from concrete surfaces.</p> <p>Concrete surfaces shall be wetted one hour before repair concrete is applied.</p> <p>Concrete surfaces shall be free from standing water when repair concrete is applied.</p>

Clause No.		Title and Written Text
	6	<p>The surface profile after cutting out by high pressure water jetting shall be irregular with aggregate particles projecting above the surrounding concrete matrix.</p> <p>All concrete surfaces exposed by percussive methods to receive repair materials, shall be prepared by low vibration processes, such as grit blasting or high pressure water jetting, to remove all fractured aggregate particles and expose a sound substrate.</p>
		Trials
	7	<p>The Operating Company shall remove, cut back and prepare the surface of an area of one square metre of concrete to be repaired as a trial of the methods proposed for carrying out the work and obtain photographic records.</p>
1774AR		Concrete Repairs
		General
	1	<p>Concrete repairs shall be carried out using either, normal-flow concrete proprietary repair mortar, high-flow repair concrete proprietary sprayed concrete or a proprietary repair system proposed by the Operating Company and consented to in writing by the Overseeing Organisation.</p> <p>Crack repairs carried out by a resin injection system shall be proposed by the Operating Company and subject to written consent by the Overseeing Organisation.</p>
	2	<p>Proprietary repair materials and systems shall have an Agreement Board Roads and Bridges Certificate registered with the Overseeing Organisation.</p>
	3	<p>Proprietary repair mortars shall be used for repair areas less than 1m² or repair depths less than 30mm deep.</p> <p>Normal flow concrete or high flow concrete or sprayed concrete shall be used for repair areas greater than 1 square metre or greater than 30mm deep or as otherwise proposed by the Operating Company and subject to consent in writing by the Overseeing Organisation.</p>
		Materials for Repairs Using Normal Flow Concrete
	4	<p>(i) Cement shall comply with sub-clause 1702.1.</p> <p>(ii) Repair concrete shall be a designed concrete as defined in sub-clause 1701.2 and clause 1705.</p> <p>(iii) Cement or combination content shall be not less than 360 kg/m³ in any designed concrete.</p> <p>(iv) Maximum aggregate size shall be 20mm.</p> <p>(v) The free water/cement ratio shall not be greater than 0.4.</p> <p>(vi) The minimum strength class shall be C32/40.</p> <p>(vii) Alkali – silica reaction shall be controlled as specified in sub-clause 1704.5.</p>
		Materials for Repairs Using Proprietary Repair Mortar
	5	<p>(i) Pre-batched polymer modified cementitious mortars incorporating a shrinkage reduction agent shall be used.</p>

Clause No.	Title and Written Text
	<p>(ii) Mortars for hand screeding of surfaces to be waterproofed shall be sand/cement mortar containing styrene acrylate or styrene butadine polymer bonding admixture.</p> <p>(iii) The maximum aggregate grain size in the mortar shall be suitable for the depths of repair required.</p> <p>(iv) Water required to mix repair mortars shall be clean potable water.</p> <p>(vii) The maximum total chloride content expressed as % of chloride ion by mass of cement of the materials shall not exceed 0.3% and for repairs to prestressed or heat cured concrete shall not exceed 0.1%. Calcium chloride or admixtures containing chloride salts shall not be used.</p> <p>(viii) The minimum 28 day cube strength of the repair mortar shall be 40 N/mm².</p> <p>(ix) Alkali-silica reaction shall be controlled as specified in sub-clause 1704.5.</p>
	Delivery and Storage of Material
6	<p>(i) The Operating Company shall provide and retain for each batch of the material delivered to the Site of the Operations certificates furnished by the supplier stating:</p> <ul style="list-style-type: none"> (a) the polymer used, (b) evidence that the total chloride content is less than specified in sub-clause 5(vii) of this Specification, (c) the content of sodium oxide equivalent in the mortar, (d) maximum shelf life, (e) handling arrangements. <p>(ii) The material shall be stored in a dry environment free from extremes of cold and heat and any specific storage requirements of the manufacturer.</p> <p>(iii) The materials shall not be removed from store until immediately prior to mixing.</p>
	Placing Repair Mortar
7	<p>(i) Repair mortar shall be built up in accordance with the manufacturer's written instructions. The surface of each layer except the final layer shall be scored to provide a key for the next layer.</p> <p>(ii) The repair mortar shall be suitable for the purpose intended i.e. for soffits or vertical surfaces as appropriate.</p> <p>(iii) Repair mortar shall not be applied when the temperature of the surface to be repaired falls below 5°C.</p> <p>(iv) The material shall be incorporated within 1 hour of mixing or such lesser period as stated in writing by the manufacturer.</p> <p>(v) Repair mortar shall be cured in accordance with sub-clause 1710.5 and the manufacturer's written instructions.</p>

Clause No.		Title and Written Text
		During the curing period air and surface temperatures shall be maintained at or above 5°C or in accordance with the manufacturers written instructions which may require artificial means if necessary.
		Surface Finish to Repair Mortar
8		Repair mortar shall be float finished to produce a dense smooth uniform surface free from float marks to the specified line and level.
		Materials for Repairs Using Proprietary High-Flow Repair Concrete
9		<ul style="list-style-type: none"> (i) Materials for proprietary high-flow repair concretes shall comply with the specification requirements in BS 8500-1:2006. (ii) Water shall be clean potable water. (iii) Aggregate shall be well graded with the maximum size not exceeding 8mm except when pumping is to be employed when the maximum size shall not exceed 6mm and shall comply with sub-clause 1702.2. (iv) Proprietary material shall be of such composition and grading that when mixed with water a flowable concrete is produced which shall flow freely into the confined spaces to be filled and shall not be prone to segregation bleeding or cracking in either the plastic or hardened stat. (v) The minimum strength class shall be C32/40.
		Delivery and Storage of Material
10		<ul style="list-style-type: none"> (i) Records shall be kept of each batch of material delivered to the site of the Operations and shall include: <ul style="list-style-type: none"> (a) formulator's name and address, (b) formulator's agent's name and address where applicable, (c) material identification, (d) batch reference number size of batch and number of containers in the delivery, (e) date of manufacture, (f) evidence that the chloride contents are less than specified in table 17/1 of clause 1704, (g) details of the significant rock components contained in the aggregates, (h) cement content, (i) combinations and additions used, and (j) the equivalent sodium oxide content. (ii) Containers shall be damp proof and readily emptied of their contents.

Clause No.	Title and Written Text
	<p>(iii) Containers shall be marked with the following information:</p> <ul style="list-style-type: none"> (a) material identification, (b) batch reference number, (c) formulator's name, (d) net weight and lifting arrangements and storage specific requirements, (e) any warnings or precautions concerning the contents. <p>(iv) The material shall be stored in a dry environment free from extremes of cold and heat.</p> <p>(v) Material shall not be older than three months or lesser period specified by the formulator when used in the Operations.</p> <p>(vi) The materials shall not be removed from the store for use in the Operations until immediately prior to mixing.</p>
	Formwork Site Mixing Placing and Curing
11	<p>(i) Formwork shall be Class F2 to sub-clause 1708.4 with the perimeter of the repair well sealed to prevent grout loss.</p> <p>Release agents shall be compatible with proposed surface treatments.</p> <p>(ii) Mixing in a forced action paddle mixer and placing shall be carried out strictly in accordance with the formulator's written instructions.</p>
	Approval Tests
12	<p>(i) Before Operations commence all properties of the proposed high-flow repair concrete shall be demonstrated by the Operating Company and the formulator's representative by carrying out the tests specified below in an UKAS accredited laboratory.</p> <p>Records shall be maintained of all tests in accordance with the procedures in the Quality Management System.</p> <p>(ii) The composition of the high flow concrete including the source of water the mix proportions and the method of mixing shall be the same as that proposed for use in the Operations.</p> <p>The composition shall not be varied throughout the course of the tests and the material shall be obtained from the same batch.</p> <p>(iii) The tests fall into two categories flowability and compressive strength.</p> <p>(iv) The flowability tests shall demonstrate:</p> <ul style="list-style-type: none"> (a) flow characteristics in a trough at 5°C and 20°C as specified in Note 1 of this sub-clause, (b) flow characteristics in a simulated soffit repair at 5°C and 20°C as specified in Note 2 of this sub-clause.

Clause No.	Title and Written Text
	<p>Note 1: The flow characteristics of the concrete in a trough shall be assessed by the Operating Company.</p> <p>For each test the concrete and trough shall be at the specified temperature.</p> <p>The funnel of the apparatus shall be fitted with a rubber bung and charged with 6 litres of concrete.</p> <p>On release of the bung, the concrete shall flow along the trough and the length of the flow along the trough shall be measured.</p> <p>A test shall consist of three readings the flow requirements and shall be deemed to be satisfied if none of the readings are below 750mm in 30 seconds without signs of segregation or bleeding.</p> <p>Note 2: The flow characteristics of the concrete in a simulated soffit repair shall be tested in accordance with BD27 of the Design Manual for Roads and Bridges.</p> <p>For each test the concrete and apparatus shall be at the specified temperature.</p> <p>The concrete shall be poured in one operation into the supply tube until the level of the concrete has reached 100mm above the underside of the top plate.</p> <p>After the concrete has set, the specimen shall be removed from the apparatus and sawn into two parts and the sawn concrete surfaces shall be examined.</p> <p>The concrete shall be homogeneous free from excessive air holes voids segregation and other Defects and shall completely fill the simulated repair.</p>
	<p>Compressive Strength Tests</p>
13	<p>(i) Compressive strength tests shall comply with conformity testing requirements in BS 8500-2, section 10.</p> <p>(ii) Compressive strength tests shall be carried out by the Operating Company to determine the compressive strength of the concrete at 5°C and 20°C.</p> <p>(iii) Test cubes shall be made in 100mm metal moulds to BS EN 12390.</p> <p>The moulds shall be carefully filled by pouring concrete through a funnel to produce void free specimens.</p> <p>There shall be no compaction.</p> <p>The cubes shall be cured and testing shall be carried out in accordance with the appropriate parts of BS EN 12390.</p> <p>(iv) The minimum compressive strength shall be established using a set of three cubes.</p> <p>The requirement shall be satisfied if none of the compressive strengths obtained are lower than the specified value and the difference between the highest and lowest values is not more than 20% of the average.</p> <p>(v) Identity testing where required shall be carried out by the Operating Company in accordance with clause 1707.</p>

Clause No.	Title and Written Text
	Batch Acceptance Tests
14	<p>Each batch of material delivered to the Site shall be tested by the Operating Company as follows:</p> <ul style="list-style-type: none"> (i) the material shall be taken at random from one or more containers from the same batch, (ii) flow trough tests shall be carried out as specified in Note 1 of sub-clause 12 of this clause at 20°C, and (iii) compressive strength tests shall be carried out as specified in sub-clause 13 of this clause at 20°C.
	Site Tests
15	<ul style="list-style-type: none"> (i) Site tests shall be carried out by the Operating Company to monitor: <ul style="list-style-type: none"> (a) flowability, and (b) compressive strength. (ii) The flowability of a sample of fresh concrete shall be determined in a trough as specified in sub-clause 12, Note 1. (iii) The gain in strength of the repair concrete shall be monitored by the Operating Company by testing cubes cured alongside the repaired areas at ambient temperature. (iv) For each day's production of repair concrete, six 100mm cubes shall be made by the Operating Company in accordance with sub-clause 13 of this clause. <p>The cubes shall be cured for 24 hours in the moulds with the top surfaces covered by polythene sheets.</p> <p>After 24 hours the cubes shall be stripped and placed in polythene bags which shall be sealed.</p> <p>The cubes shall continue to be stored alongside the repaired areas throughout the curing period until required for testing.</p> <p>The cubes shall be crushed at times determined by the Operating Company but at least 2 cubes shall be retained to be tested at 28 days.</p>
	Materials for Repairs Using Proprietary Sprayed Concrete
16	<ul style="list-style-type: none"> (i) The proprietary material shall be pre-weighed and pre-mixed at a location off the Site. (ii) Cement shall comply with sub-clause 1702.1. (iii) Alkali-silica reaction shall be controlled as specified in clause 1704. (iv) The total chloride content of the materials shall be expressed as % of chloride ion by weight of cement and shall not exceed 0.3%. <p>Any additional chloride or admixtures containing chloride salts shall not be used.</p> (v) Aggregate shall be well graded with the maximum size not exceeding 3mm and shall comply with sub-clause 1702.2. (vii) Material shall be capable of being applied to a thickness of 100mm without the requirement for additional mesh reinforcement or fibres.

Clause No.	Title and Written Text	
	(vii) Once placed the material shall be capable of being profiled and trowel finished (to the equivalent of formed Class F2) without detrimental effects.	
	Performance Characteristics	
17	The proprietary material shall have performance characteristics as detailed in Table 17/71 which shall be verified by an independent testing authority employed by the Operating Company.	
	TABLE 17/71: Performance Characteristics	
	TEST	PERFORMANCE
	Bond Strength to BS EN 1542	greater than 1.0 N/mm ²
	Characteristic strength of cores (28 days) to BS EN 12504-1	40 N/mm ²
	Tensile splitting strength (28 days) to BS EN 12390-6	greater than 2.4 N/mm ²
	Static Modulus of elasticity to BS EN 13412	27000 ± 3000 N/mm ²
	Shrinkage to BS EN 12617-4	less than 0.002%
	Coefficient of Thermal Expansion to BS EN 1770	8 to 12 x 10 ⁻⁶ /°C
	Coefficient of Chloride Ion Diffusion to BS EN 13396	To be agreed with the Overseeing Organisation
	Delivery and Storage of Material	
18	<p>(i) Records shall be kept of each batch of material delivered to the Site and shall include:</p> <ul style="list-style-type: none"> (a) formulator's name and address, (b) formulator's agent's name and address where applicable, (c) batch reference number size of batch and number of containers in the delivery, (d) date of manufacture, (e) evidence that the chloride contents are less than specified in sub-clause 16(iv) of this clause, (f) details of the significant rock components contained in the aggregates, (g) cement content, (h) additives used. <p>(ii) The sodium oxide equivalent content.</p> <p>(iii) Containers shall be damp proof and readily emptied of their contents.</p> <p>(iv) Containers shall be marked with the following information:</p> <ul style="list-style-type: none"> (a) material identification, (b) batch reference number, (c) formulator's name. 	

Clause No.		Title and Written Text
		Procedure Trials
19		<p>(i) Before work commences on the Operations, procedure trials shall be carried out to pre-qualify the nozzlemen proposed for use on the Site. Nozzlemen who have not been pre-qualified shall not be permitted to apply sprayed concrete on the Operations.</p> <p>(ii) Each nozzleman shall carry out procedure trial panels. The procedure trial panels shall have minimum dimensions of 750mm x 750mm x 100mm deep and shall be made of plywood with 45° sloped edge to permit rebound to escape.</p> <p>(iii) One half of each procedure trial panel shall contain reinforcement representative of the size and spacing of the work. The second half of the procedure trial panel shall contain no reinforcement (with the exception of fibre reinforcement) to allow for the extraction of cores for testing in accordance with sub-clause 29(ii) of this clause.</p> <p>(iv) One procedure trial panel shall be carried out by each nozzleman proposed for use on the Site using each proposed mixture proportion at each proposed orientation i.e. horizontally overhead or other such orientations.</p> <p>(v) A minimum of three 100mm diameter cores shall be extracted from the location of intersecting reinforcing steel to check the adequacy of consolidation of the sprayed concrete around the reinforcement.</p> <p>(vi) No sprayed concrete shall be carried out on the Site until the procedure trial testing requirements shall have been met.</p>
		Surface Preparation for Sprayed Concrete
21		<p>(i) Sound surfaces which are to receive sprayed concrete shall be thoroughly cleaned and roughened by grit blasting or high pressure water jetting.</p> <p>(ii) All concrete surfaces to receive sprayed concrete, exposed by percussive methods using hand or mechanical tools, shall be prepared by low vibration processes, such as grit blasting or high pressure water jetting, to remove all fractured aggregate particles and expose a sound substrate.</p> <p>(iii) Grit blasted areas shall have sprayed concrete applied within 48 hours or shall be re-blasted.</p> <p>(iv) Immediately prior to spray concreting all the surfaces to be sprayed shall be thoroughly cleaned and wetted with a strong blast of oil-free air and water.</p>
		Outline Definition
22		<p>(i) The outline of the finished sprayed concrete shall be defined by screed boards, guide wires or other means proposed by the Operating Company and consented to in writing by the Overseeing Organisation.</p> <p>(ii) Guide wires shall be installed tight and true to line and in such a manner that they may be easily tightened.</p>

Clause No.	Title and Written Text
	Mixing Sprayed Concrete
23	<p>(i) Sprayed concrete shall be mixed in a batch type mixer complying with the requirements of BS1305 except that the water shall be delivered direct to the nozzle.</p> <p>The delivery equipment shall be capable of delivering a continuous even stream of uniformly mixed material to the nozzle.</p> <p>Water supply at the nozzle shall be maintained at a uniform pressure sufficient to ensure adequate hydration at all times.</p> <p>The delivery equipment and nozzle shall be thoroughly cleaned and inspected at the end of each day and parts replaced as required.</p> <p>(ii) The temperature of water and cement when added to the mix shall not exceed 60°C and 65°C respectively.</p> <p>(iii) Water used in sprayed concrete shall be clean potable water.</p>
	Reinforcement
24	<p>Welded wire mesh fabric reinforcement shall be fixed to prepared surfaces and shall be carefully bent to follow the shape of the members and held in position by anchors spaced at not less than 2 per m².</p> <p>The fabric shall be spaced at not less than 25mm from the finished surface of the concrete.</p>
	Transport and Placing Sprayed Concrete
25	<p>(i) No concrete shall be sprayed in air temperatures less than 5°C or onto a surface temperature less than 5°C.</p> <p>Surfaces shall be free from standing water.</p> <p>(ii) Sprayed concrete shall emerge from the nozzle in a steady uninterrupted flow and an uninterrupted supply of compressed air shall be provided to maintain adequate nozzle velocity.</p> <p>Should the flow become intermittent the nozzle shall be directed away from the work until the flow again becomes uniform.</p> <p>(iii) Sprayed concrete shall be applied under sufficient pressure so as to give a dense and homogeneous covering to the surface in one or more layers of a thickness compatible with the mix Design constituents position of reinforcement and plane of application to ensure the placed concrete does not slump or sag.</p> <p>(iv) Adequate precautions shall be taken to ensure that sprayed concrete rebound shall not be incorporated in the finished work and that any previously deposited hardened rebound which may prevent a proper bond or encasement shall be removed from reinforcement.</p> <p>(v) Adequate protection shall be given to the nozzle and application surface during high winds.</p> <p>(vi) The final coat shall be hand screeded to a Class U3 finish in accordance with sub-clause 1708.4.</p>
	Fibre Reinforced Sprayed Concrete
26	<p>(i) The weight of steel or composite fibres shall not exceed 5% by weight of the combined weight of cement and aggregate.</p>

Clause No.	Title and Written Text
	<ul style="list-style-type: none"> (ii) Fibres shall be added to the mix in such a manner that the fibres shall be evenly distributed and not bent. (iii) Procedure trials shall be undertaken to demonstrate that the proposed methods can achieve the requirements of this sub-clause. (iv) Unless otherwise stated elsewhere in this Contract, a final 15mm thick coat of unreinforced sprayed concrete shall be applied over the whole exposed surface to cover exposed fibres. (v) The gun and nozzle shall be electrically earthed.
	Construction Joints
27	<ul style="list-style-type: none"> (i) Construction joints in sprayed concrete shall be tapered at approximately 30 degrees or cut back square to the reinforcement and then tapered at 30 degrees. (ii) The construction joint shall be thoroughly cleaned all laitance and loose material removed and the surface wetted using a strong blast of air and water prior to the placement of adjacent sprayed concrete.
	Curing of Sprayed Concrete
28	<ul style="list-style-type: none"> (i) Freshly sprayed concrete shall be protected from rain or water until the surface is sufficiently hard to resist damage. (ii) Immediately after placing and for 14 days thereafter, sprayed concrete shall be protected against harmful effects of weather including rain rapid temperature changes and frost and from drying out. (iii) Curing membranes shall not be used. (iv) Impregnation in accordance with clause 1709 may be carried out after 14 days.
	Production Testing of Sprayed Concrete
29	<ul style="list-style-type: none"> (i) One production test panel shall be carried out for each nozzle orientation for each day of sprayed concrete production or every 15m³ of sprayed concrete whichever is the lesser. (ii) Sprayed concrete production test panels shall be made with dimensions 450mm x 450mm x 100mm thick with 45° sloped edge forms to permit escape of rebound. (iii) Production test panels shall contain no reinforcement (other than fibre reinforcement). (iv) The production test panels shall be marked, cured, cored and tested in compression in accordance with the appropriate parts of BS EN 12390. (v) They shall be tested in a United Kingdom Accreditation Service (UKAS) accredited laboratory. Records shall be maintained of all tests.

Clause No.		Title and Written Text
		(vi) Routine tests shall be carried out by the Operating Company on the finished sprayed concrete. These routine tests shall consist of taking 25mm or 100mm diameter cores from the finished sprayed concrete, tested in the same manner as cores taken from the test panels or by carrying out non-destructive tests by means of a 'Schmidt' hammer or 'Windsor Probe' or other approved test to determine compressive strength and testing for bond by the use of a hand hammer.
		Resin Injection Repairs
	30	<p>(i) The concrete surface at least 50mm either side of the crack shall be dry blast cleaned to a sound surface free from dirt moss salt staining and loose concrete.</p> <p>The full extent of the crack shall be found and the cleaned area shall extend 50mm beyond the end of the crack or until the crack becomes too narrow to warrant resin injection.</p> <p>(ii) Where algae or other bacterial growth emanates from the crack it shall be removed by scrubbing with bactericide and rinsing with clean water.</p> <p>Health and safety precautions appropriate to the bactericide cleaning agent used shall be adopted including those recommended in writing by the manufacturers.</p> <p>Measures shall be taken to ensure that any adjacent water course shall not be contaminated and that run-off shall be collected and disposed of in a safe manner.</p>
	31	<p>(i) Where excess moisture is evident in the crack to be resin injected the crack shall be blown through with dry hot air starting at the top of the crack.</p> <p>A temporary crack sealant shall be applied immediately after blowing through and the resin shall be injected into the crack immediately the necessary preparations shall be complete.</p> <p>(ii) If, for whatever reason, the crack becomes damp before it is resin injected no further work shall be permitted until the temporary crack sealant is removed and the crack blown through again with dry hot air.</p> <p>(iii) The temperature of the hot air shall be sufficient to dry the full depth of the crack and shall not exceed the maximum temperature specified by the equipment manufacturer.</p>
	32	<p>(i) The resin to be used shall be either polyester or epoxy based and shall be mixed and injected in accordance with the manufacturer's written specification.</p> <p>Resin shall not be injected when the air temperature or the surface temperature concrete to be repaired is less than 5°C.</p> <p>(ii) The spacing of the nozzle positions shall be equal to the depth of the crack and shall not, in any case, be less than 250mm.</p>

Clause No.		Title and Written Text
		<p>(iii) Injecting shall start at the bottom of the crack and work shall proceed upwards in a continuous operation throughout.</p> <p>Resin shall be seen extruding from the crack at the next nozzle position before the current nozzle location is locked off.</p> <p>(iv) The injected crack shall be left undisturbed for a period of at least 24 hours to allow the resin to harden.</p> <p>(v) When the resins are sufficiently cured, the cracks and any resin spillages shall be cleaned from the face of the concrete.</p>
33		<p>When the resin has set, two 20mm diameter proving cores shall be taken to the full depth of the crack.</p> <p>The resulting holes shall be filled with either the resin used for injecting or with a suitable filler of a compatible thixotropic resin.</p>
		Sealing of Cracks in Concrete Bridge Decks
34		The preparation of surfaces around cracks and the measures to deal with algae or other growth in cracks shall be as described in sub-clause 30 of this clause.
35		<p>(i) The sealing resin shall be a low viscosity, polyester epoxy or acrylic polymer which shall be compatible with any proposed waterproofing system.</p> <p>(ii) The material shall be applied by pouring through a fine nozzle directly into the crack or into preformed dams.</p> <p>(iii) The injected crack shall be left undisturbed for a period of at least 24 hours to allow the resin to harden.</p> <p>(iv) When the resins are sufficiently cured the cracks and resin spillages shall be cleaned to the face of the concrete.</p>
1775AR		Foamed Concrete Fill to Structures and Backfilling to Drainage Trenches
1		<p>Foamed concrete fill to arches or bridge decks shall be of density 1400 – 1600 kg/m³.</p> <p>Minimum cement content shall be 350 kg/m³.</p> <p>The maximum free-water/cement ratio shall be 0.4. The minimum cube compressive strength shall be 8 N/mm².</p>
2		Foamed concrete fill to drainage trenches shall comply with sub-clause 1 of this clause.
2070AR		Replacement of Bridge Deck Waterproofing
		Removal of Existing Waterproofing
1		The existing surfacing shall be removed by cold-milling (planing) in accordance with clause 709 except in the case of small areas which may be removed using other suitable methods.

Clause No.		Title and Written Text								
	2	<p>The existing bridge deck waterproofing or protective layer comprising the last 30mm above the concrete substrate shall be carefully removed to avoid damage to the concrete.</p> <p>In exceptional cases, for particularly difficult materials, method statements shall be submitted by the Operating Company for the written consent of the Overseeing Organisation before these techniques shall be used.</p>								
	3	<p>The final removal of the remaining waterproofing or primer to expose the concrete substrate shall be by recoverable abrasive blast cleaning systems.</p> <p>'Open' blast cleaning shall not be permitted except on vertical surfaces or intricate details.</p>								
		Inspection and Testing								
	4	<p>Prior to application of the new waterproofing, the deck concrete shall be examined by the Operating Company to determine the following:</p> <ul style="list-style-type: none"> (i) if any testing is required (in accordance with the requirements of Series 3300), (ii) if additional deck preparation is required, and (iii) if structural concrete repairs are required (in accordance with the requirements of Series 1700). 								
		Additional Preparation of Bridge Deck								
	5	<p>Additional preparation of bridge decks prior to the application of the new waterproofing shall be the following:</p> <ul style="list-style-type: none"> (i) removal of surface Defects such as screed marks and footprints, (ii) removal of formwork and falsework anchors from the original construction which have inadequate cover, (iii) sealing of cracks greater than 0.25mm, and (iv) repairs to or forming of fillets and chases to facilitate waterproofing. 								
	6	<p>Any work required in addition to the items listed above, such as removal of chloride contaminated concrete or delaminated concrete and concrete repairs considered necessary by the Operating Company, shall be deemed to be structural concrete repairs and shall be undertaken in accordance with Series 1700.</p>								
		Replacement of Bridge Deck Waterproofing								
	7	<p>The replacement waterproofing system shall be in accordance with clauses 2008 and shall comply with the requirements of clauses 2002, 2003, 2005 & 2007 and any additional requirements described in Appendix 20/1.</p>								
2370AR		Bridge Expansion Joints Used on Bridge Decks								
	1	<p>The following types of bridge expansion joints are known to occur on the Trunk Road Network.</p> <table border="1" data-bbox="391 1848 1380 2049"> <thead> <tr> <th data-bbox="391 1848 582 1897">Type</th> <th data-bbox="582 1848 1380 1897">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="391 1897 582 1948">1</td> <td data-bbox="582 1897 1380 1948">Buried joint under continuous surfacing</td> </tr> <tr> <td data-bbox="391 1948 582 2000">2</td> <td data-bbox="582 1948 1380 2000">Asphaltic plug joint</td> </tr> <tr> <td data-bbox="391 2000 582 2049">3</td> <td data-bbox="582 2000 1380 2049">Nosing joint with poured sealant</td> </tr> </tbody> </table>	Type	Description	1	Buried joint under continuous surfacing	2	Asphaltic plug joint	3	Nosing joint with poured sealant
Type	Description									
1	Buried joint under continuous surfacing									
2	Asphaltic plug joint									
3	Nosing joint with poured sealant									

Clause No.	Title and Written Text	
	4	Nosing with preformed compression seal
	5	Reinforced Elastomeric
	6	Elastomeric in metal runners
	7	Maurer D80
	This list is not exhaustive and reference shall be made to BA26 and BD33 of the DMRB for all possible types that may be encountered.	
	A description of deck joint types and deck joint manufacturers' details shall be as provided in Transport Scotland's structures management function of the Integrated Roads Information System for individual Structures where these shall be known.	
2371AR	Replacement of Bridge Deck Expansion Joints and Gap Sealants	
	1	Replacement repair and alterations to expansion joints shall comply with the requirements of clauses 2301 to 2304 and Standards BD33/94 and BA26/94 of the Design Manual for Roads and Bridges.
	2	<p>Joints shall be installed in accordance with the manufacturer's written instructions.</p> <p>Work may comprise replacement of a complete joint or maintenance of a joint where complete or partial replacement is not considered necessary.</p>
	3	<p>Existing joints (including transition strips) shall be carefully broken out or unbolted and removed.</p> <p>The adjacent carriageway hardshoulder, hardened verges and central reservations shall be saw cut to provide neat vertical edges.</p> <p>The location of any existing services or ducts shall be determined prior to breaking out or saw cutting and measures shall be taken to protect them.</p>
	4	<p>Existing flashings and sealants shall be removed.</p> <p>Where appropriate, existing intact waterbars may be retained.</p> <p>Existing galvanised plates in buried joints shall be set aside for possible re-use.</p>
	5	<p>The existing surfacing and additional protective layer adjacent to the expansion joint shall be removed to expose the waterproofing membrane.</p> <p>The waterproofing shall be carefully cut back to expose the concrete surface which shall be prepared to receive the expansion joint system.</p>
	6	Continuity of the waterproofing membrane shall be provided by bond or lap between the waterproof membrane and the expansion joint.
	7	<p>Existing holding down bolts and fixings shall be protected, if required, for installation of the proposed replacement joint.</p> <p>If such bolts and fixings are not required they shall be removed or ground flush with the surface of the deck concrete.</p>
	8	<p>The concrete substrate shall be examined by the Operating Company for Defects.</p> <p>Where required, testing shall be carried out and concrete repairs undertaken in accordance with Series 1700 and this Appendix 0/1.</p>

Clause No.		Title and Written Text
	9	If the joint is not completely replaced, material and components shall form the same system as the existing joint, where possible.
	10	<p>Where required vertical drain holes shall be installed adjacent to expansion joints.</p> <p>The drain holes shall comprise a down pipe fixed into holes cored through the superstructure of minimum internal diameter 40mm and a conical entry funnel with cap to allow water to enter the funnel but prevent blocking of the waterway by the surfacing.</p> <p>The cap and funnel shall be covered with a sheet of permeable membrane prior to surfacing.</p>
	11	<p>Where gap sealant shall be replaced, the existing sealant and deteriorated joint filler shall be raked out to leave clean surfaces.</p> <p>Where possible, new joint filler to replace that removed shall be installed prior to re-sealing the gap.</p> <p>Where it shall not be possible to replace joint filler the joint shall still be sealed.</p>
2372AR		Asphaltic Plug Joints
		Installation
	1	All joints shall have a valid Approval/Registration in accordance with Appendix E of this Specification.
	2	The joints shall be installed in accordance with the manufacturer's written instructions which shall comply with the terms of the certification.
	3	<p>All batches of materials delivered to the Site shall have a Certificate of Compliance stating:</p> <ul style="list-style-type: none"> (i) The binder compound and its properties including Penetration Value Softening Point (Ring and Ball) and Flow Resistance. (ii) The specific type and density of aggregate/stone used in the asphaltic plug matrix. (iii) The quantities and weights of binder and aggregate used at each joint location.
2470AR		Repointing of Brickwork Blockwork and Stonework
	1	<p>Masonry joints in brickwork and blockwork to be repointed shall be ground out to a depth of 25mm to give adequate key. For natural stone masonry and historic structures, power tools shall not be used.</p> <p>All unsound mortar at a greater depth than 25mm shall be removed until sound mortar is encountered.</p> <p>Apparatus used for grinding out shall be fitted with a depth gauge to allow control of rake out depth.</p>
	2	<p>All detritus shall be removed by low pressure water jetting.</p> <p>Repointing shall be carried out by trowel or purpose made repointing keys or by using injection techniques.</p>

Clause No.		Title and Written Text
	3	<p>Cement mortar designation shall be selected based on clause 2404 and 2417 and Table 24/5.</p> <p>Lime mortar designation shall be selected based on clause 2476AR Table 24/7, Table 24/8 and Table 24/9.</p> <p>Water for mortars shall be clean and free from impurities.</p>
	4	<p>The specification of mortars used in the repair of masonry construction shall be prepared with reference to the existing mortar in the remaining construction and appropriate adjustment shall be made to take account of existing conditions and availability of materials.</p>
	5	<p>For historic brick Structures and all stone masonry Structures, the mortar specification shall be prepared by the Operating Company in conjunction with specialist advice based on mortar analysis and evaluation carried out on the mortar samples from the existing construction.</p>
	6	<p>Lime mortar is extensively used in the construction of masonry road Structures. Mortars used for repairs and repointing shall match the appearance and characteristics of existing materials as closely as possible.</p>
	7	<p>The choice of lime mortar to be used shall be influenced by the nature of stone, the nature of any surviving lime based materials and the environmental conditions or exposure of the site.</p>
	8	<p>Samples of mortar pointing at locations shall be provided for reference and comparison for the duration of the work.</p> <p>Mortar for pointing shall match the standards and details of the samples.</p>
	9	<p>Adequate protection of repair works and pointing from sun, wind, rain and frost shall be provided until cured.</p>
	10	<p>For historic Structures, power tools shall not be used to remove mortars. Damage to stone work shall be avoided.</p>
	11	<p>If any significant voids are present the Operating Company shall where necessary wedge and pin up loose stones.</p>
	12	<p>In deep cavities, work shall be carried out in layers of not more than 35mm allowing the material to dry before placing the next layer. A period of 24 hours shall elapse between each layer.</p>
	13	<p>Deep voids shall be filled to within 35mm or twice the width of the joint back from the finished wall face to allow sufficient depth for pointing.</p>
2471AR		Replacement of Precast Concrete Copings
	1	<p>Broken precast concrete copings shall be removed together with the old mortar bed and any loose and friable mortar in the joints below the coping.</p>
	2	<p>New precast concrete copings shall be laid on a mortar designation (i) (refer to clause 2404) bed to a line and level to match existing copings.</p>
2472AR		Rebedding Existing Precast Concrete or Stone Masonry Copings
	1	<p>Precast concrete or stone masonry copings shall be removed and stored for re-use.</p>
	2	<p>The existing mortar bed shall be completely removed together with any loose and friable mortar joints below the coping.</p>

Clause No.		Title and Written Text
	3	Copings shall be relaid on mortar designation (i) (refer to clause 2404) or where wall construction contains lime mortar to clause 2476AR. Rebedding of existing precast concrete or stone masonry copings shall match existing line and level.
2473AR		Replacement Tiling
	1	All damaged and defective tiles, adhesive, mortar, loose concrete and grout shall be broken out.
	2	Replacement tiles shall be in accordance with BS 5385-1 for wall and floor tiling.
	3	Any areas of the underlying concrete surface which have been damaged shall be made good as detailed in Series 1700.
	4	Repair materials shall be compatible with the tile adhesive to be used.
	5	The edges of retained existing tiles shall be clean and free of any grout.
	6	Unless otherwise determined by the Operating Company in accordance with other provisions of this Contract, replacement tiles shall be glazed ceramic of a colour size and pattern to match existing tiles.
	7	Tiles shall be installed to a line and level to match existing tiling with the joints grouted to match the existing grout colour and pattern.
	8	New tiling shall be cleaned of excess grout when the grout to the joints has hardened.
	9	Where a mural or other new tile pattern is to replace an existing, the Operating Company shall produce drawings for approval by the Overseeing Organisation prior to construction.
2474AR		Rebuilding of Defective Masonry
	1	Bricks, concrete blocks and stones designated for reuse in the repairs or reconstruction of existing masonry including bridge parapets shall be taken down and set aside for reuse or removed for storage.
	2	Where parapets have been damaged, the Operating Company shall retrieve displaced bricks, blocks and stones.
	3	The Operating Company shall consult the appropriate bodies to obtain agreement on access and method of working for retrieval and rebuilding.
	4	For Structures which are scheduled ancient monuments approvals shall be obtained from Historic Scotland.
	5	For Structures which are historic listed approvals shall be obtained from the appropriate local authority.
	6	The Operating Company shall set up lines of communication and processes to enable timescales for rebuilding to be achieved.

Clause No.		Title and Written Text
	7	<p>The Operating Company shall include in its procedure for approval by Historic Scotland the following steps to ensure early consent:</p> <ul style="list-style-type: none"> (i) Inform Historic Scotland Ancient Monument Division of damage to a scheduled ancient monument Structure and apply for Scheduled Monument Consent for repair works with cost estimates using new stone and sketch drawings of proposed repairs. <p>Record photos of damaged areas shall be submitted to Historic Scotland Ancient Monument Division at this time.</p> <ul style="list-style-type: none"> (ii) Carry out assessment of retrieval of stones from river beds and the like and notify Historic Scotland of outcome. (iii) Send stone samples to British Geological Survey for best matching replacement stones. Copy report to Historic Scotland. (iv) Meet Historic Scotland on site with draft proposals for repair. (v) Agree final repair scheme and submit all information to Historic Scotland for final comment. (vi) Historic Scotland issue Scheduled Monument Consent.
	9	<p>The Operating Company shall include in its procedures for the liaison and approval by local authorities any proposals for repairs and any repair works or alterations required due to damage to historic listed Structures other than scheduled ancient monuments which shall be covered by sub-clause 2 of this clause.</p>
	10	<p>All mortar from the faces of the bricks, concrete blocks or stone shall be removed before incorporating them into the reconstructed work.</p>
	11	<p>Recovered bricks, blocks and stones from watercourses and other situations where the surfaces have been discoloured or contaminated shall be cleaned and allowed to dry before incorporating into the reconstructed work.</p>
	12	<p>Where new replacement parapet stones are required for listed / ancient monument Structures, they shall be of matching stone based on British Geological Survey's analysis of stone samples from the relevant Structure.</p>
	13	<p>New materials to be incorporated into existing brick, concrete block or stone masonry construction shall match the remaining construction with regard to appearance and physical characteristics.</p>
2475AR		Lime Putty
	1	<p>Lime putty shall be traditional non-hydraulic slaked lime putty to comply with BS EN 459-1 with a density of not less than 1.35kg/ltr.</p>
	2	<p>Water for mortars shall be clean and free from impurities which would adversely affect the mortar.</p>
2476AR		Hydraulic Lime Mortars
	1	<p>Hydraulic lime for preparation of lime mortars to be used for building, rebuilding, grouting, mechanical pointing and hand pointing shall be Natural Hydraulic Lime NHL5 (eminently hydraulic) or Natural Hydraulic Lime NHL3.5 (moderately hydraulic) or Natural Hydraulic Lime NHL2 (feebly hydraulic) and shall conform to BS EN459-1.</p> <p>Non-hydraulic lime shall conform to BS EN 459-1.</p>

Clause No.		Title and Written Text																																																																																																																																			
2		Proportions of hydraulic lime to sand shall be based on Table 24/7 according to the required mortar Durability Designation as defined in BS 5628 <i>Code of Practice for Use of Masonry</i> and as specified in Appendix 24/1.																																																																																																																																			
		<p>TABLE 24/7 Typical Hydraulic Lime Mortar Proportions by Volume</p> <table border="1" data-bbox="392 407 1366 1498"> <thead> <tr> <th data-bbox="392 407 568 551" rowspan="2">Constituents</th> <th colspan="11" data-bbox="568 407 1366 443">Mix Reference/Durability Designation</th> </tr> <tr> <th data-bbox="568 443 639 551">M1 10</th> <th data-bbox="639 443 711 551">M2 9</th> <th data-bbox="711 443 783 551">M3 8</th> <th data-bbox="783 443 855 551">M4 7</th> <th data-bbox="855 443 927 551">M5 6</th> <th data-bbox="927 443 999 551">M6 5</th> <th data-bbox="999 443 1070 551">M7 4</th> <th data-bbox="1070 443 1142 551">M8 3</th> <th data-bbox="1142 443 1214 551">M9 2</th> <th data-bbox="1214 443 1286 551">G1* 5-6</th> <th data-bbox="1286 443 1366 551">G2* 2-4</th> </tr> </thead> <tbody> <tr> <td data-bbox="392 551 568 658">NHL5 Eminently Hydraulic</td> <td data-bbox="568 551 639 658">1</td> <td data-bbox="639 551 711 658">1</td> <td data-bbox="711 551 783 658">1</td> <td data-bbox="783 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1093"></td> <td data-bbox="783 925 855 1093">½</td> <td data-bbox="855 925 927 1093"></td> <td data-bbox="927 925 999 1093">½</td> <td data-bbox="999 925 1070 1093">½</td> <td data-bbox="1070 925 1142 1093"></td> <td data-bbox="1142 925 1214 1093"></td> <td data-bbox="1214 925 1286 1093"></td> <td data-bbox="1286 925 1366 1093"></td> </tr> <tr> <td data-bbox="392 1093 568 1171">Well Graded Sharp Sand</td> <td data-bbox="568 1093 639 1171">1½</td> <td data-bbox="639 1093 711 1171">1½</td> <td data-bbox="711 1093 783 1171">2</td> <td data-bbox="783 1093 855 1171">1½</td> <td data-bbox="855 1093 927 1171">2</td> <td data-bbox="927 1093 999 1171">2½</td> <td data-bbox="999 1093 1070 1171">1½</td> <td data-bbox="1070 1093 1142 1171">2</td> <td data-bbox="1142 1093 1214 1171">2</td> <td data-bbox="1214 1093 1286 1171">10</td> <td data-bbox="1286 1093 1366 1171">9</td> </tr> <tr> <td data-bbox="392 1171 568 1223">Soft Sand</td> <td data-bbox="568 1171 639 1223">½</td> <td data-bbox="639 1171 711 1223">½</td> <td data-bbox="711 1171 783 1223">½</td> <td data-bbox="783 1171 855 1223">½</td> <td data-bbox="855 1171 927 1223">1</td> <td data-bbox="927 1171 999 1223">1</td> <td data-bbox="999 1171 1070 1223">½</td> <td data-bbox="1070 1171 1142 1223"></td> <td data-bbox="1142 1171 1214 1223">½</td> <td data-bbox="1214 1171 1286 1223"></td> <td data-bbox="1286 1171 1366 1223"></td> </tr> <tr> <td data-bbox="392 1223 568 1361">Porous Limestone or Brick Aggregate</td> <td data-bbox="568 1223 639 1361"></td> <td data-bbox="639 1223 711 1361">½**</td> <td data-bbox="711 1223 783 1361">½</td> <td data-bbox="783 1223 855 1361">½**</td> <td data-bbox="855 1223 927 1361"></td> <td data-bbox="927 1223 999 1361">½**</td> <td data-bbox="999 1223 1070 1361">½**</td> <td data-bbox="1070 1223 1142 1361">1</td> <td data-bbox="1142 1223 1214 1361">1½</td> <td data-bbox="1214 1223 1286 1361"></td> <td data-bbox="1286 1223 1366 1361"></td> </tr> <tr> <td data-bbox="392 1361 568 1498">Lime Mortar Mix Proportions by Volume</td> <td data-bbox="568 1361 639 1498">1:2</td> <td data-bbox="639 1361 711 1498">1:2 ½</td> <td data-bbox="711 1361 783 1498">1:3</td> <td data-bbox="783 1361 855 1498">1:2 ½</td> <td data-bbox="855 1361 927 1498">1:3</td> <td data-bbox="927 1361 999 1498">1:4</td> <td data-bbox="999 1361 1070 1498">1:2 ½</td> <td data-bbox="1070 1361 1142 1498">1:3</td> <td data-bbox="1142 1361 1214 1498">1:4</td> <td data-bbox="1214 1361 1286 1498">3:1 :10</td> <td data-bbox="1286 1361 1366 1498">2:1 :9</td> </tr> </tbody> </table> <p data-bbox="392 1498 1366 1563">*Gauged mixes G1 and G2 comprise Natural Hydraulic Lime NHL5 : Lime Putty : Sand</p> <p data-bbox="392 1563 1366 1655">** Porous Limestone aggregate may be substituted for equivalent amount of soft sand to achieve the specified lime mix proportions.</p>	Constituents	Mix Reference/Durability Designation											M1 10	M2 9	M3 8	M4 7	M5 6	M6 5	M7 4	M8 3	M9 2	G1* 5-6	G2* 2-4	NHL5 Eminently Hydraulic	1	1	1							3	2	NHL3.5 Moderately Hydraulic				1	1	1						NHL2 Feebly Hydraulic							1	1	1			Lime Putty										1	1	Brick Powder (Reactive)/ Pozzolanic additive		½		½		½	½					Well Graded Sharp Sand	1½	1½	2	1½	2	2½	1½	2	2	10	9	Soft Sand	½	½	½	½	1	1	½		½			Porous Limestone or Brick Aggregate		½**	½	½**		½**	½**	1	1½			Lime Mortar Mix Proportions by Volume	1:2	1:2 ½	1:3	1:2 ½	1:3	1:4	1:2 ½	1:3	1:4	3:1 :10	2:1 :9
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3		Hydraulic lime Mortar shall be mixed as described below unless otherwise described in Appendix 24/1.																																																																																																																																			
4		<p>Mortar shall be mixed thoroughly by hand or mechanically until its colour and consistency are uniform.</p> <p>The constituent materials shall be accurately measured.</p> <p>Mortar shall be made in small quantities only as and when required for the Operations.</p> <p>Mortar which has begun to set or has been mixed for a period of more than 2 hours shall be discarded.</p>																																																																																																																																			

Clause No.		Title and Written Text
		<p>Hydraulic lime shall be delivered to Site in sealed paper bags stored in dry conditions and used within 24 weeks of manufacture.</p> <p>Brick powder in fine particle (<100 microns) reacts with free lime to form a pozzolan which improves frost resistance. Care is needed as if used at too high a proportion it can increase porosity and reduce flexibility.</p> <p>Introducing porous limestone or brick to the lime mortar mix will assist carbonation and frost resistance. Grading shall be similar to that for sharp sand. Pre-soaking prior to mixing will also help act as a retarder.</p>
		Hydraulic Lime: Sand Mortars
	5	Hydraulic lime mortars may be provided as pre-mixed dry lime/sand mixes - either bagged or silo mixes or they may be site-mixed from bagged hydraulic lime and sand.
	6	<p>Hydraulic lime mortars shall be used for the construction of masonry arch bridges which require a degree of flexibility to function structurally as arches.</p> <p>Hydraulic lime mortars shall be used for repair of masonry arch bridges that were constructed using hydraulic lime mortars.</p>
	7	All hydraulic lime mortars shall be mixed in accordance with the supplier's written instructions.
	8	Hydraulic lime mortar shall be in accordance with the durability classification required (refer to Table 24/8).

Clause No.	Title and Written Text																				
	<p>TABLE 24/8 Durability Class Requirements for Straight Hydraulic Lime Mortars</p> <table border="1" data-bbox="403 322 1342 1877"> <thead> <tr> <th colspan="4" data-bbox="403 322 1342 427">Mortar Durability Designation (with approximate compressive strengths) for General use building mortar & General use mechanical or hand pointing mortar</th> </tr> <tr> <th data-bbox="403 427 636 647">Masonry Type</th> <th data-bbox="636 427 871 647">Parapet & copings Masonry facing roadsides subject to spray & de-icing salts</th> <th data-bbox="871 427 1106 647">Other parapets, abutments & spandrel walls Above flood level</th> <th data-bbox="1106 427 1342 647">Soffit to arch barrel Above flood level</th> </tr> </thead> <tbody> <tr> <td data-bbox="403 647 636 925">Dense impermeable masonry. Squared or random. Brick, Basalt, Granite etc. (No Suction)</td> <td data-bbox="636 647 871 925">9 – 10 2.2 N/mm²</td> <td data-bbox="871 647 1106 925">7 – 8 1.8 N/mm²</td> <td data-bbox="1106 647 1342 925">5 – 6 1.5 N/mm²</td> </tr> <tr> <td data-bbox="403 925 636 1417">Medium permeability masonry. Squared or random. Brick, Blockwork, Reconstructed stone, Sandstone, Limestone and mixed quality field stone masonry. (Moderate Suction)</td> <td data-bbox="636 925 871 1417">7 – 8 1.8 N/mm²</td> <td data-bbox="871 925 1106 1417">5 – 6 1.5 N/mm²</td> <td data-bbox="1106 925 1342 1417">3 – 4 1.34 N/mm²</td> </tr> <tr> <td data-bbox="403 1417 636 1877">High permeability masonry. Squared or random. Brick, Blockwork, Reconstructed stone, Sandstone, Limestone and poor quality mixed field stone masonry. (High Suction)</td> <td data-bbox="636 1417 871 1877">5 – 6 1.5 N/mm²</td> <td data-bbox="871 1417 1106 1877">3 – 4 1.34 N/mm²</td> <td data-bbox="1106 1417 1342 1877">2 – 4 1.34 N/mm²</td> </tr> </tbody> </table>	Mortar Durability Designation (with approximate compressive strengths) for General use building mortar & General use mechanical or hand pointing mortar				Masonry Type	Parapet & copings Masonry facing roadsides subject to spray & de-icing salts	Other parapets, abutments & spandrel walls Above flood level	Soffit to arch barrel Above flood level	Dense impermeable masonry. Squared or random. Brick, Basalt, Granite etc. (No Suction)	9 – 10 2.2 N/mm ²	7 – 8 1.8 N/mm ²	5 – 6 1.5 N/mm ²	Medium permeability masonry. Squared or random. Brick, Blockwork, Reconstructed stone, Sandstone, Limestone and mixed quality field stone masonry. (Moderate Suction)	7 – 8 1.8 N/mm ²	5 – 6 1.5 N/mm ²	3 – 4 1.34 N/mm ²	High permeability masonry. Squared or random. Brick, Blockwork, Reconstructed stone, Sandstone, Limestone and poor quality mixed field stone masonry. (High Suction)	5 – 6 1.5 N/mm ²	3 – 4 1.34 N/mm ²	2 – 4 1.34 N/mm ²
Mortar Durability Designation (with approximate compressive strengths) for General use building mortar & General use mechanical or hand pointing mortar																					
Masonry Type	Parapet & copings Masonry facing roadsides subject to spray & de-icing salts	Other parapets, abutments & spandrel walls Above flood level	Soffit to arch barrel Above flood level																		
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10	Lime mortars suitable for use below flood level, depending on time required, are mortar designation 9–10 which shall be suitable for immersion within 24 hours or mortar designation 7–8 if a coffer dam shall be provided to allow 72 hours for setting.																				

Clause No.	Title and Written Text
11	<p>Site-mixed hydraulic lime mortars are sufficiently workable for laying and building stone masonry units but shall be generally not initially workable for laying bricks in a modern context without being banked up for several hours and reworked.</p> <p>Site-mixed hydraulic lime mortars shall be generally not suitable for pumping without the use of air entraining additives.</p> <p>Where required for site-mixed mortars, an air entrainer can be used to increase workability and minimise water requirement.</p> <p>Air entrainers shall be used in accordance with the manufacturer's written instructions.</p> <p>Pre-mixed dry bagged or silo mixes generally have a higher entrained air content than site-mixed mortars and shall be suitable for building, pumping and pointing without the need for additional air entrainers.</p> <p>The use of air entraining additives provides mortars of the same Durability Class which shall generally have superior performance characteristics in respect of earlier resistance to freeze/thaw action, faster rate of carbonation, better vapour permeability, and lower capillarity, due to their higher air content and reduced water demand.</p>
	<p>Gauged Hydraulic Lime: Sand Mortars</p>
12	<p>Gauged hydraulic lime mortars shall only be used where this is necessary to match existing mortars in repointing work.</p> <p>There shall be no requirement for significant structural strength in re-pointing work.</p> <p>Gauged Hydraulic lime mortar shall be in accordance with the durability classification required (Refer to Table 24/9).</p>

Clause No.	Title and Written Text																								
	<p>TABLE 24/9 Durability Class Requirements for Gauged Hydraulic Lime Mortars</p> <table border="1" data-bbox="403 322 1342 1865"> <thead> <tr> <th colspan="4" data-bbox="403 322 1342 400">Mortar Durability Designation (with approximate compressive strengths) for Non-general use hand pointing mortar</th> </tr> <tr> <th data-bbox="403 400 643 571">Masonry Type</th> <th data-bbox="643 400 882 571">Parapet & copings facing roadsides subject to spray & de-icing salts</th> <th data-bbox="882 400 1121 571">Other parapets, abutments & spandrel walls Above flood level</th> <th data-bbox="1121 400 1342 571">Soffit to arch barrel Above flood level</th> </tr> </thead> <tbody> <tr> <td data-bbox="403 571 643 864">Dense impermeable masonry. Squared or random. Brick, Basalt and Granite (No Suction)</td> <td data-bbox="643 571 882 864">N/A</td> <td data-bbox="882 571 1121 864">N/A</td> <td data-bbox="1121 571 1342 864">5 – 6 1.5 N/mm²</td> </tr> <tr> <td data-bbox="403 864 643 1323">Medium permeability masonry. Squared or random. Brick, Blockwork, Reconstructed stone Sandstone, Limestone and mixed quality field stone masonry. (Moderate Suction)</td> <td data-bbox="643 864 882 1323">N/A</td> <td data-bbox="882 864 1121 1323">5 – 6 1.5 N/mm²</td> <td data-bbox="1121 864 1342 1323">2 – 4</td> </tr> <tr> <td data-bbox="403 1323 643 1727">High permeability masonry. Squared or random. Brick, Blockwork, Reconstructed stone Sandstone, Limestone and poor quality mixed field stone masonry. (High Suction)</td> <td data-bbox="643 1323 882 1727">5 – 6 1.5 N/mm²</td> <td data-bbox="882 1323 1121 1727">3– 4 1.34 N/mm²</td> <td data-bbox="1121 1323 1342 1727">1.34 N/mm²</td> </tr> <tr> <td colspan="4" data-bbox="403 1727 1342 1865">When work is planned to continue beyond the autumn raise the durability class by at least 1 where the background masonry permits. Where the background masonry does not permit, plan to commence in the early spring and be complete before the end of summer.</td> </tr> </tbody> </table>	Mortar Durability Designation (with approximate compressive strengths) for Non-general use hand pointing mortar				Masonry Type	Parapet & copings facing roadsides subject to spray & de-icing salts	Other parapets, abutments & spandrel walls Above flood level	Soffit to arch barrel Above flood level	Dense impermeable masonry. Squared or random. Brick, Basalt and Granite (No Suction)	N/A	N/A	5 – 6 1.5 N/mm ²	Medium permeability masonry. Squared or random. Brick, Blockwork, Reconstructed stone Sandstone, Limestone and mixed quality field stone masonry. (Moderate Suction)	N/A	5 – 6 1.5 N/mm ²	2 – 4	High permeability masonry. Squared or random. Brick, Blockwork, Reconstructed stone Sandstone, Limestone and poor quality mixed field stone masonry. (High Suction)	5 – 6 1.5 N/mm ²	3– 4 1.34 N/mm ²	1.34 N/mm ²	When work is planned to continue beyond the autumn raise the durability class by at least 1 where the background masonry permits. Where the background masonry does not permit, plan to commence in the early spring and be complete before the end of summer.			
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13	Gauged hydraulic lime mortars exhibit slower rates of carbonation and higher capillarity than straight hydraulic lime mortars and shall not be used in close proximity to wet areas or in areas subject to road spray.																								
14	Air entrainers shall not be added to gauged hydraulic lime mortars.																								

Clause No.		Title and Written Text
2670AR		Anti-Graffiti Coatings
	1	Anti-graffiti coatings shall be of the sacrificial type and shall be capable of being cleaned at least twice before re-coating is necessary.
	2	The coating system shall be applied in accordance with the manufacturer's written instructions.
	3	The application of the coating system shall not change the appearance of the substrate.
	4	<p>Prior to application the surface shall be cleaned of all loose material, oil, grease, dirt and existing graffiti.</p> <p>The surface shall be lightly abraded after cleaning and drying.</p> <p>All loose and flaking paintwork shall be feathered back to a sound edge.</p> <p>A suitable sealer/primer shall be applied to bare areas and areas of graffiti which resist cleaning and may present a problem by showing through the coating system unless sealed.</p>
	5	<p>The cleaning of the coating/removal of graffiti shall not have any detrimental effect on the substrate.</p> <p>Grit-blasting water jetting or chemical cleaning agents likely to have long term effects on the substrate shall not be used.</p>
		Series 2800 Winter Service
2801AR		Winter Service Plant
	1	<p>Winter Service Plant used for spreading de-icing materials shall:</p> <ul style="list-style-type: none"> (i) be of proven design and comply with the requirements of British Standard 1622:1989– Spreaders for the Winter Maintenance of Roads, (ii) be capable of symmetrical and asymmetrical spreading in accordance with the Class A1 requirements of British Standard 1622:1989, (iii) be fitted with a de-icing material discharge indicator to inform the operator that treatment has ceased, (iv) have: <ul style="list-style-type: none"> (a) two rotating amber beacons fitted to the vehicle on the roof of the cab with a visible arc of at least 270° to the front, and (b) one rotating amber beacon at the rear of the vehicle with a visible arc of at least 270° to the rear, that shall be in operation whilst precautionary treatment and snow and ice clearance Operations are being carried out or when the snow plough is attached, (v) have a sign board reading "SPREADING" visible to following vehicles, the lettering of which shall be 160mm in height in black capitals from the 'Transport heavy alphabet' described in the Traffic Signs Regulations and General Directions on a yellow Class 1 reflective background in accordance with BS 381C, lemon yellow No 355, (vi) be fitted with a passenger seat, (vii) be painted golden yellow to BS 4800, and

Clause No.		Title and Written Text
		(viii) comply with any other relevant requirements relating to Winter Service Plant.
2802AR		Not used
2803AR		Winter Service Vehicle Data Logging and Transmitting Equipment
	1	The in vehicle data logger shall be capable of system and data back up so that the system can be recovered in 12 hours. The data shall be transferred from the vehicle to the data store in near real time (within 30 seconds of collection). In the event of communications failure, the in vehicle data logger shall be capable of storing one week's worth of data on a robust onboard storage device.
	2	The equipment shall comply with British Standard EN 15430-1:2007 Winter and road service area maintenance equipment-Data acquisition and transmission Part 1: In vehicle data acquisition.
	3	<p>The system shall provide accurate recorded data of the following parameters:</p> <ul style="list-style-type: none"> (i) location of vehicle, (ii) spreading or not spreading, (iii) rate of spreading, (iv) spreading pattern, width and lane position, (v) ploughing or not ploughing, (vi) road surface temperature, (vii) record of weight out of and weight in to the depot, (viii) beacons on or off (including confirmation that they are actually working if on), (ix) pre-wet on or off, (x) flow rates for liquid treatment, (xi) plough orientation, (xii) driver identification, (xiii) fuel usage, (xiv) distance travelled, (xv) vehicle speed, (xvi) time of leaving depot, (xvii) time of returning to the depot, (xviii) treatment type, (xix) travelling off route, with driver alert, (xx) time. <p>Data shall be referenced to the Ordnance Survey grid.</p>
	4	All records shall contain a date and time stamp, vehicle identification and the geographical position of the vehicle at the time of record creation and meet the requirements of British Standard EN 15430-1:2007 Winter and road service area maintenance equipment-Data acquisition and transmission Part 1: In vehicle data acquisition.

Clause No.		Title and Written Text
	5	The data output shall be in accordance with British Standard EN15430-1:2007 Winter and road service area maintenance equipment-Data acquisition and transmission-Part 1: In vehicle data acquisition (DPC:05/30142514DC), to allow data logging information to be easily acquired for transmission.
	6	The accuracy of all data shall be validated by the Operating Company. Calibration of the time and date stamp and Geographical Positioning System location shall be confirmed prior to commissioning and at a frequency not exceeding 12 months thereafter.
	7	The method of calibration and accuracy of the time and date stamp shall be in accordance with British Standard EN15430-1:2007 Winter and road service area maintenance equipment-Data acquisition and transmission-Part 1: In vehicle data acquisition.
2804AR		Winter Service Vehicle Data Receiving, Storing, Archiving and Web Based Systems
	1	Data transmitted from the vehicles shall be stored by the Operating Company on a secure server and be accessible by Transport Scotland or the Performance Audit Group by means of a web interface, from a commercially available computer.
	2	The web interface shall provide access to reports on any of the measured parameters detailed in clause 2803AR. These reports shall be capable of being parameterised to be configured for national, regional and local use.
	3	<p>Reports for the following shall be available:</p> <ul style="list-style-type: none"> (i) material usage (vehicle weight in and out), (ii) fuel usage, (iii) vehicle mileage, (iv) route identification and adherence to route, (v) treatment times, (vi) reports on any/all control functions (plough and spinner/chute settings), (vii) beacons on or off, (viii) driver identification, (ix) vehicle identification.
	4	<p>The system shall be capable of displaying treatment routes on a map background showing the Trunk Road Network in Scotland.</p> <p>The scale of the map shall be user selectable between Unit and national views.</p>
	5	The system shall be capable of displaying due treatment, treated and untreated routes and vehicle position and status in a graphical colour coded format.
	6	The system shall be capable of operating on dial up type connection when required.
	7	The system shall be capable of alerting the driver if the pre-determined route is not adhered to.

Clause No.		Title and Written Text
	8	The system shall be capable of generating a remote alert if the vehicle does not follow the prescribed route. The system alert shall be available via user selectable short message service and email.
	9	The system shall display time of last data transmission in order that the viewer can determine if the vehicle is stationary or if there is a break in data transmission.
	10	The Operating Company shall demonstrate how the transmission system will be capable of full operation in poor signal areas or during times of system network overload
		Series 3200 Incident Response Operations for Incident Support Units and Trunk Road Incident Support Service Units
3201AR		Incident Response
	1	<p>The response time for attendance of the Operating Company's initial, secondary and back-up Incident Response Resources at the scene of an Incident shall be as stated in Appendix 32/1.</p> <p>During the hours specified in Appendix 32/1, the Operating Company may use the resources identified to respond to requests for assistance on other Operations in connection with this Contract. However they must be able to attend at the site of any incident on any part of the Unit within the response time stated in Appendix 32/1.</p>
		Resources for Incident Operations
	2	Details of the types of Incident Support Resources that the Operating Company may utilise to respond to incidents are as specified in Appendix 32/1.
		Series 3300 Site Investigation
3301AR		Rotary Coring in Carriageways
	1	<p>Rotary coring in carriageways shall be carried out in accordance with this clause.</p> <p>Cores shall be 100mm or 150mm nominal diameter and taken in the positions and to the depths proposed by the Operating Company and consented to in writing by the Overseeing Organisation.</p>
	2	Cores shall be cut in accordance with BS 598 using a coring machine that complies with BS 4019.
	3	The walls and base of all holes from which core samples have been cut shall be thoroughly dried and painted with hot bituminous binder immediately prior to reinstatement.
	4	The holes shall be filled to within 50 to 75mm inclusive from the road surface with wet lean concrete and topped off with well compacted bituminous repair material which on completion shall be at the same level as the adjacent surface.
	5	<p>The cores shall be handled carefully to prevent damage and wrapped in polythene to prevent moisture loss.</p> <p>They shall be indelibly marked to indicate the location and date of coring.</p>

Clause No.		Title and Written Text
	6	<p>Cores shall be packaged to avoid damage, clearly labelled and delivered to the Operating Company's store.</p> <p>At the Operating Company's store, cores shall be handled carefully and stored on purpose built racks or shelves.</p>
	7	<p>Cores shall be stored for periods determined by the Operating Company to enable the necessary recording, testing and data to be obtained or inspected by the Overseeing Organisation.</p>
	8	<p>The Operating Company shall establish if the Overseeing Organisation wishes to inspect the cores prior to disposal.</p>
	9	<p>Core sampling operations testing, referencing, information obtained from data analysis and interpretation shall be recorded by the Operating Company and a copy of data and reports supplied to the Overseeing Organisation.</p>
	10	<p>Any tests required to be carried out on cores shall be subject to an Order.</p>
	11	<p>The Operating Company shall submit evidence, in writing to the Overseeing Organisation for his written consent, that the persons including any sub-contractor proposed to carry out coring testing and reporting Operations have the expertise and resources to carry out any such work.</p>
	12	<p>All coring testing and reporting Operations shall be carried out by a specialist testing firm or laboratory holding accreditation granted in respect of such coring and testing by the United Kingdom Accreditation Service (UKAS) or by the European Co-operation for Accreditation of Laboratories (EAL).</p>
3302AR		Rotary Coring in Structures
	1	<p>Rotary coring in Structures shall be carried out in accordance with this clause.</p>
		<p>Cores shall be 50mm 75mm 100mm or 150mm nominal diameter and taken in the positions and to the depths proposed by the Operating Company and consented to in writing by the Overseeing Organisation.</p>
	2	<p>The cores shall be cut in accordance with BS 598 using a coring machine which complies with BS 4019.</p> <p>Cores shall generally be cut through structural concrete with measures taken to avoid encountering reinforcement.</p>
	3	<p>The holes from which core samples have been cut shall be reinstated using repair mortar in accordance with clause 1773AR.</p>
	4	<p>The cores shall be handled carefully to prevent damage and wrapped in polythene to prevent moisture loss.</p> <p>They shall be indelibly marked to indicate the location and date of coring.</p>
	5	<p>Cores shall be packaged to avoid damage, clearly labelled and delivered to the Operating Company's store.</p>
	6	<p>At the Operating Company's store cores shall be handled carefully and stored on purpose built racks or shelves.</p>
	7	<p>Cores shall be stored for periods determined by the Operating Company to enable the necessary recording testing and data to be obtained or inspection by the Overseeing Organisation.</p>

Clause No.	Title and Written Text
8	The Operating Company shall establish if the Overseeing Organisation wishes to inspect the cores prior to disposal.
9	Any extended storage periods requested by the Overseeing Organisation shall be subject to an Order.
10	Core sampling operations, testing, referencing, information obtained from data analysis and interpretation shall be recorded by the Operating Company.
11	Any tests required to be carried out on cores shall be subject to an Order.
12	The Operating Company shall submit evidence, in writing to the Overseeing Organisation for his written consent, that the persons including sub-contractors proposed to carry out coring testing and reporting Operations have the expertise and resources to carry out the work.
13	All coring testing and reporting Operations shall be carried out by a specialist testing firm or laboratory holding accreditation granted in respect of such coring and testing by the United Kingdom Accreditation Service (UKAS) or by the European Co-operation for Accreditation of Laboratories (EAL).
3303AR	Structural Investigations
1	Separate reports upon the findings and testing together with photographic evidence as stated in Appendix 33/1 shall be supplied for each Structure.
2	The Operating Company shall determine in accordance with the other requirements of this Contract, the need for the reports to contain a section giving an expert interpretation of the results of the investigation the reports shall contain such a section.
3	The number of copies for each report shall be as stated in Appendix 33/1.
4	All sampling and testing Operations shall be carried out by a specialist testing firm or laboratory holding appropriate accreditation granted in respect of such sampling and testing.
3304AR	Inspection Patches within Surfacing on Bridge Structures
1	The general requirements for excavation and reinstatement of inspection patches within surfacing on bridges shall be as referred to in the appropriate clauses of Series 600, 700, 900 and 1100.
2	Details of patch size and location within footways and carriageways shall be determined by the Operating Company.
3	Such inspection patches shall be excavated through any flexible surfacing asphaltic sand carpet and waterproofing system which may be present.
4	Following excavation, all residual deposits of surfacing and waterproofing shall be disposed of and the deck cleaned.
5	Excavation patches shall remain open for testing and inspection and shall only be reinstated after having received the written consent of the Overseeing Organisation.
3305AR	Trial Pits in Paved Areas
1	The Operating Company shall excavate trial pits to permit inspection or sampling of unbound or bound materials.

Clause No.		Title and Written Text
	2	The size and location of the trial pits shall be determined by the Operating Company.
	3	Trial pits shall be excavated and reinstated in accordance with clause 706 except that trial pits shall remain open for testing and inspection by the Overseeing Organisation.
3306AR		Falling Weight Deflectometer Tests
	1	The Operating Company shall undertake falling weight deflectometer tests to assess the structural condition of bituminous and cementitious road pavements.
	2	The location, length to be tested and number of tests to be carried out shall be determined by the Operating Company.
	3	The testing and reporting shall be carried out in accordance with the guidance given in HD 29/08 (Design Manual for Roads and Bridges, Volume 7.3.2).
3307AR		Dynamic Cone Penetrometer Tests
	1	The Operating Company shall undertake dynamic cone penetrometer tests to assess the structural condition of bituminous and cementitious road pavements.
	2	The testing shall be carried out in accordance with the manufacturer's written instructions.
	3	The calculations and reporting shall be carried out in accordance with the guidance given in <i>Transport and Road Research Laboratory Overseas Road Note 8 – A Users Manual for a Program to Analyse Dynamic Cone Penetrometer Data</i> .
3308AR		Structural Investigations Tests
	1	Structural investigations tests shall be as described in Appendix 33/1.
		Series 6100 Core Operations
6101AR		Maintenance of Road Restraint Systems
	1	Safety barriers shall be re-tensioned in accordance with the requirements of clause 472AR.
	2	Re-tensioning required outwith the maintenance cycle shall only be when instructed by the Overseeing Organisation.
6102AR		Maintenance of Gullies, Catchpits, Interceptors, Soakaways, Manholes and Oil Separators
	1	Cleaning of gullies, catchpits, interceptors, soakaways, manholes and oil separators shall be carried out in accordance with clauses 520 and clause 521.
	2	The outlet pipe shall be jetted with clean water to ensure that it is flowing freely. The location of any restrictions in flow and obstruction that cannot be removed shall be recorded. Polluted water shall not be used to jet, surcharge or refill gullies.

Clause No.		Title and Written Text
	3	<p>Before putting a gully grating or cover back on after cleaning, a spot of paint shall be sprayed onto the underside.</p> <p>The colour of the paint shall differ for each cycle of cleaning.</p>
	4	<p>Details of the Operations including the Scheme Identifier, Operations Instructions road and number of gullies and chambers emptied and any Defects found in respect to blockages or damages to the drainage system or components together with the location of those Defects shall be recorded.</p>
6103AR		Maintenance of Drainage Grips
	1	<p>Drainage grips shall be maintained by cutting and cleaning such that free flow of water shall not be impeded and water does not stand on the carriageway adjacent to the grip.</p>
6104AR		Maintenance of Linear Drainage Systems,
	1	<p>Linear drainage systems shall be maintained by cleaning in accordance with clauses 520 and clause 521.</p>
	2	<p>Cleaning may be carried out by drawing through a mandrel with a diameter 20mm less than the nominal diameter of the pipe or nominal minimum area of the "waterway area" of the block.</p>
	3	<p>If necessary a root cutter attachment shall be used with the high-pressure water jetter.</p>
	4	<p>Piped grips shall be cleaned by removing all silt and loose obstructions from the pipe such that the free flow of water is not impeded and that the water does not stand on the carriageway adjacent to the piped grip.</p>
	5	<p>Each end of the piped grip shall be maintained free from vegetation or other obstructions including any material expelled from the pipe.</p>
	6	<p>Where the invert of the outlet is below the invert of the ditch the invert of the ditch shall be excavated until the invert of the pipe is exposed.</p>
6105AR		Maintenance of Filter Material
	1	<p>The filter material shall be loosened by harrowing to a depth of 200mm over the full width of the drain including contiguous filter material so as to minimise retention of water within this depth.</p>
	2	<p>All weed growth in filter material shall be treated in accordance with clause 3002.</p>
	3	<p>The location of any obstruction that cannot be removed shall be recorded.</p>
	4	<p>Any build up of detritus within the filter material or between the edge of the carriageway and the filter drain shall be removed.</p>
6106AR		Maintenance of Drainage Structures
	1	<p>Drainage structures shall be maintained by cleaning in accordance with clauses 520 and clause 521.</p>
	2	<p>Each end of the drainage structure including any ancillary drainage items is shall be kept free of vegetation and other obstructions including any material disturbed during cleaning.</p>

Clause No.		Title and Written Text
	3	Where the invert of any drainage structure at intake and outfall points is below the invert of an adjacent watercourse, the watercourse invert shall be excavated to the invert level of the drainage structure to facilitate flow from the drainage structure.
	4	The Operating Company shall maintain a record of any defects found during maintenance Operations and shall report any hazards immediately to the Overseeing Organisation.
6107AR		Maintenance of Ancillary Drainage Items
	1	Ancillary drainage shall be maintained by clearing all vegetation and debris and cleaning to remove all silt, obstructions and other detritus.
	2	Sluices, tidal flaps, penstocks, valves, pumps and other specialist equipment shall be maintained by checking that all mechanisms are functioning as required and lubricating any moving parts in accordance with any manufacturers' instructions.
	3	The Operating Company shall maintain a record of any defects found during maintenance operations and shall report any hazards immediately to the Overseeing Organisation.
6108AR		Litter and Refuse
	1	Subject to the other provisions of this Contract, the Operating Company shall ensure that all roads and other land within the Unit are maintained to the standards of a Category 6 Zone as set out in the Code of Practice on Litter and Refuse issued under section 89 of the Environmental Protection Act 1990 document no. SE/2006/164 by the Scottish Executive Environment Group in October 2006.
	2	Road cleaning and clearance of channels shall be to such a standard that, on completion of the Operation, there is an unimpeded passage for storm water into the drainage system.
		Vehicles engaged in sweeping shall only travel in the same direction of flow as the adjacent road traffic. Any growth of grass or other vegetation which may obstruct the flow of water in the channel shall be controlled in accordance with clause 3002.
	3	The term "grassed areas" as referred to in the Code of Practice on Litter and Refuse shall be deemed to cover all areas within the Trunk Road boundary which are not hard surfaced.
	4	Central reservations may be grassed areas or hard surfaced areas.
6109AR		Maintenance of Road studs
	1	Any road stud which has become displaced from its socket or is loose or broken shall be removed from the carriageway immediately and the resulting socket shall be filled with bituminous instant repair material.
6110AR		Maintenance of Structures – General
	1	Vegetation on or adjacent to a Structure shall be removed using methods which do not damage the structure. Injurious weed such as Japanese Knotweed and Giant Hogweed shall be removed in accordance with clause 3002 and reported to the Overseeing Organisation.

Clause No.	Title and Written Text
2	Debris from any part of a Structure shall be removed using methods which do not damage the Structure.
3	Bird droppings shall be removed using methods which do not damage the structure.
5	Bolts shall be checked and tightened to the appropriate torque.
5	Missing bolts shall be replaced and tightened to the appropriate torque.
6	Local damage to protective systems shall be made good.
7	Cleaning shall not be carried out when the ambient temperature is 2°C or less and falling or when the Operations are likely to result in the formation of ice.
6111AR	Maintenance of Expansion Joints
1	Debris and vegetation shall be cleaned out from the expansion joint.
2	Bolts securing the expansion joint, cover plates and nosing joints shall be checked and tightened to the appropriate torque.
3	Missing bolts shall be replaced and tightened to the appropriate torque.
4	Securing compounds shall be checked and repaired as necessary.
5	Neoprene or elastomeric material shall be checked for splitting or detachment from the supporting frame by a visual inspection and the use of appropriate hand tools.
6	Cover plates and nosing joints shall be checked by visual inspection and the use of appropriate tools.
7	Debris and sediment from associated drainage below the joint shall be cleared.
6112AR	Maintenance of Bridge Drainage Systems
1	Cleaning of bridge drainage systems shall be carried out in accordance with clauses 520, 6102AR, 6103AR, 6104AR and 6106AR.
2	Drainage holes in structural components, obstructions, outlet pipes, outlet manholes, weep pipes, silt and debris deposits shall be cleaned using appropriate hand tools drainage rods and mechanical means including jetting.
3	Flap valves shall be checked for operation by hand or using appropriate lifting devices.
4	Hinges and fixings shall be greased using a corrosion inhibiting lubricant that will not flow below 70°C.
5	Vegetation and weeds blocking pipes shall be removed.
6113AR	Maintenance of Parapets and Pedestrian Protection on Structures
1	Hollow section drain holes shall be cleaned.
2	Bolts shall be checked and tightened to the appropriate torque.
3	Missing bolts shall be replaced and tightened to the appropriate torque.
4	Local damage to protective systems shall be made good.
5	Parapet expansion joints shall be checked for freedom.

Clause No.	Title and Written Text
6	Connections with adjoining vehicle restraint barriers shall be checked.
6114AR	Maintenance of Bearings and Bearing Shelves
1	Maintenance shall be in accordance with the manufacturers' requirements.
2	Local damage to protective systems shall be made good.
3	Bearings shall be checked for freedom of movement and any signs of misalignment, binding, distortion or excessive freedom shall be reported to the Overseeing Organisation.
6115AR	Maintenance of Structures Over or Conveying Watercourses
1	Structures over or conveying watercourses shall be maintained, including clearing of vegetation, debris and encrustations, greasing and lubrication where appropriate.
2	Maintenance shall be in accordance with manufacturers' requirements or information in the maintenance manual or as-built records.
6116AR	Maintenance of Sign or Signal Gantries and High Mast Lighting Masts
1	Holding down assemblies and fixings, including to cladding, shall be checked and tightened to the appropriate torque.
2	Missing bolts in the holding down assemblies and fixings shall be replaced and tightened to the appropriate torque.
3	Holding down assemblies shall be cleaned and re-greased in accordance with the manufacturer's written specifications, where available.
4	Cladding shall be cleaned using detergents that will not discolour/degrade cladding finishes.
5	Seals to box type gantries shall be visually inspected for leaks using torches and tools suitable for use in confined spaces. Any box type gantries that are not wind and waterproof shall be reported to the Overseeing Organisation.
6	High mast winch and head frame assemblies shall be inspected and maintained in accordance with the manufacturers requirements.
7	Removal of debris from any part of a Structure shall be undertaken without damage to the Structure and any protective systems.
8	Local damage to protective systems shall be made good.
6117AR	Maintenance of Non-structural items
1	Moveable parts shall be cleaned and greased and in accordance with the manufacturers' requirements.
2	Holding down assemblies and fixings, including to cladding, shall be checked and tightened to the appropriate torque.
3	Missing bolts in the holding down assemblies and fixings shall be replaced and tightened to the appropriate torque.
4	Holding down assemblies shall be cleaned and re-greased and in accordance with the manufacturer's written specifications, where available.
5	Local damage to protective systems shall be made good.
6	Vegetation shall be removed in accordance with clause 6110AR.

Clause No.		Title and Written Text
6118AR		Maintenance of Underpasses and Culverts used by Pedestrians and Cyclists and Retaining Walls
	1	All surfaces, painted finishes and protective systems within culverts and underpasses including ceilings, soffits and handrails shall be cleaned without any detrimental effect to the surface finishes or protective systems.
	2	Cleaning of polycarbonate mirrors shall be undertaken by hand using the appropriate methods as specified in writing by the manufacturer, where available.
6119AR		Maintenance of Road Traffic Signs
	1	Road traffic signs shall be maintained by cleaning using methods which do not damage them.
	2	Hazard posts and marker posts shall be straightened and the ground around the base of the post re-compacted.
	3	Cleaning shall not be carried out when the ambient temperature is 2°C or less and falling or when the Operations are likely to result in the formation of ice on the footway or carriageway.
	4	Ladders shall not be leant against sign faces.
6120AR		Maintenance of Lit Sign Units
	1	<p>Lit Sign Units shall be maintained by:</p> <ul style="list-style-type: none"> (i) cleaning of all photo electric control units, luminaire external and internal surfaces and any other components affecting the optical performance of the luminaire using methods which do not damage them, (ii) degreasing, lubricating and checking the operation of all toggles, wing nuts, hinges, door locks and lifting gear, (iii) aligning bracket luminaire and luminaire optical equipment in respect of the sign face and to minimise glare to traffic, (iv) checking and tightening screws and locking devices in accordance with the manufacturer's instructions, (v) identifying and recording damage, corrosion or misalignment of posts, (vi) identifying and recording electrical component showing signs of overheating fracture condensation or tracking, (vii) refitting lamps removed for cleaning purposes shall be or, if no longer serviceable, replacing with a new lamp of an equivalent specification, (viii) replacing lamps, (ix) marking new lamps with the date of installation and recording this date, (x) identifying and recording faults on any electrical unit, (xi) visually checking fixings and recording any defects, (xii) identifying and recording damage, corrosion or other defects of conduits, (xiii) checking all electrical connections and recording any defects,

Clause No.		Title and Written Text
		(xiv) checking all earthing connections and recording any defects, clearing debris from around sign post bases for 1 metre radius.
	2	The supply shall be isolated at the cut-out for the removal and fitting of lamps.
	3	Any faulty lamp shall be disposed of in accordance with clause 1370AR.
6121AR		Maintenance of Traffic Signals
	1	<p>Traffic signals shall be maintained by:</p> <ul style="list-style-type: none"> (i) cleaning lenses internal and external surfaces and any other components affecting the optical performance of the lenses in accordance with manufacturer's recommendations, (ii) checking and tightening all grub screws and locking devices in accordance with the manufacturer's instructions, (iii) identifying and recording damage, corrosion or misalignment of posts, (iv) identifying and recording electrical component showing signs of overheating fracture condensation or tracking, (v) refitting lamps removed for cleaning purposes shall be or, if no longer serviceable, replacing with a new lamp of an equivalent specification, (vi) identifying and recording faults on any electrical unit, (viii) visually checking fixings and recording any defects, (ix) identifying and recording damage, corrosion or other defects of conduits, (x) checking all electrical connections and recording any defects, (xi) checking of all earthing connections and recording any defects, (xii) clearing debris from around post bases for 1 metre radius.
	3	The supply shall be isolated at the cut-out for the removal and fitting of lamps.
	4	Any faulty lamp shall be disposed of in accordance with clause 1370AR.
6122AR		Maintenance of Roadside Electrical Apparatus, Lighting and Power Supplies
	1	Special requirements for equipment identified in the risk assessment shall be in place prior to electrical maintenance work commencing.
	2	The Operating Company shall obtain the prior agreement of the appropriate third party before carrying out work which will result in loss of service of third party roadside electrical apparatus.
	3	Replacement components shall be either the same as that being replaced or an equivalent.
	4	The Operating Company shall store all faulty columns and lanterns removed from the Unit for four weeks to allow inspection by the Overseeing Organisation.

Clause No.		Title and Written Text
	5	The Operating Company shall carry out non-cyclic maintenance Operations of luminaires, columns and brackets, underground cable systems, feeder pillars and associated switchgear, control systems, and any other roadside electrical apparatus and lighting.
	6	When replacing luminaires, columns, brackets and other electrical apparatus as non-cyclic maintenance Operations, the Operating Company shall comply with the aesthetic requirements of clause 1302 and shall ensure that any replaced items match the existing in physical appearance, lighting levels and operational capability.
	7	Electronic control gear or low loss control gear shall be used in all replacement luminaires.
	8	The Operating Company shall inform Traffic Scotland Operator and Traffic Scotland maintenance contractor prior to isolating or energising power supplies to any equipment that Traffic Scotland operates.
	9	All works carried out by the Operating Company, with the exception of inspections and testing on electrical apparatus shall be recorded by: (i) a works report, (ii) a call out report, or (iii) another method approved by the Overseeing Organisation.
	10	The Operating Company when submitting Call Out Reports and Works Reports shall use the format of the model forms below. These reports shall be forwarded to the Overseeing Organisation in accordance with the reporting requirements of Schedule 5.
	11	The Operating Company shall comply with <i>Transport Scotland guidance document LDS8020_09 – Guidance on the preparation of statement of intents relating to proposed works on Road Lighting and other Electrically Energised Apparatus</i> when submitting bids for Works relating to electrical apparatus.
	12	The Operating Company shall comply with of the recommendations made in Transport Scotland guidance document <i>LDS8018_09 – Guidance on Sustainability in relation to Roadside Electrical Equipment and Lighting</i> .
	13	The Operating Company shall ensure that new items of energy consuming equipment supplied for use on the Unit are provided with an appropriate charge code (ELEXON code) for incorporation into the electrical apparatus inventory in accordance with Transport Scotland guidance document <i>LDS8012_09 – Guidance Note on MPANS and using ELEXON Consumption Codes for Roadside Electrical Equipment and Lighting</i> .

Call Out Report Form

DATE WEATHER CONDITIONS

TIME CALLED OUT CALLED OUT BY

TRUNK ROAD/MOTORWAY LOCATION

DESCRIPTION OF WORK

To include: equipment damaged
nature of emergency
registration of any vehicle involved
colour and type of vehicle involved
name and number of Police Officer at scene
photographs glued to reverse side of report
details of any liaison with electricity company
police station reference.

MATERIALS USED

To include stores issue number.

TIME ON SITE

TIME OF LEAVING SITE

ADDITIONAL TEAM TYPES AND DURATION

DESCRIPTION OF PLANT USED AND DURATION

NAME OF APPROVED ELECTRICIAN

SIGNATURE OF APPROVED ELECTRICIAN

NAME OF SUPERVISOR

SIGNATURE OF SUPERVISOR

Works Report Form	
ORDER NUMBER	DATE OF ISSUE
TODAY'S DATE	
WEATHER CONDITIONS	
LOCATION	TIME OF ARRIVAL ON SITE
DESCRIPTION OF WORK	
To include accurate details of all site operations undertaken in order of the Site Operations carried out:	
results of tests or protective measures taken by the operatives	
any difficulties and further action required	
details as clause 1402 times of isolation and energising of power supplies	
details of any liaison with electricity companies.	
MATERIALS USED	
TIME OF LEAVING SITE	
TYPE OF CLOSURE USED	
DURATION OF CLOSURE	
OUTSTANDING WORK	
DESCRIPTION OF TEAM TYPES USED AND DURATION	
NAME OF SUPERVISOR	
SIGNATURE OF SUPERVISOR	

Clause No.		Title and Written Text
6123AR		Not used
6124AR		Maintenance of High Mast Lighting
	1	Maintenance of high mast lighting units shall be in accordance with clause 6122AR and Technical Report No. 7 High Masts for Lighting and CCTV (2000 Edition), published by The Institution of Lighting Engineers.
6125AR		Not used
6126AR		Not used
6127AR		Removal of Graffiti, Posters and Encrusted Deposits
	1	Graffiti, posters and encrusted deposits shall be removed by suitable methods which do not damage the substrate.
6128AR		Not used
6129AR		Not used
6130AR		Maintenance of Geotechnical Assets
	1	The removal of stones, rocks and other debris from behind and in contact with the geotechnical assets shall be carried out within or associated with the Unit at sufficient frequency to ensure that damage does not occur to the Asset.
		Series 6200 Professional Services Staff
6201AR		Requirements for Professional Services Staff The requirements of role, qualifications, experience, areas of knowledge and key and specific tasks for staff engaged in undertaking Professional Services shall be as stated in Appendix 62/1.
		Preliminaries
110SR		Information Boards
	1	The information boards required are: (i) Network Customer Information Signs The Operating Company shall supply, erect and, at the end of this Contract Period, remove Network Customer Information Signs as stated in Schedule 3 Part 6. The Network Customer Information Signs shall be erected at the locations of the existing signs at the Commencement of Service Date. The Operating Company shall maintain the signs in a clean condition. Signs shall be constructed and assembled in accordance with clause 1207. (ii) Works Contract Information Signs Scheme Information Boards shall comply with the Traffic Signs Regulations and General Directions (2002) sign reference 7007.1 and shall be constructed and assembled in accordance with clause 1207.

Clause No.	Title and Written Text
	<p>(iii) Operations Information Signs</p> <p>Temporary scheme contact signs, as defined in the Traffic Signs Regulations and General Directions (2002), sign reference 7008, shall be erected at all sites within the Unit while Operations, including traffic management, are being carried out.</p> <p>In the permitted variants of sign reference 7008, the word "Undertaker's" shall be replaced with the words "Operating Company's".</p> <p>In the description of the sign reference 7008, the word "employer" shall be replaced with the words "Operating Company".</p> <p>The signs shall be erected in a prominent position at either end of the Site so that they may be read easily by users of the Trunk Road.</p> <p>The sign shall display the name and telephone number of the organisation responsible for carrying out such Operations.</p>
2	The Operating Company shall keep clean and maintain any information boards and shall dismantle and remove them on completion of the Operations.
3	The Operating Company may erect for its own purpose sign boards at the entrance to each of the compounds which it uses in connection with the maintenance of the Unit. The size of these boards shall be no greater than the boards required for Network Customer Contact Signs and shall be subject to the approval of the appropriate planning authority.
4	Operating Company advertising boards other than those set out in Schedule 3 Part 6 will not be allowed on or adjacent to the Unit except at the entrance to compounds.
1202SR	General Requirements for Permanent Traffic Signs
1	Materials for permanent traffic signs and their construction, assembly, location and erection shall comply with this Series, Series 1400 and the requirements of the Contract. The manufacture and installation of traffic signs shall be in accordance with the quality management scheme described in Appendix A.
2	Each complete traffic sign or part thereof shall be capable of passing the tests in BS EN 12899-1:2001. Additionally, unless protected by existing safety barriers signs shall be, by preference, designated as Passively Safe and shall therefore conform to testing as BSEN12767:2007, TD89/08 and be installed in compliance with TD19/06.
3	Sign panels of internally illuminated signs, transilluminated signs and luminaire face panels shall, comply with impact BS EN 12889-1:2001.
4	All lit traffic signs shall comply with Category 1 luminance of BS EN 12899-1:2001
5	<p>Before the commencement of fabrication of any traffic sign, the Operating Company shall submit for the Overseeing Organisation's approval:</p> <p>(i) fabrication drawings for 'directional informatory' and 'informatory' signs which shall be as required by Appendix 1/4,</p> <p>(ii) the information about 'warning', 'regulatory' and other traffic signs required in Appendix 12/1.</p>

Clause No.	Title and Written Text
6	A traffic sign housing shall be provided with vandal and weather resistant locks. Keys shall be provided to the Overseeing Organisation, in the quantities stated in Appendix 12/1. Types of lock shall be kept to a minimum and shall be as described in Appendix 12/1.
7	The backs of traffic signs shall have a location identifying mark as described in Appendix 12/1. Illuminated traffic signs shall also be labelled in accordance with Transport Scotland (TS) Guidance Note GN01/07 'Trunk Road Lighting Identification System'. The identifying code shall be provided by the Operating Company responsible for the road. Contact details are provided in Appendix 12/1.
8	Traffic signs and poles shall at all times be handled, transported and stored in accordance with the manufacturers recommendations and be at all times adequately protected to prevent damage.
1204SR	Posts for Permanent Traffic Signs
1	<p>Posts for permanent traffic signs shall be as described in Appendix 12/1 and shall comply with BS EN 12899-1:2001. The surface protection requirements shall similarly comply with BS EN 12899-1:2001 installation shall be in compliance with TD 19/06. Sign posts shall also conform to testing as BSEN12767:2007 and be constructed as to conform to the following:</p> <ul style="list-style-type: none"> (i) steel posts shall be tubular or rectangular hollow section complying with BS EN 10 210, joists, universal beams or columns complying with BS 4-1, and shall be manufactured from steel complying with grade S275 JO or S275 J2, (ii) aluminium posts shall be of tubular or rectangular hollow section, lattice or other construction as agreed with the Overseeing Organisation. Such posts shall not include joints except at the sign head fixing, (iii) Concrete posts shall only be used for special and specific applications. Such use shall be agreed with the Overseeing Organisation on a site by site basis.
2	Posts shall not protrude above the top of the sign unless supporting an external luminaire, in which case the protrusion shall be kept to no greater than 120mm. Posts shall be fitted with suitable permanently affixed weatherproof cap of a type capable of providing watertight protection for a minimum of 20 years.
3	Internally illuminated posts for pedestrian crossing beacons shall comply with sub-clause 2 above and where appropriate with BS EN 12899-1:2001.
4	Signs erected on a single post shall be positioned so that the post is in the centre of the sign, unless otherwise described in Appendix 12/1.
5	Compartments for electrical equipment shall be as described in Appendix 12/1 and, wherever practicable shall be installed such that the door is facing away from the oncoming traffic allowing maintenance personnel to access the door while facing the traffic. The use of other access door orientation shall only be agreed with the Overseeing Organisation at very specific locations. In the case of signs supported by more than one post, such compartment shall be on the post furthest from the carriageway unless otherwise described in Appendix 12/1.

Clause No.	Title and Written Text
6	Where Flange plates are required they shall have holes or slots as described in Appendix 12/1 to accommodate the installation system.

TABLE 50/2SR: Requirements for Bridges, Parapets, Bearings, CCTV Masts, Cantilever Masts, Steel Lighting Columns and Bracket Arms and other Highway Structures: Protective Systems

I (M) – High Build Epoxy (2 pack)/ Polyurethane (2 pack) finish				
Substrate Type	1 Steel	2 Aluminium metal spray, zinc metal spray	3 Existing paint coats	4 Existing paint coats
Surfaces prepared to	Clean, bright Sa2 or St3 quality steel	Bright or sound metal coating	Sound finishing coat or last undercoat	Other sound paint coats
1st Coat				
Item No.	Item 115	Item 115	Nil	Nil
Minimum dry film thickness (µm)	100	100	–	–
2nd Coat				
Item No.	Item 116	Item 116 or 112	Nil	Item 116 or 112
Minimum dry film thickness (µm)	–	–	–	100
3rd Coat				
Item No.	Item 168	Item 168	Item 168	Item 168
Minimum dry film thickness (µm)	50	50	50	50
Minimum total dft of the paint system to be obtained (µm)	300µm	300µm	50µm	175µm
STRIPE COATS	Item 112, 80 µm mdf. Brush or airless spray. One stripe coat in area prepared to clean steel or sound metal coating. Applied over 1 st coat.			
PATCH COATS	Nil			

TABLE 50/2SR: Requirements for Bridges, Parapets, Bearings, CCTV Masts, Cantilever Masts, Steel Lighting Columns and Bracket Arms and other Highway Structures: Protective Systems (Continued)

NOTES:

1. When a light tint gloss finish is required an extra coat of Item 168 shall be applied. Item 169 Polyurethane Finish, may be used in lieu of Item 168 to provide a semi-gloss finish, alternatively Item 164 (Moisture Cure Polyurethane finish) can provide a semi-gloss finish and is tolerant of surface moisture (but not running water) and low temperatures during application and curing.
2. Types I (M) and II (M) can be combined to allow paint maintenance to proceed when temperature falls and relative humidity increases and for night work.

HEALTH & SAFETY

Polyurethane (two pack) and Moisture Cured Polyurethane paints contain isocyanate and can be injurious to health if not used correctly.

An assessment of the risks and controls for their safe use shall be carried out before use.

TABLE 50/2SR: Requirements for Bridges, Parapets, Bearings, CCTV Masts, Cantilever Masts, Steel Lighting Columns and Bracket Arms and other Highway Structures: Protective Systems (continued)

II (M) – MC/Polyurethanes				
Substrate Type	1 Steel	2 Aluminium metal spray, zinc metal spray	3 Existing paint coats	4 Existing paint coats
Surfaces prepared to	Clean or bright steel	Bright or sound metal coating	Sound finishing coat or last undercoat	Other sound paint coats
1st Coat				
Item No.	Item 160	Item 160	–	–
Minimum dry film thickness (µm)	40	40	–	–
2nd Coat				
Item No.	Item 162	Item 162	–	Item 162
Minimum dry film thickness (µm)	–	–	–	70
3rd Coat				
Item No.	Item 162	Item 162	–	Item 162
Minimum dry film thickness (µm)	70	70	–	70
4th Coat				
Item No.	Item 164/169	Item 164/169	Item 164/169	Item 164/169
Minimum dry film thickness (µm)	40/50	40/50	40/50	40/50
Minimum total dft of the paint system to be obtained (µm)	275/325µm	275/325µm	50/100µm	225/275µm
STRIPE COATS	Item 162, 50 µm mdf. Brush or airless spray. Two stripe coats, the first applied over 1st coat, the second coat applied over the 2nd coat.			
PATCH COATS	Nil			

TABLE 50/2SR: Requirements for Bridges, Parapets, Bearings, CCTV Masts, Cantilever Masts, Steel Lighting Columns and Bracket Arms and other Highway Structures: Protective Systems (continued)

NOTES:

1. Item 168, Polyurethane (two pack) gloss finish may be used in lieu of Item 164 MC Polyurethane semi-gloss finish (two pack Polyurethane gloss finishes shall be less tolerant of moisture and low temperatures during application and curing than MC Polyurethanes and shall therefore only be specified when conditions preclude the formation of moisture on surfaces and when the ambient temperature is likely to be above 5°C during application and the curing period).
2. Types I (M) and II (M) can be combined to allow paint maintenance to proceed when temperature falls and relative humidity increases and for night work.

HEALTH & SAFETY

Polyurethane (two pack) and Moisture Cured Polyurethane paints contain isocyanate and can be injurious to health if not used correctly.

An assessment of the risks and controls for their safe use shall be carried out before use.

TABLE 50/2SR: Requirements for Bridges, Parapets, Bearings, CCTV Masts, Cantilever Masts, Steel Lighting Columns and Bracket Arms and other Highway Structures: Protective Systems (continued)

	III (M) – Extended Cure Epoxy/Polyurethanes	III (M) (alternative) – Extended Cure Epoxy/Polyurethanes
Substrate Type	1 Hot dip galvanizing	2 Hot dip galvanizing
Surfaces prepared to	Bright or sound metal coating	Bright or sound metal coating
1st Coat		
Item No.	Item 155 or other adhesion promoter	Item 121
Minimum dry film thickness (µm)	–	100
2nd Coat		
Item No.	Item 121	Item 164,168 or 169
Minimum dry film thickness (µm)	100	50
3rd Coat		
Item No.	Item 164,168 or 169	–
Minimum dry film thickness (µm)	40/50/50	–
Minimum total dft of the paint system to be obtained (µm)	175/250µm	175µm
STRIPE COATS	Item 121, 80 µm mdf. Brush or airless spray. One stripe coat in area prepared to clean steel or sound metal coating Applied over 1st coat	
PATCH COATS	Nil	

TABLE 50/2SR: Requirements for Bridges, Parapets, Bearings, CCTV Masts, Cantilever Masts, Steel Lighting Columns and Bracket Arms and other Highway Structures: Protective Systems (continued)

NOTES:

1. Some Item 121 formulations have been developed for direct application to hot dipped galvanised surfaces with excellent adhesion without the need for an adhesion promoter (to be checked with and guaranteed by paint manufacturer).
2. When a light tint gloss is required an extra coat of Item 168 shall be applied. Item 164, Moisture Cured Polyurethane Finish, may be used in lieu of Item 168 to provide a semi-gloss finish tolerant of surface moisture (but not running water) and low temperatures during application and curing.

TABLE 50/2SR: Requirements for Bridges, Parapets, Bearings, CCTV Masts, Cantilever Masts, Steel Lighting Columns and Bracket Arms and other Highway Structures: Protective Systems (continued)

HEALTH & SAFETY

Polyurethane (two pack) and Moisture Cured Polyurethane paints contain isocyanate and can be injurious to health if not used correctly. An assessment of the risks and controls for their safe use shall be carried out before use.

IV (M) – MC/Epoxy/Polyurethane	
Substrate Type	1 Steel
Surfaces prepared to	Clean, bright or Sa2 or St3 quality steel
1st Coat Item No. Minimum dry film thickness (µm)	Item 160 50
2nd Coat Item No. Minimum dry film thickness (µm)	Item 116 or 112 –
3rd Coat Item No. Minimum dry film thickness (µm)	Item 164 or 168 50
Minimum total dft of the paint system to be obtained (microns)	250µm
STRIPE COATS	Item 112, 80µm mdft. Brush or airless spray. One stripe coat in area prepared to clean steel or sound metal coating Applied over 1st coat
PATCH COATS	Nil

NOTES:

1. When a light tint gloss finish shall be required an extra coat of Item 168 shall be applied. Item 164, Moisture Cured Polyurethane Finish may be used in lieu of Item 168 to provide a semi-gloss finish tolerant of surface moisture (but not running water) and low temperatures during application and curing.

HEALTH & SAFETY

Polyurethane (two pack) and Moisture Cured Polyurethane paints contain isocyanate and can be injurious to health if not used correctly.

An assessment of the risks and controls for their safe use shall be carried out before use.

TABLE 50/2SR: Requirements for Bridges, Parapets, Bearings, CCTV Masts, Cantilever Masts, Steel Lighting Columns and Bracket Arms and other Highway Structures: Protective Systems (continued)

Grease paint system for maintenance of an Oleo-resinous system on a zinc metal sprayed coating where there has been extensive breakdown of the paint system over areas where corrosion of the zinc metal coating has started.

Also may be used, subject to the written approval of the Overseeing Organisation as a temporary measure over steel strengthening (additional stiffeners, welding or other measures) on the insides of boxes and to external bridge bearings where loose surface paint has been removed.

V (M) – Grease Paint			
Substrate Type	1 Steel	2 Aluminium metal spray, zinc metal spray or hot dip galvanizing	3 Existing paint coats
Surfaces prepared to	Clean, bright or Sa2 or St3 quality steel	Bright or sound metal coating	Sound finishing coat or last undercoat or other sound paint coats
1st Coat: Grease Paint Penetrating Primer Item No. Minimum dry film thickness (µm)	Item 200 Nominal	Item 200 Nominal	Item 200 Nil
2nd Coat: Grease Paint Undercoat, yellow Item No. Minimum dry film thickness (µm)	Item 201 150	Item 201 150	Item 201 Nil
3rd Coat: Grease Paint Finish, black Item No. Minimum dry film thickness (µm)	Item 201 150	Item 201 150	Item 201 150
Minimum total dft of the paint system to be obtained (µm)	330µm	350µm	160µm
STRIPE COATS	Item 201, 150µm mdft. Brush. One stripe coat in all areas over 2 nd coat		
PATCH COATS	Item 201. Brush, over 2 nd coat		

TABLE 50/2SR: Requirements for Bridges, Parapets, Bearings, CCTV Masts, Cantilever Masts, Steel Lighting Columns and Bracket Arms and other Highway Structures: Protective Systems (continued)

NOTE:

The total dft of existing coats plus new coats, including patch coats, shall not be less than 400 µm.

Number of patch coats to suit.

Cancelled Clauses Tables And Figures	
Clause No	Title and Written Text
	None

APPENDIX 0/2 - CONTRACT-SPECIFIC MINOR ALTERATIONS TO EXISTING CLAUSES, TABLES AND FIGURES INCLUDED IN THIS CONTRACT

Clause No.	Alterations to be made
	Preliminaries
104	Standards Quality Assurance Agreement Certificates and Other Approvals
4	In sub-clause 4, add a new sentence at the end as follows: "All Quality Management Schemes listed in Appendix A of the Specification for Highway Works shall be applicable to this Contract".
120	Recovery Vehicles For Breakdowns
9	Insert in sub-clause 9, after "A copy of each certificate shall be provided to the Overseeing Organisation not less than 14 days before the commencement of the recovery operations", the following: "and a copy of each certificate shall be kept by the Operating Company".
17	Insert in sub-clause 17 new paragraph as follows: "The Operating Company shall assist, when required by the Overseeing Organisation or the Police, in the removal of loads or parts thereof deposited within the Site".
18	Insert in sub-clause 18, before "The recovery service is ...", add: "Unless otherwise required under the Order,"
19	Insert in sub-clause 19 new paragraph as follows: "When moving broken down or damaged vehicles, the Operating Company shall take all reasonable measures to prevent further damage to the vehicles."
21	Insert in sub-clause 21 new paragraph as follows: "All necessary arrangements shall be made for recovery vehicle(s) and impact protection vehicles as described in an Order to be on standby to be available on Site within 30 minutes of a call-out."
23	Insert in sub-clause 23 new paragraph as follows: "Drivers shall be informed that they must make their own arrangements for further assistance."
26	In sub-clause 26 delete: "The Contractor shall submit weekly to the Overseeing Organisation:" and replace with: "The Contractor shall maintain at the Central Office:"
32	Insert in sub-clause 32: After "Vehicle and Operator Services Agency (VOSA) approved testing station,...", the following: "or the Freight Transport Association, conducted not less than 14 days nor more than 28 days before the vehicles are required,"

Clause No.		Alterations to be made
		<p>Delete "annually on the due anniversary of the inspection" and replace with:</p> <p>"at intervals not exceeding six months where the period for which the recovery vehicles are required exceeds six months, ..."</p> <p>Add a new paragraph as follows:</p> <p>"A copy of each inspection report shall be kept in:</p> <ul style="list-style-type: none"> (i) the Operating Company Central Office, (ii) the recovery vehicle."
	52	<p>Inset in sub-clause 52, after "The contractor shall ...", the following:</p> <p>"provide suitable mess and other welfare arrangements for the recovery operatives which shall:</p> <ul style="list-style-type: none"> (i) be in the form of temporary accommodation, (ii) be located at the recovery vehicle station, and <p>shall ..."</p>
		SITE CLEARANCE
201		Clearing
	6	<p>In sub-clause 6, after paragraph 2, add new paragraph as follows:</p> <p>"In the case of items such as stone, copes, granite setts, kerbs and concrete paving, stacking and protection shall be achieved by palletising."</p>
	7	<p>Delete sub-clause 7 and replace with:</p> <p>"7. Topsoil excavated for any purpose shall be reserved and protected for re-use.</p> <p>Multiple handling of topsoil shall be kept to a minimum.</p> <p>After completion of the works the topsoil shall be spread over the disturbed ground, any surplus being disposed of as described in clause 602"</p>
204		Hazardous Materials
	1	<p>In sub-clause 1, after "...in Site clearance", insert "or any other work on the Unit including Incident Response".</p>
		DRAINAGE AND SERVICE DUCTS
507		Chambers
	19	<p>Add the following new sub-clauses 19-23:</p> <p>The frame shall be haunched with mortar to within 40mm of its top.</p> <p>The remaining 40mm shall be painted with joint bitumen.</p>

Clause No.		Alterations to be made
	20	<p>The remainder of the void around the frame shall be filled with either bitumen macadam or rolled asphalt surfacing material to match the surrounding surface.</p> <p>The surface course shall be laid in a uniform layer of the specified thickness and shall include any surface treatment necessary to match the surrounding surface.</p> <p>Such treatment shall comply with the relevant clauses in this Specification.</p>
	21	Covers and frames shall be broken-out, adjusted reinstated and able to be trafficked in the course of one working day.
	22	<p>In certain circumstances, for example if the Site is to be overlaid, the Operating Company may adjust covers and frames to levels above the adjacent surface.</p> <p>The covers and frames shall be surrounded by a temporary ramp in bituminous material to a gradient not steeper than 1:10.</p> <p>The Operating Company shall provide warning signs in accordance with clause 117.</p>
	23	Draw pit chambers for electrical supply cables shall be as referred to in Appendix 5/2.
521		Water Jetting and Suction
	9	<p>In sub-clause 9, after (vi), insert (vii):</p> <p>(vii) the suction facility shall be provided by a liquid ring exhauster and shall have an air flow of at least 70 cu m per minute and 380mm Hg vacuum through a 200mm boom mounted pipe with a debris tank capacity of at least 5.5 cu m.</p>
606		Watercourses
	1	In sub-clause 1, after "ditches," insert "drainage grips".
	5	<p>Add new sub-clause 5:</p> <p>"The cutting of new drainage grips shall be to the profiles required to deal with the discharge of surface water from the carriageway.</p> <p>All arisings from the cutting of new drainage grips shall be removed to a licensed disposal facility unless it is appropriate to spread and level the arisings on the verge.</p> <p>The grass shall be trimmed for a distance of 1 metre on either side of the grip."</p>
610		Fill to Structures
	1	<p>In sub-clause 1(iv):</p> <p>delete "unless otherwise required in Appendix 6/6".</p>
	2	<p>In sub-clause 2 line 2 delete:</p> <p>" 6P, 7A and 7B".</p>

Clause No.		Alterations to be made
		In sub-clause 2 lines 3 and 4 delete: ", in the locations described in Appendix 6/6".
	3	In sub-clause 3 lines 2 and 3 delete: "6P, 7A and 7B".
	6	In sub-clause 6 lines 1 and 2: delete: "6P and 7B"
611		Fill Above Structural Concrete Foundations
	1	In sub-clause 1 (i): delete "6P, 7A or 7B". In sub-clause 1 (ii) delete whole sub-clause.
930		EME2 Base and Binder Course Asphalt Concrete
	6	Add to end of sub-clause 6: "EME2 shall be laid with uniform compaction over the whole lane width by a paver fitted with a, high density, pre-compaction screed."
	8	Delete existing sub-clause 8 and replace with: "Compaction shall be substantially completed before the temperature falls below 125 °C. Limited rolling without vibration may be carried out below this temperature to improve the finish. If EME2 starts to shove or tear during compaction, compaction must be stopped. Compaction can recommence if material temperature drops and no material movement is observed."
	14	Delete existing sub-clause 14 and replace with: "For the material from each mixing plant, a pair of cores shall be taken from the wheel-tracks every 250 metres laid, or part thereof, per paver, and the void content shall be determined in accordance with BS 594987, clause 9.5.1.3."
	16	Delete existing sub-clause 16 and replace with: "For the material from each mixing plant, a pair of cores shall be taken every 250 metres laid, or part thereof, centered 100mm from the final joint position or at any open longitudinal joint and the air void shall be determined in accordance with BS 594987, clause 9.5.1.3."
	20	Add to end of sub-clause 20: "Two copies of the final in situ core air void results shall be passed to the Overseeing Organisation within 7 days."
		Kerbs Footways And Paved Areas
1101		Precast Concrete Kerbs Channels Edgings and Quadrants
	3	In sub-clause 3 lines 13 and 14: delete "At expansion joints in bridge decks the kerb joints shall be as described in Appendix 11/1."

Clause No.		Alterations to be made
1102		In Situ Asphalt Kerbs
	2	Delete sub-clause 2.
1103		Freestanding In Situ Concrete Kerbs Channels and Edge Details
	1	In sub-clause 1, line 8: delete all text after "dragging" and add: "The longitudinal surface regularity shall not deviate by more than 5mm in 3 metres when checked with a 3 metre straight edge."
1104		Footways and Paved Areas (Precast Concrete Flags and Natural Stone Slabs)
	2	In sub-clause 2, lines 3 and 4: delete "with a bond as described in Appendix 11/1".
1106		Footpaths and Paved Areas (In Situ Concrete)
	4	Add new sub-clause 4: "Synthetic fibres shall be added to the concrete at the concrete mixing plant at a rate of 0.9kg per cubic metre of concrete as and when specified by the Overseeing Organisation."
1107		Footways and Paved Areas (Concrete Block Paving)
	4	Add new sub-clause 4: "When replacing in existing areas of block paving the type and colour of the blocks and the pattern used shall match existing."
1108		Footways and Paved Areas (Clay Pavers)
	4	Add new sub-clause 4: "When replacing in existing areas of block paving the type and colour of the blocks and the pattern used shall match existing."
		TRAFFIC SIGNS
1209		Covering of Permanent Traffic Signs
	7	Add new sentence to sub-clause 7 as follows: "Any damage caused as a result of the temporary covering of permanent traffic signs shall be rectified at the Operating Company's expense."
1213		Road Studs
	9	Add new sub-clause 9: "New or replacement thermoplastic road studs shall be installed as CHART node points as and when directed by the Overseeing Organisation. Existing metal CHART node points shall be removed with minimum damage to the carriageway which shall be reinstated using filled bitumen or bituminous instant repair material."

Clause No.		Alterations to be made
1301		General
	1	<p>Delete existing sub-clause 1 and replaced with:</p> <p>"This Series shall apply to the design, supply and installation of lighting columns and brackets and CCTV masts and cantilever masts for traffic signals and/or speed cameras (hereafter called cantilever masts) within the following dimensional limitations:</p> <ul style="list-style-type: none"> (i) For aluminium lighting columns: <ul style="list-style-type: none"> (a) aluminium columns shall not exceed 15 metres nominal height, (b) columns shall be tapered with an integral bracket. The maximum bracket outreach shall be no greater than 0.5 metres. (ii) For steel columns: <ul style="list-style-type: none"> (a) post top columns not exceeding 20 metres nominal height, these columns shall be of continuously tapered folded steel construction, (b) columns with brackets not exceeding 18 metres nominal will have a maximum bracket outreach of 0.5 metres. <p>NOTE: Only where individual columns are being replaced within an existing lighting scheme will outreaches greater than 0.5 metres be accepted. Generally, only to maintain consistency in such installations can columns other than tapered folded sheet steel be used. In these situations columns of a similar design to those in the existing lighting scheme can be used.</p> <ul style="list-style-type: none"> (iii) For glass fibre reinforced plastic lighting columns: <ul style="list-style-type: none"> (a) unless specified otherwise by the Overseeing Organisation columns not exceeding 10 metres nominal height, (b) bracket projections shall not exceed 0.5 metres. (iv) For steel CCTV masts: <ul style="list-style-type: none"> (a) post top masts not exceeding 25 metres nominal height. (v) For steel cantilever masts: <ul style="list-style-type: none"> (a) nominal height not exceeding 8.5 metres, (b) cantilever projection not exceeding 8.5 metres, (c) bracket projections for cantilever masts not exceeding 0.25 x nominal height or 3 metres whichever is the lesser. (vi) For hinged columns: <ul style="list-style-type: none"> (a) Nominal height shall not exceed 12 metres, (b) Bracket projections shall not exceed 0.5m, (c) Where hinged columns greater than 8 metres high are installed these shall incorporate a suitable raising and lowering mechanism.

Clause No.	Alterations to be made
	<p>For all new installations it is a requirement of the Overseeing Organisation that lighting columns shall be continuous taper, be manufactured from aluminium, the column root to be protected by an inner and outer polymer thermally bonded sheath to a height of 250mm from the bottom of the column, the columns to have an integral 0.5m outreach and flush access doors. Sign support posts shall be of tubular aluminium or aluminium lattice construction.</p> <p>The nominal height of a flange column or mast is taken as the distance between the underside of the flange plate and the highest point of the mast. See Fig. 1. of BD88 (DMRB 2.2.13)."</p>
8	<p>Insert additional sub-clause 8:</p> <p>"Unless protected by an existing Vehicle Restraint System (VRS), columns shall be, designated Passively Safe or otherwise located so as to require no protection in accordance with TD19/06. Where passively safe columns are used they shall conform to testing as BSEN12767:2007. Installation shall always be in compliance with TD19/06."</p>
9	<p>Insert additional sub-clause 9:</p> <p>"Non-hygroscopic base compartment back-board not less than 15mm thick and of a sufficient size to accept the selected cut-out shall be positioned internally opposite the access door. The baseboard shall be securely fixed to the inside of the column. All screws and fixings used for the attachment of equipment and components to this wooden back-board shall be of stainless steel."</p>
10	<p>Insert additional sub-clause 10:</p> <p>"Lighting columns shall be manufactured with a flush mounted access door correctly positioned relative to the integral bracket. This position ensures that access through the door can only take place when the operative is facing the oncoming traffic."</p>
11	<p>Insert additional sub-clause 11:</p> <p>"The column cable entry slot, which shall be positioned on the face to the right of the column access door opening, shall have minimum dimensions of 150mm x 75mm with the lower edge of the slot 600mm below ground level. The cable entry slot shall be free from irregularities and burrs."</p>
12	<p>Insert additional sub-clause 12:</p> <p>"Each column shall be fitted with an 8 mm (minimum) diameter earth terminal complete with two plain washers and one full nut and one locking nut. These items shall be corrosion resistant and compatible with the column material. Earth terminals shall be readily accessible through the door opening and located such as to minimise the risk of injury to persons accessing them while undertaking installation and maintenance."</p>
13	<p>Insert additional sub-clause 13:</p> <p>"All electrical and similar joints made onto the column structural aluminium and column access door shall be such as to eliminate or protect against corrosion resulting from contact between dissimilar metals. Operating Companies are required to adhere to such aspects of the guidance provided in PD6484 as it relates to dissimilar metals in contact with</p>

Clause No.	Alterations to be made
	aluminium. The selection of electrical earthing components shall also comply in this and other respects with the requirements of BS 7430. All access doors shall be fitted with a bonding earth conductor marginally longer than the retaining chain or wire. Termination of the bonding earth conductor shall use components manufactured from compatible material."
14	<p>Insert additional sub-clause 14:</p> <p>"The flush fitting weatherproof single access door shall provide protection no less than IP33 and shall be free from any irregularities, burrs or sharp edges likely to cause injury. Unless specifically required by the Contract each column access door shall have at least one lock. All locks shall use a triangular type key. The number of column door keys shall be supplied shall be 10% of the number of columns erected subject to a minimum of three keys. All column access door keys shall be manufactured from metal and be of an adequate handling size."</p>
15	<p>Insert additional sub-clause 15:</p> <p>"On completion of the installation, all door locking components shall be coated with suitable corrosion inhibitor grease providing lubrication and protection from seizure and general deterioration."</p>
16	<p>Insert additional sub-clause 16:</p> <p>"Lighting column access doors shall be retained by stainless steel chain or braided stainless steel wire. Such retaining chain or wire shall be compatible with the column material and be held captive by fixings similarly manufactured from compatible material. Chains shall be a minimum gauge of 4mm and be long enough to allow the column access door to be rested completely on the ground whilst removed. All removable access doors shall be interchangeable with access doors of similar columns without the need for adjustment."</p>
17	<p>Insert additional sub-clause 17:</p> <p>"Where columns are mounted on structures and behind parapets, the access doors shall be positioned such that the access opening is fully accessible above the upper height of the protective parapet and facing the maintenance personnel."</p>
18	<p>Insert additional sub-clause 18:</p> <p>"Flange plate columns shall be set vertical on the foundation bases prepared for them. To ensure the column is set vertical compatible metal shims shall be used for adjustment. The nuts and exposed bolts shall be made suitably tight and then coated with protective paste and suitable protective tape. All fixings shall be compatible with the column material."</p>
19	<p>Insert additional sub-clause 19:</p> <p>"Where the column flange is not in accordance with BS EN 40-2 the Operating Company shall liaise with the Contractor responsible and agree details of the flange sizes and fixing centres. The Operating Company shall implement a design based upon the agreed flange fixing and provide the design to the column manufacturer."</p>

Clause No.		Alterations to be made
	20	<p>Insert additional sub-clause 20:</p> <p>"Where separate bracket arms are used such bracket arms shall be of the same material as the column and fixed in accordance with the manufacturer's written instructions to prevent rotation using an anti-rotational device."</p>
	21	<p>Insert additional sub-clause 21:</p> <p>"Road lighting columns and brackets shall be manufactured, located and erected in compliance with this Series, the 1400 Series and all relevant requirements."</p>
	22	<p>Insert additional sub-clause 22:</p> <p>"Where wall brackets and associated service boxes are installed they shall, where applicable, match existing items."</p>
1302		Design of Lighting Columns, Brackets, CCTV Masts, Cantilever Masts, Foundations, Anchorages and Attachment Systems
	1	<p>Delete existing sub-clause 1 and replace with:</p> <p>"Lighting columns, brackets, CCTV masts, cantilever masts, the foundations of both planted columns and columns and masts with flange plates, and the anchorages and attachment systems for columns and masts with flange plates shall be designed to comply with the requirements of Standards BD 26 (DMRB 2.2.1), BD 83 (DMRB 2.2.11), BD 88 (DMRB 2.2.13) and the technical approval scheme adopted by the Overseeing Organisation. The Operating Company shall similarly comply with PD6547 and the referenced standards within it. The Operating Company shall use the soil type information as described in Appendices 13/1. The Operating Company shall design foundations for all columns and masts detailed in the Contract.</p> <p>The Operating Company shall submit to the Overseeing Organisation a copy of all design calculations, variations, certification and supporting information at least two weeks prior to delivery and shall include with such records confirmation that such records have been checked by a competent person to ensure compliance with the required standards and check certificates issued for lighting columns, brackets, CCTV masts, cantilever masts and foundations. The design of the foundations shall be appropriate to the soil types encountered on site, as identified in Appendices 13/1, 13/4 and 13/7.</p> <p>The Operating Company shall establish the soil types on site and submit, to the Overseeing Organisation for its acceptance, lighting column foundation details appropriate to the conditions found and in accordance with the requirements of BS EN 40.</p> <p>The excavation to accommodate planted root columns shall not exceed a diameter greater than twice the diameter of the column root. Where a separate bracket is used for compatibility with existing columns the column shall be erected without the bracket in place and placed centrally in the excavation. Where separate brackets are used these shall not be erected on the column until such a time as the foundations have cured.</p>

Clause No.		Alterations to be made
		Alternative foundations can be used with the prior agreement of the Overseeing Organisation."
	2	<p>Aesthetic Requirements</p> <p>Delete existing sub-clause 2 and replaced with:</p> <p>"The aesthetic design of lighting columns, including those with bracket arms, shall be submitted by the Operating Company to the Overseeing Organisation for consideration and approval. The design of lighting columns and luminaires including those with bracket arms shall comply with the general advice given in BS 5489-1 relating to the appearance of lighting installations both by day and by night both from the viewpoint of both the road and the surrounding neighbourhood. Where required to be incorporated into an existing scheme the lighting column silhouette must use the same or near similar bracket angle and generally be compatible with existing equipment."</p>
1303		Data Sheets
	3	<p>Insert additional sub-clause 3:</p> <p>"The Operating Company shall within one month of the commencement of the works and prior to placement of any orders for materials, submit to the Overseeing Organisation for approval, triplicate copies of completed Appendix 13/2 Data sheets for each type lighting column."</p>
1304		Identification and Location Markings
	1	<p>Delete existing sub-clause 1 and replace with:</p> <p>"All lighting columns and brackets, CCTV masts and cantilever masts shall carry unique identification marks indicating the name of the manufacturer, year of manufacture, the unique product code and other relevant information to enable details of the lighting column and bracket, CCTV masts and cantilever masts to be determined by reference to the appropriate Lighting Column and Bracket, CCTV masts and cantilever masts Data Sheets. All such masts, columns and brackets shall be correctly labelled with the CE mark confirming conformance with the appropriate directive(s)."</p>
	2	<p>Delete existing sub-clause 2 and replace with:</p> <p>"The column and mast identification marks shall be permanent and legible and be made clearly visible in one of the following ways:</p> <ul style="list-style-type: none"> (i) on a permanent fixed label, or (ii) hard stamped, or (iii) formed into the material of the column/mast external face only. <p>For hard stamped identifiers, the mark shall be located immediately above the access door and for label identification this shall be placed immediately inside the base compartment: it shall not be located on the door.</p> <p>All hard stamping shall be carried out in a manner that will not induce any stresses into the material of the column/mast."</p>

Clause No.		Alterations to be made
	3	Delete existing sub-clause 3 and replaced with: "Where separate brackets are approved for use by the Overseeing Organisation the bracket identification mark shall also be permanent and legible and be either: (i) hard stamped, or (ii) formed into the material of the bracket arm and on either the luminaire spigot or the underside of the bracket arm adjacent to the column shaft or the wall or pole mounting plate. The mark will be on an external face only."
	4	Delete existing sub-clause 4:
	5	Delete existing sub-clause and replaced with: "In addition, location/identification labels for compliance with DMRB requirements and electrical regulatory inspection and maintenance purposes shall be applied to each lighting column as described in the Overseeing Organisation guidance document LDS8001_09 "Trunk Road Lighting and Associated Electrical Apparatus Identification System" . The identifying code for use on the labels shall be provided by the Operating Company and agreed with the Overseeing Organisation. The Operating Company shall provide the Overseeing Organisation with site design layout drawings and electrical schematics. All records relating to the lighting columns shall include the identifying code."
1308		Handling, Transport and Erection
	4	Delete existing sub-clause 4 and replace with: "Columns and masts shall be installed in accordance with the manufacturer's instructions and all requirements of the Specification."
	6	Insert additional sub-clause 6: "All verge located lighting columns shall be installed such that the door is facing away from the oncoming traffic. Alternative access door orientation must be agreed with the Overseeing Organisation. Where agreement for such alternative orientations is to be sought this must form part of the initially proposed project design."
	7	Insert additional sub-clause 7: "All proprietary materials shall be stored in accordance with the manufacturer's written instructions."
1401		General
	1	Insert additional new first paragraph to sub-clause 1: "The lighting installation shall not be operationally energised until the Operating Company has complied with the Electricity at Work Regulation 1989 and provided to the Overseeing Organisation all completed BS7671 Inspection and Testing Certificates. In addition to the provision of the BS7671 Inspection and Testing Certificates the Operating Company shall provide a written record to the Overseeing Organisation stating that these Certificates have been audited for correct and full completion by a resource competent to undertake such audits."

Clause No.	Alterations to be made
	<p>Delete existing first paragraph of sub-clause 1 and replaced with:</p> <p>"Materials equipment and workmanship required under the Contract shall comply with BS 7671 Regulations for Electrical Installations (the IEE Wiring Regulations) and the applicable regulations of the Distribution Network Operator (DNO) providing the supply. The installation and maintenance of electrical apparatus and cabling for road lighting and illuminated traffic signs shall comply with the quality management scheme detailed in Appendix A Volume 1 of this MCHW. The Operating Company shall incorporate into work procedures the contents of Engineering Recommendation G39/1 'Model Code of Practice covering Electrical Safety in the Planning, Installation, Commissioning and Maintenance of Public Lighting and Other Street Furniture'."</p> <p>Delete existing third paragraph of sub-clause 1 and replaced with:</p> <p>"In addition to the requirements of sub-clauses 10.2 and 10.3 of G.39/1, each Competent Person as defined in G.39/1, clause 2, shall be provided by the Operating Company with not less than one copy of the above certificate, duly completed and signed as Approved. Such certificate(s) shall be retained and be available at all times for inspection on the Works on request by the Overseeing Organisation. A formal Work Allocation record shall be kept by the Operating Company to enable work carried out by individual operatives and the responsible supervisor to be identified. All operatives and supervisors shall hold a valid Electrotechnical Certification Scheme (ECS) identity card. Notification of the details of all such cards shall be submitted to the Overseeing Organisation 14 days prior to commencement of the works."</p> <p>Insert additional final paragraph to sub-clause 1:</p> <p>"The Operating Company shall ensure that only competent persons as defined in the guidance note <i>LDS8014</i> Only such competent persons shall be employed on works that fall within the scope of this series. All competent persons shall be registered with the Highway Electrical Registration Scheme (HERS). In addition Authorised Persons shall be registered as specified in the "Highway Electrical Registration Scheme (HERS) Handbook"</p>
2	<p>Delete existing sub-clause 2(iv) and replaced with:</p> <p>"Electrical Equipment for Lighting Units shall consist of the following as described in the Contract: luminaires, photo-electric control units (PECUs), shorting plugs, lamps, time switches, ballasts, ignitors, starters, capacitors, cut-outs, fuses, fuse holders, miniature circuit breakers (MCBs) and Light Emitting Diode (LED) drivers."</p> <p>Delete existing sub-clause 2(v) and replaced with:</p> <p>"In this Series the "Network" is the electrical distribution network from the Distribution Network Operator (DNO) cut-out to the Lighting Units. This includes feeder pillars, cabinets, housings and similar enclosures that form part of the installed electrical distribution network."</p>

Clause No.	Alterations to be made
3	<p>Delete existing sub-clause 3 and replaced with:</p> <p>"Each network shall operate on a nominal single phase 230V ac, - 6% to +10% or three phase 400V - 6% to +10% at a frequency of 50Hz ±1%. It will be the Operating Company's responsibility to ensure that the equipment supplied will operate correctly at the voltage and frequency available at the point of use and ensure that the voltage at the point of use is within the requirements of the BS 7671 Regulations. The Operating Company's designer shall obtain a declaration from the DNO, provided in accordance with the Electricity Safety, Quality and Continuity Regulations in which the nominal voltage and frequency of the supply shall be specified along with the permitted tolerances. Further guidance on requesting electricity supplies is contained within <i>LDS8006</i>.</p> <p>TN-C distribution shall not be used for any part of any new road lighting electrical distribution network.</p> <p>Only where a 3-phase supply is used to energise high mast lighting and similar loads shall a 3-phase supply be distributed within the lighting installation as 3-phase.</p> <p>Where a 3-phase supply has been provided by the DNO for circuits other than high mast lighting and similar the 3-phase supply shall, unless otherwise agreed with the Overseeing Organisation, not be distributed as a 3-phase supply but only as three separate single phase supplies.</p> <p>Single phase supplies derived from a 3-phase supply as in (iii) shall not be considered as being an 'individual' or 'separate' single phase supplies.</p> <p>Unless specifically approved by the Overseeing Organisation lighting supplies shall not be used to supply equipment other than road lighting and related circuits.</p> <p>Road lighting circuit electricity consumption shall be considered as including maintenance sockets and similar items housed within lighting pillars.</p> <p>Unless specifically agreed with the Overseeing Organisation anti-condensation heaters shall not be fitted within pillars and distribution cabinets."</p>
4	<p>Delete existing sub-clause 4 and replace with:</p> <p>"The Operating Company's Designer shall provide sufficient access and area within electrical equipment to allow the electricity supplier to install their service connection and associated cut-out. This shall be considered as the origin of the installation as defined in BS7671."</p>
5	<p>Delete existing sub-clause 5 and replaced with:</p> <p>"This dedicated feeder pillar shall be provided for the Overseeing Organisation's lighting network. Distribution feeder pillars shall be also provided as required. Unless otherwise approved by the Overseeing Organisation supplies provided to electrical equipment for third parties, internal and external to the Overseeing Organisation, shall not be connected to the Overseeing Organisation's lighting network. Any such supplies so provided shall conform to the Overseeing Organisation's specific instructions as specified in the Overseeing Organisation guidance document <i>LDS8006_09</i> 'Electricity Supply for Roadside Electrical</p>

Clause No.		Alterations to be made
		Equipment and Lighting sites'. Before making any form of electrical connection into any part of the Overseeing Organisation's lighting network approval shall be obtained from the Overseeing Organisation 21 days prior to the connection being made."
	6	Insert additional sub-clause 6: "The Operating Company shall fit ID labels and conspicuity bands in accordance with the Overseeing Organisation guidance document LDS8001_09 'Trunk Road Lighting and Associated Electrical Apparatus Identification System'."
1402		Site Records
	1	Delete existing sub-clause 1 and replace with: "In accordance with the requirements of the Electricity at Work Regulations the Operating Company shall, on the completion of the electrical work, provide a set of as-installed drawings or transparencies showing as a minimum the position and identification mark (including luminaire type, modification status, lamp setting, lamp type and serial numbers) of equipment requiring electrical connections, ducts, underground cables and joints and the type and depth of cables.. The Operating Company shall also supply test certificates and Operation and Maintenance manuals. The general requirement for information to be included within the lighting section of the Health and Safety File is contained within LDS8004."
	2	Delete existing sub-clause 2 and replace with: "The Operating Company shall amend drawings provided by the Overseeing Organisation whenever any part of the installation shall be amended or extended. Test certificates pertaining to the part of the installation that has been modified shall be completed and passed to the Overseeing Organisation for approval. Locations of Constructional Plant and equipment shall be referenced in accordance with the Trunk Road Network Referencing System."
	3	Delete existing sub-clause 3 and replace with: "As built drawings shall be produced by the Operating Company showing the Network and all lighting units in accordance with this clause. The Operating Company shall complete the as-built drawings in AutoCAD TM format and provide them drawings in AutoCAD. As-built drawings shall include both geographical and schematic drawings: (i) a schematic distribution layout drawing indicating the distribution arrangement of each private cable network, (ii) a schedule of abandoned cables including location, (iii) duct and cable location offsets taken at 20m intervals where cables maintain a steady line, and at 5m intervals where the line of the cable varies. Cable records shall be determined from kerb lines or fence lines, (iv) the geographical and schematic drawing shall detail the ID label attached to pillars and lighting units. The geographical drawing shall detail the accurate location of all lighting units, duct location (including

Clause No.		Alterations to be made
		size and number), cable runs (including cable size), pillars, all chambers and the electricity supply location. The DNO 'supply point ID No.' must be obtained from the electricity supplier and included on the drawing. Every lighting unit shall be marked in a manner such that it can be determined what the column height, material lantern type, lamp wattage, Lit Sign Units TRGD ref. No, type and wattage of sign lighting unit."
	4	Delete existing sub-clause 4 and replace with: "Operational Records shall include: (i) maintenance or operating manuals for installed equipment, (ii) inspection and test certificates in accordance with BS 7671, (iii) Data required for inventory purposes in the format stipulated in the Trunk Road Inventory Manual and Employers Requirements."
1403		Location of Lighting Units and Feeder Pillars
	1	Delete existing sub-clause 1 and replace with: "The location of feeder pillars shall be in accordance with the Operating Company's submitted design. The Operating Companies design shall fully consider all relevant requirements including inter alia such arrangements as to ensure safe maintenance access to the pillar. The exact location will be agreed on site before commencement of any related ground works. The Operating Company shall be responsible for recording and documenting all aspects of the final site layout and the as-installed equipment."
	3	Insert additional sub-clause 3: "The location of cabinets or pillars provided to house the electricity supplier's equipment shall be agreed with the Overseeing Organisation prior to its installation."
1407		Luminaires
	1	Delete existing sub-clause 1 and replace with: "Luminaires fitted with integral control gear shall have a fuse holder adjacent to the terminal block with a cartridge fuse protecting each set of control gear."
	2	Delete existing sub-clause 2 and replace with: "Luminaires for road lighting shall comply with BS EN 60598-2-3 and the following: (i) the mounting arrangement shall provide for a close fitting between the luminaire and the column, making use of a two or more bolt, fixing arrangement, (ii) tilt angle adjustment shall be integral to the luminaire and shall apply to both top and side fixing arrangements. The adjustment shall allow for a minimum of three tilt angles including 0deg. +5deg. and +10 degrees, (iii) the internal arrangement of the luminaire shall consist of separate control gear and lamp compartments. These compartments shall

Clause No.	Alterations to be made
	<p>be arranged to provide for the separate sealing of the optical system (lamp housing) and control gear compartment. Both compartments shall have a degree of external sealing and sealing between each other no less than IP66,</p> <p>(iv) luminaire to be used for group control shall be fitted with a NEMA socket and this shall be located in the canopy. The control column shall be sited immediately adjacent to the control pillar and a PECU fitted into the NEMA socket,</p> <p>(v) meet the structural design and aesthetic approval requirements of clause 1302. The external finish shall be to BS4800 RAL9007 Silver,</p> <p>(vi) a range of luminaires of varying rating shall be available in a common style/design,</p> <p>(vii) curved glass shall be manufactured from toughened safety glass. Flat glass shall only be used in the vicinity of railways, airfields and navigable waterways or by agreement with the Overseeing Organisation. Luminaires shall be of the full-cut-off/low-threshold increment type as agreed with the Overseeing Organisation,</p> <p>(viii) Electronic ballast units shall be provided in luminaires rated up to and including 250W and shall be suitable for operation over the input voltage range of 210-250 Volts. Electronic ballasts shall incorporate over-temperature protection and have a power factor of 0.95 (lagging/leading) or greater. Prior to delivery of any luminaire using electronic control gear the Overseeing Organisation shall be provided, by the supplier, with a 'statement of Compatibility'. This statement shall detail and confirm that the electronic control gear being supplied is capable of operating over the temperatures range to which it will be exposed in use within the luminaire housing and that the lamp and control gear are fully compatible. The 'Statement of Compatibility' shall indicate that the testing regime to which the equipment has been exposed,</p> <p>(ix) conventional ballast units shall have a power factor no less than 0.85,</p> <p>(x) luminaires shall incorporate some form of anti-condensation vent or similar measures to minimise moisture build-up within the luminaire,</p> <p>(xi) all luminaires shall operate correctly over the temperature range of -25deg. C to +35deg. C,</p> <p>(xii) luminaires may be Class I where the luminaire has an integral earth terminal linked to all exposed metalwork or Class II where there is no earth terminal provided for connection of the luminaire's exposed metalwork to the circuit protective conductor. Fortuitous earth connection provided by connection to mechanical fixings shall not be relied upon,</p>

Clause No.	Alterations to be made
	<p>(xiii) safe access to the lamp and control gear enclosures for maintenance purposes shall require a tool. Doors shall be hinged and include a safety catch,</p> <p>(xiv) luminaire housings shall be manufactured from corrosion resistant die-cast aluminium suitable for use in their intended environments include locations directly adjacent to the sea, and similar salt-laden locations,</p> <p>(xv) any electrical wiring that could be subjected to heat shall be fitted with additional heat insulating sleeving,</p> <p>(xvi) luminaires with remote control gear shall not be used unless previously agreed with the Overseeing Organisation,</p> <p>(xvii) luminaires shall conform to the requirements of the appropriate sections of the ROHS and WEEE Regulations."</p>
3	<p>Delete existing sub-clause 3 and replace with:</p> <p>"Traffic sign luminaires shall comply with BS 873-5 and the following:</p> <p>(i) luminaires shall use low energy, high efficiency lamps with electronic control gear,</p> <p>(ii) traffic sign luminaires shall be manufactured from cast aluminium unless otherwise specified,</p> <p>(iii) the external finish shall be to BS4800 RAL7000. External sealing shall be to no less than IP54. The construction shall be suitable for use in all environments including directly adjacent to the sea at ferry terminals and in similar salt-laden locations.</p> <p>(iv) for overhung illumination of a sign:</p> <p>(a) the mounting arrangement of the luminaire(s) shall incorporate a vandal and wind loading resistant anti-rotational support fixing capable of accommodating all commonly used post diameters,</p> <p>(b) the sign lighting luminaire(s) shall provide efficient illumination of the sign,</p> <p>(c) all luminaires shall include integral control gear which shall be mounted on a single readily removable tray,</p> <p>(d) suitable arrangements must be incorporated to prevent unnecessary light spillage.</p> <p>(v) for up-lighter illumination of a sign:</p> <p>(a) the mounting arrangement of the luminaire(s) shall incorporate a vandal and wind loading resistant anti-rotational support,</p> <p>(b) the sign lighting luminaire(s) shall provide efficient illumination of the sign,</p> <p>(c) all luminaires shall include integral control gear,</p> <p>(d) suitable arrangements must be incorporated to prevent unnecessary light spillage.</p>

Clause No.		Alterations to be made
		<p>(vi) for internally illuminated 'light box' and electroluminescence signs, the signs shall conform to all applicable standards in relation to their use including background light intensity,</p> <p>(vii) access doors into lamp and control gear compartments on all luminaire types shall be hinged and tamperproof,</p> <p>(viii) the mean sign luminance shall be Category I of BS 873-5 and use high efficiency lamp(s),</p> <p>(ix) the impact strength shall be Category 1 of BS 873-5,</p> <p>(x) sign lighting luminaires shall conform to the requirements of the appropriate sections of the ROHS and WEEE Regulations."</p>
1409		Photo-electric Control Units (PECUs)
	1	<p>Delete existing sub-clause 1 and replace with:</p> <p>"Photo-electric control units (PECUs) shall comply with BS 5972 1980 BS2011 for vibration and certified to EN 50081-1 EMC Emissions and to EN 50082-1. The PECU shall incorporate synchronous switching technology and be of one-part construction."</p>
	2	<p>Delete sub-clause 2(i) and replace with:</p> <p>"be factory fitted in NEMA socket and secured as appropriate to the road lighting luminaire canopy."</p> <p>Insert additional sub-clauses in sub-clause 2:</p> <p>(vi) be protected against mains borne surges and spikes,</p> <p>(vii) be of an electronic type with a switching level of 70 Lux with switching differential ratio of 1:0.5 negative. The photoelectric sensor shall have zero sensor shift over a five year period,</p> <p>(viii) have a power consumption of no more than 0.25Watts with a uniform operating temperature range of -25deg. C to +50deg. C,</p> <p>(ix) be able to switch a continuously rectified circuit of less than 20Watts where used to control contactors,</p> <p>(x) date stamped and have a manufacturer's guarantee of at least 6 years,</p> <p>(xi) be designed so that in the event of a fault occurring in the unit they fail in the ON position.</p>
	3	<p>Delete existing sub-clause 3 and replace with:</p> <p>"Single and multi-bracket lighting circuits shall be group switched under the control of the group PECU. Such control shall include provision for remotely switched or time switched lighting control."</p>

Clause No.		Alterations to be made
1412		Ballasts
	1	Delete existing sub-clause 1 and replace with: "Ballasts shall comply with BS EN 61347-1, BS EN 61347-2-1, BS EN 61347-2-8, BS EN 61347-2-9 and BS EN 60921 or BS EN 60923 as appropriate and be tap selected to the specified operating voltage of the network. Lantern control gear shall be rated at 300volts and thermally protected with super imposed pulse ignitor."
1416		Cut-outs, Fuse Holders, Fuses and Miniature Circuit Breakers (MCBs)
	1	Delete existing sub-clause 1 and replace with: "Cut-outs, fuse holders and MCBs shall have moulded plastic drip-proof housing to IP34 or above. This requirement applies to the device when installed in a normal operational orientation and fully assembled."
	2	Delete existing sub-clause 2 and replace with: "All single phase road lighting cut-outs shall be BS7654 and double-pole ensuring both phase and neutral is broken by the removal of the fuse carrier. An earth terminal shall be provided within the cut-out enclosure. The continuity of the any earth path shall not be broken by the removal of the cut-out fuse carrier."
	3	Delete existing sub-clause 3 and replace with: "Terminals shall be sufficient for the conductors. They shall be clearly labelled to differentiate circuits and phases."
	4	Delete existing sub-clause 4 and replace with: "When fuses are intended to be used as isolating devices, no special tools shall be necessary to extract the fuse from its carrier to achieve disconnection. However some method of then securing the device in the disconnected (OFF) condition must be provided. To achieve full isolation the fuse carrier shall incorporate the means of neutral disconnection."
	5	Delete existing sub-clause 5 and replace with: "Fuse links shall comply with the requirements of BS EN 60269-1, BS EN 60269-2, BS 646/BS 2950, or BS 1361. They shall be of high rupture capacity (HRC) type and be of a rating as specified in sub-clause 11 below."
	6	Delete existing sub-clause 6 and replace with: "Miniature circuit breakers shall be in accordance with BS EN 60898 for use on the specified operating voltage of the network at single or three phase as appropriate. Their short circuit current rating shall be no less than 10KA. The Operating Company shall ensure by enquiry of the DNO that the prospective short circuit current rating, of the supply is no greater than 16KA. Thermal or magnetic overcurrent tripping devices shall be provided with a mechanism to ensure that the contact cannot be held closed against a fault. Circuits shall be designed such that devices are operated within the ratings specified by the manufacturer."

Clause No.	Alterations to be made
8	<p>Insert additional sub-clause 8:</p> <p>"The cut-out gland plates shall be an integral part of the cut-out and be capable of terminating XLPE/PVC SWA cables up to 25mm sq. and have the capacity for looping in-out. The gland plate shall typically accommodate up to 3 cables however additional armoured cable termination and cut-out capacity shall be provided at multi-headed columns, at columns where the group PECU is fitted and at locations where spur supplies are provided."</p>
9	<p>Insert additional sub-clause 9:</p> <p>"At columns fitted with more than one luminaire, each luminaire shall be wired and fused separately however all cut-out fuse carriers shall be arranged to be withdrawn as one. Where a PECU is fitted to any of the luminaires then the cut-out for that luminaire shall also carry the fuse for the PECU and provide simultaneous isolation of both PECU and luminaire. Each cut-out fuse carrier shall be clearly marked indicating the luminaire or device that it protects."</p>
10	<p>Insert additional sub-clause 10:</p> <p>"The design of the cut-out shall be such that it is possible to incorporate facilities, integral within the unit, to feed additional spur(s) to sundry equipment such as lit bollards and signs. The supply to each spur shall have its own dedicated circuit protection and be individually isolated by a separate fused cut-out. Spur supplies will be protected using a dedicated fuse carrier allowing the supply to be individually isolated. Where spurs are required for supplies to third parties then reference should also be made to Cl. 1401SR.6."</p>
11	<p>Insert additional sub-clause 11:</p> <p>"The design of the cut-out shall be such that when the fuse carrier/neutral link is removed no live parts are accessible. i.e. have a minimum rating of IP2X. Any protective cover exposed by the removal of the fuse link shall be designed so it cannot be separated from the main housing without the use of a key or tool."</p>
12	<p>Insert additional sub-clause 12:</p> <p>"Circuit protection on lamp circuits shall be provided by high rupturing capacity (HRC) fused links complying with BS 88 category of duty 300 AC 16 rating Q1 and shall be rated to suit the lamp circuit type.</p> <p>Typical fuse rating for High pressure sodium and Metal Halide lamp types are 6A for 70-150 Watts, 10A for 151 to 250 Watts and 16A for 251 to 400 Watts."</p>
1417	Base Compartment Fixing Arrangements
1	<p>Delete existing sub-clause 1 and replace with:</p> <p>"Electrical equipment described in clauses 1411 to 1416 installed within the base compartment of columns or posts shall be fixed in accordance with manufacturers' instructions with corrosion resistant fixing screws."</p>

Clause No.		Alterations to be made
1418		Feeder Pillars
	1	<p>Delete existing sub-clause 1 and replace with:</p> <p>"Feeder pillars, forming part of a road lighting installation, are required to:</p> <ul style="list-style-type: none"> (i) house the DNO service connection facilities, (ii) provide the electrical distribution to individual circuits and their associated circuit protection, (iii) provide circuit energisation under the control of PECUs or time-clocks. Where time-clocks are used these shall be housed within the feeder pillars. PECUs shall be mounted on an immediately adjacent column or post. <p>Lighting feeder pillars shall be used for the energising of the lighting equipment and associated electrical circuits only.</p> <p>All equipment fitted within the feeder pillars shall be securely fixed to the back board.</p> <p>The enclosure shall be adequately ventilated by a suitable method preventing the ingress of water, snow or foreign bodies.</p> <p>The feeder pillars shall carry a nameplate showing the manufacturers name or trade mark and the type designation or identification number of the product.</p> <p>Feeder pillars shall comply with IP 34 of BS EN 60529. They shall include a full size back board of varnished marine plywood at least 15 mm thick or other suitable non-hygroscopic material. Alternatively a purpose-designed equipment mounting system may be used. The entry for cables shall be via the root."</p>
	2	<p>Insert the following additional sentence at end of sub-clause 2:</p> <p>"All MCBs, fuses, isolators, switches, contactors, bus-bars and similar parts shall be clearly identified by correctly fitted permanent labels."</p>
	3	<p>Delete existing sub-clause 3 and replace with:</p> <p>"The feeder pillar shall be fitted with a suitably rated single or 3-phase and neutral switch disconnect/isolator and the circuit fused in accordance with BS7671 using fuses to BS 88 rated as appropriate for the consumer circuits."</p>
	4	<p>Delete existing sub-clause 4 and replace with:</p> <p>"The external pillar door locking shall be by means of tamperproof wedge type locks, with the actuator protected by plastic sealing plugs. Two sets of keys are to be provided per Feeder Pillar. The locks shall be fitted with triangular actuators operated by a single key. All hinges and locks shall be of stainless steel unless otherwise agreed with the Overseeing Organisation. Door locks on the wedge side should have a generous application of suitable inhibitor grease applied when installed to inhibit the effects of moisture and corrosion/rust.</p> <p>Access to the external enclosure shall be by means of close fitting hinged door(s) opening to a full 180 degrees at the front. Hinges shall be of stainless steel construction or similar approved materials. Means shall be</p>

Clause No.	Alterations to be made
	<p>provided to secure the door(s) in the open condition during maintenance visits.</p> <p>The door frame shall be fitted with a heavy duty non-perishable gasket to provide a minimum rating of protection against ingress of foreign materials of IP54."</p>
5	<p>Delete existing sub-clause 5 and replace with:</p> <p>"Feeder pillar distribution boards shall be provided with an external earth, be phase barriered and correctly colour coded. They shall be fitted with the same number of live and neutral bus-bar terminals as there are outgoing circuits plus at least one spare way. The main earthing terminal in each feeder pillar shall be connected to earth in accordance with BS 7671 and BS 7430.</p> <p>The main earth terminal size M8 x 32 mm. long shall be provided at a readily accessible location within the cabinet section of the pillar. The earth terminal shall be supplied complete with one full nut, two half nuts and two washers all manufactured in material compatible with the pillar material."</p>
6	<p>Delete existing sub-clause 6 and replace with:</p> <p>"Circuit details and labelling shall be provided in each feeder pillar.</p> <p>The details/diagram shall be laminated or similarly protected from moisture and held in a purpose made pocket attached to the inner face of the pillar door. The electrical details must include a circuit schematic."</p>
7	<p>Delete existing sub-clause 7 and replace with:</p> <p>"The main earthing terminal in each feeder pillar shall be connected to earth."</p>
8	<p>Delete existing sub-clause 8 and replace with:</p> <p>"Feeder pillars shall be mounted on a 150 mm thick foundation of ST2 concrete in compliance with clause 2602.</p> <p>However, where special ground conditions exist the foundations shall be adjusted to accommodate such conditions. Foundations for pillars considered as 'Passively Safe' shall be constructed in accordance with all specific guidance for such pillars. Such pillars will typically have larger foundations than normally required.</p> <p>After completion of the cabling the feeder pillar base shall be filled to 25 mm below the door with pea gravel conforming with Table 2 of BS EN 12620, 4/14 aggregate with a grading category of GC90/15. Prior to the addition of pea gravel all duct ends entering the pillar shall be cut back no greater than 25mm above the finished level of the infill. Under no circumstances shall sharp gravel be used. Prior to the addition of the pea gravel the duct ends shall be completely sealed with expanded foam."</p>

Clause No.		Alterations to be made
	9	Delete existing sub-clause 9 and replace with: "A durable warning sign indication 'Danger 400 Volts' or 'Danger 230 Volts' shall be fixed to the front of the feeder pillar door and the inner panel door where applicable to comply with the Health and safety (Safety Signs & Signals) Regulations and the Electricity at Work regulations. In compliance with these regulations these warning labels shall be triangular and no less than 75mm high."
	10	Insert additional sub-clause 10: "Where a feeder pillar is erected on a grass verge, an area of hard standing of minimum size 900x600mm shall be provided. The hard standing shall be set into the ground at a level such as to allow grass cutting to be readily undertaken."
	11	Insert additional sub-clause 11: "All ducts leaving the root of the pillar shall extend beyond the immediate concrete foundation of the pillar. A separate black duct shall be provided for the Supply Authority's incoming cable."
	12	Insert additional sub-clause 12: "The bonding conductor cross-sectional area for all lighting feeder pillars shall be not less than 10mm sq. Tri-rated."
	13	Insert additional sub-clause 13: "The inner enclosure should contain the following equipment, (i) A single phase double pole / 3 phase & neutral isolator to BS5419. (ii) A single phase single pole/3-phase contactor rated at BS 5424. (iii) A push button operated test switch accessible from within the outer enclosure and providing a timed over-ride of the photocell. (iv) A DIN rail fitted with BS EN 60898 miniature circuit breakers/ Modular fuse holders fitted with fuses to BS 88-2.1. The control circuit fuse shall normally be rated at 6 Amp with any spare output circuit fuses rated at 20 Amp, unless agreed with the Overseeing Organisation. (v) A neutral rail and an earth rail to accept the installed wiring with at least one spare termination provided on each rail. Note: within the inner enclosure all electrical apparatus shall be shrouded to a minimum of IP2X including the neutral rail and all neutral connections/terminals."
1419		Wiring
	1	Delete existing sub-clause 1 and replace with: "All wiring and installation of components within the column, post, Lit Sign Unit, bollard or pillar shall be as described in this Contract."

Clause No.	Alterations to be made
2	<p>Delete existing sub-clause 2 and replace with:</p> <p>"The wiring between the luminaire and the components in the base of the column or sign unit shall be PVC insulated 'arctic grade', 3-core 2.5mm sq. flexible cable with blue sheath. This cable shall generally be to BS6500 and be suitable for use over the temperature range -20 to +70 deg. C. The circuit protective conductor within this cable shall connect the earth terminal on the luminaire to the main earth terminal associated with the column cut-out in the base compartment.</p> <p>Under no circumstances shall domestic grade flat 'Twin and earth' cable be used for any purpose within lighting installations."</p>
5	<p>Delete existing sub-clause 5 and replace with:</p> <p>"All wiring/cables shall be correctly colour coded throughout their length and labelled appropriately at all points of termination.</p> <p>The Operating Company's attention is drawn to BS7671:2008 with regard to harmonized wiring colours and the warning notices required should 'old' and "harmonized" wiring colours form part of a single installation."</p>
6	<p>Insert the following additional sentence at the end of sub-clause 6:</p> <p>"Correctly selected and fitted plastic glands shall protect and seal all cable penetrations."</p>
7	<p>Delete existing sub-clause 7 and replace with:</p> <p>"Under no circumstances shall wiring, cables and cable tails come into direct contact with the inner surfaces of access doors or be located adjacent hinges, sharp metal edges, fixing screws or similar items. Installers shall, at all times ensure that conductor insulation is protected from being penetrated, cut, abraded, or crushed or in any other way physically damaged as a result of contact with such items."</p>
8	<p>Delete existing sub-clause 8 and replace with:</p> <p>"Wiring shall, wherever possible, be housed inside columns, wall brackets and posts or stiffening members. Where it is external it shall be secured using appropriate methods and in accordance with BS7671. Connections between conduit and sign housings, switchboxes and other components shall be sealed to no less than IP66. Internal surfaces in contact with such cables shall be smooth. Only plastic conduit, rigid or flexible, shall be used."</p>
9	<p>Delete existing sub-clause 9 and replace with:</p> <p>"All unused cores shall be cut to a suitable length for safe, unobtrusive stowage and the ends sealed and insulated."</p>

Clause No.		Alterations to be made
1420		Earthing
	1	Delete existing sub-clause 1 and replace with: "Circuit protective and equipotential bonding conductors shall be installed in accordance with BS7671 and BS7430 and shall be green/yellow PVC or XLPE insulated or sleeved. Where bolted connections are required, these shall be terminated in accordance with manufacturers' instructions in correctly sized purpose made lugs. Such connections shall be made using brass or stainless steel or other compatible non-ferrous nuts, bolts and washers."
	3	Delete existing sub-clause 3 and replace with: "A separate circuit bonding conductor not less than 10mm sq. cross-sectional area shall connect the earth terminal of the luminaire to the adjacent earth stud of the column/bracket."
	4	Delete existing sub-clause 4 and replace with: "All extraneous conductive parts, as described in BS 7671, and including doors to feeder pillars, lighting columns and lit sign units, shall be bonded to the main earth terminal using an equipotential bonding conductor of 10mm' cross-sectional area. When the earth conductor forms part of a 3-core cable the equipotential bonding conductor can be reduced to a size equal to the other cores but not less than 2.5 mm cross-sectional area. Earthing of lighting equipment in general and the design and installation of earth electrodes in particular shall all be in accordance with BS7674 and BS7430."
	6	Insert the following additional sub-clause 6: "Where lighting pillars, columns, signs are adjacent to the same or separately supplied electrical equipment i.e. equipment fed from different electrical supply pillar and these are located within 3 metres of each other, then they shall be bonded together in accordance with BS7671 Reg. 411.3.1. However in accordance with BS7671 Reg. 559.10.3.1(v) bonding is not required to adjacent metallic structures such as safety fences, handrails and similar however where lightning protection is to be provided the bonding shall satisfy BS EN 62305. With the exception of paragraph 4. above, no lighting infrastructure equipment shall be located within 5 metres of metallic conductive parts forming part of a separately supplied electrical equipment, such as Traffic Scotland (NADICS) and similar equipment. Bonding between the metal parts of such equipment is specifically excluded by this note in accordance with BS7671 Reg. 542.1.8. Where an electrical supply is required to permanently power third party equipment located at the same site then this shall be accommodated through the provision of a separate feeder pillar housing, with its own electricity suppliers cut-out. If this second housing is located within 3 metres of a road lighting pillar then the two pillars shall be bonded together in accordance with BS7671 Reg. 411.3.1."

Clause No.	Alterations to be made
7	<p>Insert the following additional sub-clause 7:</p> <p>"The main earthing conductor within the feeder pillar shall be of copper and be of a size no less than the supplier's phase conductor. Where the supplier's phase conductor is greater than 16 mm sq. the main earth conductor is 16mm sq. The main earth conductor shall connect the main earthing terminal to the incoming supply earth.</p> <p>Under no circumstances shall fortuitous contact via mechanical fixings be relied upon as a conductive path in place of a specific, correctly selected, rated, terminated and installed earthing conductor.</p> <p>Crimp connections for earth conductors shall meet the performance criteria suggested in BS 7609 using a matching tool, die set and connector, i.e. the first and second barrels shall crimp the conductor, the third set shall crimp the insulating, and facilitating stress relief and allowing for increased movement of the conductor. All bolted earth connection shall be made between two plain washers manufactured using material compatible with the equipment metalwork."</p>
8	<p>Insert the following additional sub-clause 8:</p> <p>"Earth electrodes shall be fitted to all lighting electrical installations both adjacent to the electricity supply pillar and at the end of each circuit. The acceptable resistance to earth of these electrodes shall be selected in accordance with the requirements of BS7671 and BS7430. Unless lightning protection is required typical values are likely to be no greater than 20 ohm for each individual electrode used as part of a TN-S circuit. For circuits energised by TN-C-S type electricity supply the typical electrode resistance to earth shall be as specified in Table 9.3 of BS7671 Guidance Note 5 where the circuit wattage sets the maximum resistance allowed. Lightning protection typically requires electrode resistances below 10 ohms. For the avoidance of doubt the electrode resistance values referred to above are provided for guidance only and must be confirmed by the designer before use."</p>
9	<p>Insert following additional sub-clause 9:</p> <p>"Where there are exposed metal casings of capacitors/ignitors these shall be directly connected to earth. Reliance on the earthing of security clips shall not be acceptable. All bonding conductors shall terminate at a common point."</p>
1421	Underground and Ducted Cable
1	In sub-clause 1 insert "purple" prior to "XLPE" in first sentence.
2	In sub-clause 2 insert "purple" following "self coloured" in first sentence.
3	<p>Delete existing sub-clause 3 and replace with:</p> <p>"Cable covers for protection of underground cables shall comply with BS 2484 and shall be installed as described in Appendix 14/4. When cable covers are installed, marker tapes are not required."</p>

Clause No.	Alterations to be made
4	Delete existing sub-clause 4 and replace with: "Cable trenches shall be excavated to the lines described and in accordance with clause 602. The depth of excavation shall be such that cables laid under verges, footways or open ground shall have a minimum cover of 500 mm and under carriageways of 750 mm or 300 mm below formation whichever is the greater depth."
5	Delete existing sub-clause 5 and replace with: "Cables shall be laid without sharp bends and kinks. If required, additional protection and support shall be provided as required."
8	Delete existing sub-clause 8 and replace with: "Electrical supply cables shall not be installed within 500 mm of signal, communication or telecommunication cables or within 300 mm of HV cables."
9	In sub-clause 9 insert "on a rising thermometer" following "0°C" in first sentence.
11	Delete existing sub-clause 11 and replace with: "Sufficient length of cable shall be allowed for its termination. When termination does not proceed immediately following the installation of the cable, its end shall be sealed against the ingress of moisture. If such cable ends are buried, their positions shall be marked with a permanent marker block consisting of a 300 mm square x 225 mm deep precast concrete block having a mark indented into its top surface and recorded on the site records."
14	Delete existing sub-clause 14 and replace with: "Metallic trace marker tape shall be laid above the duct or cable to permit cable detection by electronic route tracing equipment. this shall be purple self-coloured PVC or polythene plastic tape for cable marking shall be laid approximately 250 mm above any electrical supply/distribution cable. The tape shall be not less than 0.1 mm thick and 150 mm wide with the wording "Street Lighting Cables Below" printed in black along the full length so as to occupy not less than 75% of its available length and occurring at least at 1 m intervals. Where several cables are laid in one trench, only one line of marker tape need be installed."
20	Insert the following additional sub-clause 20: "Cable laid in troughs shall not be used."
21	Insert the following additional sub-clause 21: "Only steel wire armour cabling shall be used underground for lighting supply distribution. All cabling shall be purple in colour and installed within continuous purple self-coloured ducts in accordance with Cl. 1421.15. Straight or split-concentric cable shall not be used as part of any lighting installation. Direct buried cables shall not be installed."

Clause No.	Alterations to be made
22	<p>Insert the following additional sub-clause 22:</p> <p>"Under no circumstances shall cables enter a column, post, bollard or pillar base without the protection of ducting typically 60mm diameter. Such ducts, shall continue into the base and terminate at a suitable height to allow a seal to be formed using expanded foam sealant or similar."</p>
23	<p>Insert the following additional sub-clause 23:</p> <p>"When laid in carriageways, road lighting service ducts shall be twin walled high density polypropylene with smooth bore of 150mm in internal diameter to BS EN 50086-2-4, purple in colour and printed "STREET LIGHTING" at intervals of not more than one metre lettering throughout out its length. A minimum cover of 450mm shall be provided."</p>
24	<p>Insert the following additional sub-clause 24:</p> <p>"Cable duct laid under carriageways shall consist of 2 No. 100mm ducts and having a minimum cover of 750mm and shall be protected by concrete surround of mix ST2 concrete or similar as directed by the Overseeing Organisation. The ducts shall be twin walled high density polypropylene with smooth bore of 150mm in internal diameter to BS EN 50086-2-4, purple in colour and printed "STREET LIGHTING" at intervals of not more than one metre lettering throughout out its length and shall terminate in an underground draw-in chamber at each side of the carriageway."</p>
25	<p>Insert the following additional sub-clause 25:</p> <p>"When laid in verges and footways, road lighting service ducts shall be twin walled high density polypropylene with smooth bore of 100mm in internal diameter to BS EN 50086-2-4, purple in colour and printed "STREET LIGHTING" at intervals of not more than one metre lettering throughout out its length. A minimum cover of 650mm shall be provided."</p>
26	<p>Insert the following additional sub-clause 26:</p> <p>"Ducts shall be impervious to water, capable of being laid in temperature down to -10 degrees C and be sufficiently flexible to follow undulation in a trench bottom."</p>
27	<p>Insert the following additional sub-clause 27:</p> <p>"At least 75mm clearance shall be provided between the cable duct and the sides of the trench and between ducts sharing the same trench."</p>
28	<p>Insert the following additional sub-clause 28:</p> <p>"At least 150mm clearance shall be provided between cable ducts and services pipes belonging to other Statutory Undertaker."</p>
29	<p>Insert the following additional sub-clause 29:</p> <p>"At least 500 mm shall be provided between lighting electrical cable ducts and communications cable ducts."</p>

Clause No.		Alterations to be made
1422		Cable Joints
	1	Delete existing sub-clause 1 and replace with: "Cable joints, other than for short term remedial work, shall not be permitted for underground cables supplying road lighting. Lighting installations shall be designed to employ a loop in - out arrangement without joints. When joints are installed these shall be made using jointing kits complying with BS 6910-1 which shall be installed in compliance with BS 6910-2. The Operating Company shall repair damaged cables by replacing the full length of the damaged cable."
	2	Delete existing sub-clause 2 and replace with: "Approval is required from the Overseeing Organisation for any remedial jointing during new works. A record shall be kept to enable cable joints to be identified with the jointer responsible for the work."
	3	Delete existing sub-clause 3 and replace with: "Cable joints shall be made where described. Additional joints shall not be provided on cables in duct or trough. Approval is required from the Overseeing Organisation for additional joints using other fixing methods."
1423		Armoured Cable Terminations
	1	Delete existing sub-clause 1 and replace with: "Cables shall be individually terminated and existing cables re-terminated, and secured at switches, cut-outs and other electrical apparatus by means of a compression type gland and, where not provided as part of the apparatus, a gland plate compatible with the equipment material and complying with 'BS 6121-1, BS EN 50262'. Cable glands shall be manufactured in brass to BS 2874."
	2	Delete existing sub-clause 2 and replace with: "Earth connection to the cable armouring shall be made to the gland plate. At least one non ferrous earthing terminal compatible with the equipment shall be provided on the gland plate."
	3	Delete existing sub-clause 3.
1424		Inspection and Testing to be Carried Out by the Contractor
	2	Delete existing sub-clause 2 and replace with: "Not less than 3 months prior to commencing testing the Operating Company shall submit an Inspection and Testing Method Statement, Risk assessments, and the Extent and Limitations statement, forming part of the BS7671 Electrical Installation Certificate, initial verification. The Extent and Limitations shall include: (i) a description of the electrical aspects of the lighting units including the Class of the luminaires to be used i.e. Class I or Class II together a statement of the testing regime to be adopted for these items. (ii) the extent of the network fixed wiring covered by BS7671 including the point of termination within the lighting units and the point of supply (origin) for the installation."

Clause No.	Alterations to be made
	<p>(iii) any specific issues relating to the inspection and testing of the particular electrical installation.</p> <p>The Method Statement shall detail all tests and items of inspection to be undertaken, the sequence of tests, how each test will be undertaken and what records will be recorded and what values for each test will prove compliance with BS7671. The Method Statement shall include the Lighting Installation design drawings and schematics. The schematic shall be suitable for inclusion within the pillars and cabinets forming part of the circuit described. Such included schematics shall be laminated or otherwise protected against damage by moisture or handling during use.</p> <p>The Operating Company shall undertaken all required aspects of the electrical installation is sufficiently and correctly inspected and tested as required by BS7671 Part 6 and as further described in IEE Guidance Note 3 titled 'Inspection and Testing'. Without reduction to the importance of any other aspect of BS7671 Inspection and Testing the attention of persons undertaking this work is particularly drawn to the following:</p> <ul style="list-style-type: none"> (i) A cable over-sheath insulation test shall be carried out prior to any other testing of the Network cables. (ii) Continuity testing of protective conductors within The Network circuits, including main and supplementary equipotential bonding conductors, shall be carried out and the values of R1+R2 with respect to the circuit origin recorded. These measurements shall be carried out in a way that excludes any 'parallel paths'. (iii) The resistance of all earth electrodes shall be measured and recorded. (iv) For Periodic Testing Class I luminaires a 500V insulation test shall be carried out between the phase and neutral cores connected together relative to the earth core and metalwork of the lighting unit. The initial commissioning testing being carried out on each individual core. Insulation resistance shall not be less than 1 Mohm in either case. (v) For Periodic Testing Class II luminaires a 500V insulation test shall be carried out between the phase and neutral cores connected together relative to the metalwork of the lighting unit. The initial commissioning testing being carried out on each individual core. Insulation resistance shall not be less than 2 Mohm in either case. (vi) For the Periodic Testing of Network cables a 500V insulation test shall be carried out, with the phase and neutral cores connected together, relative to the earth core and the metalwork of the lighting column. The initial commissioning and testing being carried out on each individual core. Insulation shall not be less than 6 Mohm regardless of cable length. This test shall be carried out with cables in place and connected to the supply side of the lighting units cut-outs. During the testing all luminaires shall be isolated on the consumer side of the cut-out.

Clause No.	Alterations to be made
	<p>(vii) The Operating Company shall record the earth fault loop impedance at the suppliers cut-out at every lighting unit with all earth conductors and earth electrodes in place in accordance with Guidance Note 3 para. 2.7.14. Values of Zs measured for any circuit shall not exceed those given in BS7671 Tables 41.2 and 41.3 for 0.4 second disconnection.</p> <p>(viii) The Operating Company shall ensure that inspection and testing undertaken shall be sufficient to fulfil the requirements of the Electricity at Work Regulations 1989, Regulation 4(1) and other relevant Statutory Regulations.</p> <p>On conclusion of the Inspection and Testing, submission of the results to the Overseeing Organisation shall take place within 7 days of the completion of each circuit inspection and testing. If, in the opinion of the Overseeing Organisation, the Inspection and Testing is not considered adequate or the installation is not considered correct then all such necessary remedial work and repeated inspection and testing shall be undertaken by the Operating Company and all corrected results submitted to the Overseeing Organisation."</p>
4	<p>Delete existing sub-clause 4 and replace with:</p> <p>"The Operating Company shall ensure that a voltage reading is taken at each feeder pillar and at the terminals of the last current-using equipment on each circuit, with all equipment energised. Where a spur is created from the main circuit to energise a bollard, sign or similar the voltage at all such spurs shall also be recorded. The voltage measured at the last current consuming piece of equipment on a given circuit shall be below 223.1V (3% of 230V, BS7671:2008) at full load."</p>
5	<p>Delete existing sub-clause 5 and replace with:</p> <p>"The Operating Company shall provide and maintain an installation, inspection and testing programme. The programme shall be provided to the Overseeing Organisation at least 14 days prior to any installation work being undertaken and shall be updated and provided to the Overseeing Organisation when the programme changes from that previously provided to the Overseeing Organisation. The programme shall detail duct laying, cable pulling, column erection, inspection and testing. The programme will include dates when records will be provided."</p>
6	<p>Delete existing sub-clause 6 and replace with:</p> <p>"The Operating Company shall furnish the Overseeing Organisation with two copies of a certificate verifying compliance with BS 7671 upon satisfactory completion of the inspection and tests. The layout of the BS7671 Certificate shall conform to the sample Certificates as provided in the LDS8005. The separate certificate covering the testing of the luminaires and similar items considered outside of the scope of BS7671 shall also be submitted."</p>

Clause No.		Alterations to be made						
	8	Insert the following additional sub-clause 8: "The value of Ze provided by the electricity supplier at the electrical origin shall be no greater than 0.35 ohm for TN-C-S supplies and 0.8 ohm for TN-S supplies. The Overseeing Organisation shall not accept values that exceed these Ze maximum values. The Operating Company shall ensure the Ze values are achieved by the DNO prior to acceptance of the supply on behalf of the Overseeing Organisation."						
1714		Structural Concrete						
	1	Add the following additional paragraph to sub-clause 1: "Concrete spacers or distance tubes shall conform to BS 7973 and be manufactured in accordance with BS EN ISO 9001:2008. Plastic spacers shall not be used."						
		Brickwork, Blockwork And Stonework						
2404		Mortar						
	3	In sub-clause 3, add cement designation (iv) to Table 24/1 as follows: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Mortar Designation</th> <th style="text-align: center;">Cement: Lime: Stone dust</th> <th style="text-align: center;">Masonry Cement: Stone dust</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">(iv)</td> <td style="text-align: center;">1:1:5 to 6</td> <td style="text-align: center;">1:4½</td> </tr> </tbody> </table>	Mortar Designation	Cement: Lime: Stone dust	Masonry Cement: Stone dust	(iv)	1:1:5 to 6	1:4½
Mortar Designation	Cement: Lime: Stone dust	Masonry Cement: Stone dust						
(iv)	1:1:5 to 6	1:4½						
	7	Insert the following additional sub-clause 7: "Where joints less than 2 mm wide in natural stone ashlar stonework shall be required a cement mortar designation (iv) containing natural stone dust of the same colour as the adjacent masonry shall be used. However, for sandstones and similar weaker masonry, a suitable lime mortar mix shall be selected based on clause 2476AR and Appendix 24/1."						
2412		Brickwork and Blockwork						
	5	Delete existing sub-clause 5 and replace with: "Not used."						

Clause No.	Alterations to be made																													
2417	Unreinforced Masonry Arch Bridges																													
	<p>In sub-clause 8 delete the Table and replace with the following table:</p> <table border="1" data-bbox="416 344 1390 965"> <thead> <tr> <th colspan="2" data-bbox="416 344 738 398">Location / Element</th> <th colspan="4" data-bbox="738 344 1390 387">Masonry Unit Type</th> </tr> <tr> <th data-bbox="416 387 568 622"></th> <th data-bbox="568 387 738 622"></th> <th data-bbox="738 387 901 622">Class A Eng Brickwork</th> <th data-bbox="901 387 1064 622">Class B Eng Brickwork</th> <th data-bbox="1064 387 1227 622">Common Brickwork/ blockwork/ stonework with joints more than 2mm wide</th> <th data-bbox="1227 387 1390 622">Natural stone ashlar stonework with joints less than 2mm wide</th> </tr> </thead> <tbody> <tr> <td data-bbox="416 622 568 734">Below a level of 150mm above finished ground level</td> <td data-bbox="568 622 738 734"></td> <td data-bbox="738 622 901 734">(i)</td> <td data-bbox="901 622 1064 734">(ii)</td> <td data-bbox="1064 622 1227 734">(ii)</td> <td data-bbox="1227 622 1390 734">(iv)</td> </tr> <tr> <td data-bbox="416 734 568 965" rowspan="2">Above a level of 150mm above finished ground level</td> <td data-bbox="568 734 738 904">Abutments, spandrel/wing walls, piers and parapets</td> <td data-bbox="738 734 901 904">(i)</td> <td data-bbox="901 734 1064 904">(ii)</td> <td data-bbox="1064 734 1227 904">(iii)</td> <td data-bbox="1227 734 1390 904">(iv)</td> </tr> <tr> <td data-bbox="568 904 738 965">Arch rings</td> <td data-bbox="738 904 901 965">(ii)</td> <td data-bbox="901 904 1064 965">(ii) or (iii)</td> <td data-bbox="1064 904 1227 965">(iii)</td> <td data-bbox="1227 904 1390 965">(iv)</td> </tr> </tbody> </table>	Location / Element		Masonry Unit Type						Class A Eng Brickwork	Class B Eng Brickwork	Common Brickwork/ blockwork/ stonework with joints more than 2mm wide	Natural stone ashlar stonework with joints less than 2mm wide	Below a level of 150mm above finished ground level		(i)	(ii)	(ii)	(iv)	Above a level of 150mm above finished ground level	Abutments, spandrel/wing walls, piers and parapets	(i)	(ii)	(iii)	(iv)	Arch rings	(ii)	(ii) or (iii)	(iii)	(iv)
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Below a level of 150mm above finished ground level		(i)	(ii)	(ii)	(iv)																									
Above a level of 150mm above finished ground level	Abutments, spandrel/wing walls, piers and parapets	(i)	(ii)	(iii)	(iv)																									
	Arch rings	(ii)	(ii) or (iii)	(iii)	(iv)																									
3006	Planting																													
	<p>14 Insert the following additional sentence at end of sub-clause 14: "Compost produced to PAS 100:2005 may be used."</p>																													
3007	Grass, Bulbs and Wildflower Maintenance																													
1	<p>Delete existing sub-clause 1 and replace with: "The grass and wildflower areas to be maintained are scheduled in Appendix 30/7. Prior to any cutting operation all stones or other harmful material from whatever source which may damage grass cutting plant or create a possible hazard to persons or property shall be removed off Site. Not more than 48 hours prior to grass cutting the area to be cut shall be cleansed of litter to Grade B standard as stated in the Code of Practice on Litter and Refuse and any litter susceptible to shredding shall be removed. Any movable obstructions such as seats and litterbins shall be removed to facilitate cutting and replaced prior to leaving the Site."</p>																													
18	<p>Delete existing sub-clause 18 and replace with: "In the locations in the Landscape Inventory not covered by any of the high, medium or low frequency regimes, a single cut shall be undertaken once in the second Annual Period and subsequently every two years. The cut shall be to a height not exceeding 150 mm and the cuttings evenly dispersed to leave a neat and uniform appearance."</p>																													
19	<p>Delete existing sub-clause 19 and replace with: "Not used."</p>																													

Clause No.		Alterations to be made
	20	Delete existing sub-clause 20 and replace with: "Where there is a possibility of the sign being obscured by grass, visibility splays in front of road signs shall be cut in accordance with requirements for general grassed areas. The cut shall extend from the edge of the carriageway, at a point 50 m from the sign and be splayed to meet the full width of the sign. This will only be required where there is a low level sign or on a slope."
	25	Delete existing sub-clause 25 and replace with: "Where it is stated in the Landscape Inventory that grass and herbaceous plants shall be cut in planted areas/plantations, the Contractor shall cut between the woody plants over the whole area up to the boundaries of the planted area/plantation, whilst avoiding damage to the trees and shrubs, leaving no areas uncut and producing an even sward height across the whole area."
	26	Delete existing sub-clause 26 and replace with: "Where cutting of wildflowers or areas of other floral interest in rough grass is required, one or more of the following operations, shall be carried out, as identified in the Landscape Inventory: (i) Annual Spring/Summer Cut Areas shall be cut to a height of between 50 and 60 mm after the seeding of desirable species, in late spring/early summer. Arisings shall be raked off and removed off site, avoiding any pulling, tearing or causing other damage to the soil surface and retained vegetation. (ii) Annual Summer/Autumn Cut Areas shall be cut to a height of between 50 and 60 mm after the seeding of desirable species, in late summer/early autumn. Arisings shall be raked off and removed off Site, by such means that avoids pulling, tearing or causing other damage to the soil surface and retained vegetation. (iii) Topping Cut Areas shall be cut to a height of between 80 and 100 mm after the seeding of desirable species, in late autumn, with the cuttings being finely chopped and evenly dispersed over the area. (iv) Biennial Cut Areas shall be cut to a height of between 50 and 60 mm, after the seeding of desirable species, every alternate year. Arisings shall be raked off and removed off Site. If no specific requirements are identified in the Landscape Inventory then wildflower areas and areas of other floral interest in rough grass shall receive a topping cut in accordance with paragraph (iii) above. The Contractor shall seek the Overseeing Organisation's consent to alter the requirement to a Biennial Cut in accordance with sub-clause 3007.26 paragraph (iv) if it believes it would be in the best nature conservation interest."
	27	Delete existing sub-clause 27 and replace with: "Within the wildflower areas or areas of other floral interest stated in the Landscape Inventory, the cutting shall include areas of bramble, tree and shrub saplings of less than 20 mm diameter. Cutting shall be timed to allow for prior seeding of desirable species."

Clause No.		Alterations to be made
	29	Delete existing sub-clause 29 and replace with: "Where directed and subject to an order, weed control in wildflower areas shall be carried out using spot treatment with a translocated herbicide applied in accordance with sub-clause 3002.7, at the appropriate frequency."
	31	Delete existing sub-clause 31 and replace with: "In high amenity, amenity and general grass areas, molehills shall be removed before grass-cutting and the soil distributed on nearby cultivated areas."
	32	Delete existing sub-clause 32 and replace with: " Bulb foliage within ornamental planting areas shall be cut down when leaves have died back naturally, not earlier than six weeks after flowering and normally early June for Narcissus species. Bluebell stands shall not be cut. Arisings shall be raked up and removed off Site."
3009		Establishment Maintenance for Planting
	4	Delete existing sub-clause 4 and replace with: "Stakes, tubes, guards and ties shall be removed from plants where they are no longer required and either disposed of off Site or reused if suitable."
3010		Maintenance of Established Trees and Shrubs
	1	Delete existing sub-clause 1 and replace with: "All areas of established planting/vegetation to be maintained each year throughout the period of this Contract shall be as shown within the Landscape Inventory. Established tree and shrub planting shall be maintained in the locations and over the times stated below.
	1.1	Hedges which are distinct linear planting strips within the road corridor which are intended to be formally shaped and maintained. Maintenance requirements and frequency are: (a) Trimming/pruning: Once per year – arisings shall be removed. (b) Laying: When the subject of an Order. (c) Gapping up: When the subject of an Order. (d) Checking/topping-up mulch: Once per year if required. (e) Weeding: Hedges under 5 years old shall be kept weed free.
	1.2	Shrubs which are sub divided into: (i) Ornamental shrubs – planted as a visual element of the road corridor – usually associated with settlements and urban roundabouts.

Clause No.	Alterations to be made
	<p>(ii) Informal shrubs – generally native major and minor shrub species (excluding gorse and broom) informally planted or developing along the road corridor up to a maximum height of approximately 3.5m.</p>
	<p>The level and frequency of maintenance for shrubs is adjusted according to the level of maintenance required (high, medium and low). The category of maintenance and frequency relates to the category of the adjacent grass cutting i.e. high maintenance shrub treatment is undertaken in areas of high amenity/high frequency grass cutting, medium maintenance shrub treatment is undertaken in areas of amenity grass/medium frequency grass cutting and low maintenance shrub treatment is undertaken in areas of general grass/low frequency grass cutting, as follows:</p> <p>(i) High Maintenance:</p> <p>(a) Weeding: Monthly during growing season.</p> <p>(b) Pruning/cutting back/ removal/ disposal of arisings: Once per year.</p> <p>(c) Checking/topping-up mulch: Once per year if required.</p> <p>(d) Gapping-up: When the subject of an Order.</p> <p>(ii) Medium Maintenance:</p> <p>(a) Weeding: Three times during growing season.</p> <p>(b) Pruning/cutting back/ removal/disposal of arisings. Once per year.</p> <p>(c) Checking/topping up mulch. Once per year if required.</p> <p>(d) Gapping up. When the subject of an Order.</p> <p>(iii) Low Maintenance:</p> <p>(a) Weeding. Twice during growing season.</p> <p>(b) Pruning/cutting back/removal/disposal of arisings. Once every two years.</p> <p>(c) Gapping Up. When the subject of an Order.</p>
1.3	<p>Woodland which is sub divided into:</p> <p>(i) New woodland, under 5 years old, a newly planted or self-seeded area of predominantly tree species with the potential of developing into a mature wooded area. Any new planting undertaken through this Contract will be subject to establishment maintenance for three years in accordance with sub-clause 3002.7.</p>

Clause No.	Alterations to be made
	<p>(ii) Establishing Woodland, between 5 and 10 years old, a developing area of tree species with or without woodland shrubs and with the potential of developing into a mature wooded area.</p> <p>(iii) Maturing Woodland, over 10 years old, an established area of dense tree cover, whether single or mixed species/ varieties and with or without a woodland shrub layer.</p> <p>Maintenance requirements and frequency are as follows:</p> <p>(i) New Woodland:</p> <ul style="list-style-type: none"> (a) Weeding. Twice during growing season when ordered. (b) Pruning/cutting back/removal/disposal of arisings. When the subject of an Order. (c) Checking and adjusting any stakes/shelters, ties. When subject of an Order. (d) Removing any stakes/shelters/ties. When the subject of an Order. (e) Re-firming plants. Once per year. (f) Replacement planting. When the subject of an Order. <p>(ii) Establishing Woodland:</p> <ul style="list-style-type: none"> (a) Weeding. Once per year when ordered. (b) Pruning/cutting back/removal/disposal of arisings. When the subject of an Order. (c) Thinning/coppicing. When the subject of an Order. (d) Clearing/felling. When the subject of an Order. <p>(iii) Maturing Woodland:</p> <ul style="list-style-type: none"> (a) Pruning/cutting back/removal/disposal of arisings. When the subject of an Order. (b) Thinning/coppicing. When the subject of an Order. <p>(c) Clearing/felling. When the subject of an Order.</p>

Clause No.		Alterations to be made
	1.4	<p>Scrub which is areas of self-seeded vegetation, predominantly (but not exclusively) gorse, broom, birch and /or bramble, up to a height of approx. 2.5m.</p> <p>Maintenance requirements and frequency are as follows:</p> <ul style="list-style-type: none"> (a) Cutting back. When the subject of an Order except where scrub grown is impacting on (or has the potential to impact on) a sightline area when scrub shall be cut back as required. (b) Clearing. When the subject of an Order except where scrub grown is impacting on (or has the potential to impact on) a sightline area when scrub shall be cut back as required. (c) Removal/disposal of arisings. When the subject of an Order unless scrub cut is undertaken due to impact on a sightline, when arisings shall be removed from site as part of the maintenance operations.
	1.5	<p>Individual trees which are lone trees, or trees with no interlocking canopy with the nearest neighbours, and sporadic trees where there is a loose arrangement of established trees with occasional interlocking canopies.</p> <p>Maintenance and frequency are as follows:</p> <ul style="list-style-type: none"> (a) Pruning/cutting back. When the subject of an Order except where tree growth is impacting on (or has the potential to impact on) a sightline area when the vegetation shall be cut back as required. (b) Removal/treatment of arisings. When the subject of an Order unless vegetation removal is undertaken due to impact on a sightline, when arisings shall be removed from site as part of the maintenance operation. (c) Checking and adjusting any stakes/shelters/ties. Once per year. (d) Removing any stakes/shelters/ties. When the subject of an Order. (e) Re-firming plants. Once per year. (f) Replacement planting. When the subject of an Order.
3011		Management of Waterbodies
		Reedbeds and Marginal Plants
	9	<p>Delete existing sub-clause 9 and replace with:</p> <p>"Reedbeds and marginal plants as described in Appendix 30/11 shall be inspected twice per year in early February and October or at other times stated in Appendix 30/11, and their condition reported to the Overseeing Organisation."</p>

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 9 PART 2

SPECIFICATION FOR OPERATIONS (2)

CONTENTS	Page No.
APPENDIX 0/3 – LIST OF NUMBERED APPENDICES REFERRED TO IN THE SPECIFICATION AND INCLUDED IN THIS CONTRACT	1
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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 9 PART 2

SPECIFICATION FOR OPERATIONS (2)

NUMBERED APPENDICES

APPENDIX 0/3 – LIST OF NUMBERED APPENDICES REFERRED TO IN THE SPECIFICATION AND INCLUDED IN THIS CONTRACT

Appendix 0/3 is comprised of two lists, A and B, of Numbered Appendices as follows:

List A is a complete list of Numbered Appendices referred to in the Specification for Highway Works with those not adopted marked 'NOT USED'. List B is a list of Contract-specific numbered Appendices devised for this Contract.

List 'A': List of Numbered Appendices Referred to in the Specification for Highway Works			
Page No	To Be Completed By The Operating Company*	Appendix No	Title
N/A (See Sch9P1)		0/1	<u>INTRODUCTION</u> Contract-Specific Additional Substitute and Cancelled Clauses and Tables included in this Contract
N/A (See Sch9P1)		0/2	Contract-specific Minor Alterations to Existing Clauses and Tables included in this Contract
Page No 1		0/3	List of Numbered Appendices Referred to in the Specification and included in this Contract
Page No 9 Page No 15		0/4 0/5	List of drawings included in this Contract Special National Alterations of the Overseeing Department of Scotland Wales or Northern Ireland
NOT USED		1/1	<u>PRELIMINARIES</u> Temporary Accommodation and Equipment for the Overseeing Organisation
NOT USED		1/2	Vehicles for the Overseeing Organisation
NOT USED		1/3	Communication System for the Overseeing Organisation
NOT USED		1/4	Working and Fabrication Drawings
Page No 17		1/5	Testing to be carried out by the Operating Company
NOT USED		1/6	Supply and delivery of Samples to the Overseeing Organisation
NOT USED		1/7	Site Extent and Limitations on Use
NOT USED		1/8	Operatives for the Overseeing Organisation
Page No 18		1/9	Control of Noise and Vibration

List 'A': List of Numbered Appendices Referred to in the Specification for Highway Works			
Page No	To Be Completed By The Operating Company*	Appendix No	Title
NOT USED		1/10	Structures to be Designed by the Operating Company
NOT USED		1/11	Structural Elements and Other Features to be Designed by the Operating Company
NOT USED		1/12	Setting Out and Existing Ground Levels
NOT USED		1/13	Programme of Works
NOT USED		1/14	Payment Applications
NOT USED		1/15	Accommodation Works
Page No 19		1/16	Privately and Publicly Owned Services or Supplies
Page No 20		1/17	Traffic Safety and Management
NOT USED		1/18	Temporary Diversions for Traffic
NOT USED		1/19	Routeing of Vehicles
Page No 42		1/20	Recovery Vehicles for Breakdown
NOT USED		1/21	Information Boards
NOT USED		1/22	Progress Photographs
NOT USED		1/23	Risks to Health and Safety from Materials or Substances
NOT USED		1/24	Quality Management System
NOT USED		1/25	Temporary Closed Circuit Television (CCTV) System for the Monitoring of traffic
NOT USED		1/26	Temporary Automatic Speed Camera System for the Enforcement of Mandatory Speed Limits at Roadworks (TASCAR)
NOT USED		1/27	Temporary Automatic Speed Camera System for the Enforcement of Mandatory Speed Limits at Roadworks (TASCAR) – Particular Requirements
NOT USED		2/1	<u>SITE CLEARANCE</u> List of Buildings etc to be Demolished or Partially Demolished
NOT USED		2/2	Filling of Trenches and Pipes
Page No 57		2/3	Retention of Material Arising from Site Clearance
NOT USED		2/4	Explosives and Blasting
NOT USED		2/5	Hazardous Materials
Page No 58		3/1	<u>FENCING</u> Fences Gates and Stiles
Page No 59		4/1	<u>ROAD RESTRAINT SYSTEMS (VEHICLE AND PEDESTRIAN)</u> Road Restraint Systems (Vehicle and Pedestrian)
Page No 62		4/2	Information Required to Demonstrate Compliance of Road Restraint Systems to BS EN 1317-1, BS EN 1317-2, BS EN 1317-3 and DD ENV 1317-4: 2002

List 'A': List of Numbered Appendices Referred to in the Specification for Highway Works			
Page No	To Be Completed By The Operating Company*	Appendix No	Title
Page No 68 Page No 73 Page No 74		5/1 5/2 5/3	<u>DRAINAGE AND SERVICE DUCTS</u> Drainage Requirements Service Duct Requirements Surface Water Channels and Drainage Channel Blocks
Page No 75 Page No 76 NOT USED Page No 77		5/4 5/5 5/6 5/7	Fin Drains and Narrow Filter Drains Combined Drainage and Kerb Systems Linear Drainage Channel Systems Thermoplastics Structural Wall Pipes and Fittings
Page No 79		6/1	<u>EARTHWORKS</u> Requirements for Acceptability and Testing etc of Earthworks Materials
Page No 89		6/2	Requirements for Dealing with Class U1B and Class U2 Unacceptable Materials
Page No 90		6/3	Requirements for Excavation Deposition Compaction (Other than Dynamic Compaction)
NOT USED Page No 91		6/4 6/5	Requirements for Class 3 Material Geotextiles Used to Separate Earthworks Materials
NOT USED		6/6	Fill to Structures and Fill Above Structural Foundations
NOT USED		6/7	Sub-formation and Capping and Preparation and Surface Treatment of Formation
Page No 92 NOT USED		6/8 6/9	Topsoiling Earthwork Environmental Bunds, Landscape Areas, Strengthened Embankments
Page No 93		6/10	Ground Anchorages, Crib Walling and Gabions
NOT USED		6/11	Swallow Holes and Other Naturally Occurring Cavities and Disused Mine Workings
NOT USED NOT USED Page No 94		6/12 6/13 6/14	Instrumentation and Monitoring Ground Improvement Limiting Values for Pollution of Controlled Waters
Page No 95		6/15	Limiting Values for Harm to Human Health and the Environment
Page No 96		7/1TS	<u>ROAD PAVEMENTS – GENERAL</u> Flexible Pavement Options (Schedules 1, 2, 3, 4 and 5)
Page No 106		7/2	Excavation, Trimming and Reinstatement of Existing Surfaces

List 'A': List of Numbered Appendices Referred to in the Specification for Highway Works			
Page No	To Be Completed By The Operating Company*	Appendix No	Title
Page No 107		7/3	Surface Dressing – Performance Specification (Sheets 1, 2 and 3)
Page No 112		7/4	Bond Coats, Tack Coats and Other Bituminous Sprays (Sheets 1, 2 and Binder Data Sheet)
NOT USED		7/5	In Situ Recycling: The Remix and Repave Process
Page No 115		7/6	Breaking Up or Perforation of Existing Pavement
Page No 116		7/7	Slurry Surfacing Incorporating Microsurfacing (Sheets 1, 2 and 3)
NOT USED		7/8	Not Used
Page No 121		7/9	Cold-Milling (Planing) of Bituminous Bound Flexible Pavement
NOT USED		7/10	Worksheet Pro Forma for Results of Testing for Constituent Materials in Recycled Aggregate and Recycled Concrete Aggregate
NOT USED		7/11	Overband and Inlaid Crack Sealing Systems
Page No 122		7/12	Arrester Beds
Page No 123		7/13	Saw-Cut and Seal Bituminous Overlays on Existing Jointed Concrete Pavements
Page No 124		7/14	Preparation of Jointed Concrete Pavements Prior to Overlaying and Saw-Cut and Seal of the Bituminous Overlay
NOT USED		7/15	Saw-Cut, Crack and Seal Existing Jointed Reinforced Concrete Pavements
NOT USED		7/16	Cracking and Sealing of Existing Jointed Unreinforced Concrete Pavements and CBM Bases
NOT USED		7/17	Cracking Plant and Equipment Progress Record
Page No 125		7/18	Site Specific Details and Requirements for Cold Recycled Bitumen Bound Material
NOT USED		7/19	Site Specific Details and Requirements for Recycled Cement Bound Material
NOT USED		7/20	Site Specific Details and Requirements for Inducing Cracks
NOT USED		7/21	Surface Dressing – Recipe Specification (Sheets 1, 2, and Binder Data Sheet)
Page No 126		7/22	Repairs to Potholes
NOT USED		10/1	<u>ROAD PAVEMENTS – CONCRETE AND CEMENT BOUND MATERIALS</u> Plant and Equipment for the Construction of Exposed Aggregate Concrete Surface

List 'A': List of Numbered Appendices Referred to in the Specification for Highway Works			
Page No	To Be Completed By The Operating Company*	Appendix No	Title
Page No 129 Page No 145		11/1 11/2	<u>KERBS FOOTWAYS AND PAVED AREAS</u> Kerbs Footways and Paved Areas Access Steps
Page No 146 Page No 149 Page No 151 NOT USED		12/1 12/2 12/3 12/4	<u>TRAFFIC SIGNS</u> Traffic Signs: General Traffic Signs: Marker Posts Traffic Signs: Road Markings and Studs Traffic Signs: Cones, Cylinders, FTDs, and Other Traffic Delineators
Page No 152 NOT USED		12/5 12/6	Traffic Signs: Traffic Signals Traffic Signs: Special Sign Requirements on Gantries
NOT USED		13/1	<u>ROAD LIGHTING COLUMNS AND BRACKETS, CCTV MASTS AND CANTILEVER MASTS</u> Information to be Provided when Specifying Lighting Columns and Brackets (Specification for Highway Works) Typical Lighting Column and Bracket Data Sheets 1 and 2
Page No 153		13/2	(Specification for Highway Works) Typical Lighting Column and Bracket Data Sheets 1 and 2
Page No 157		13/3	Instructions for Completion of Lighting Column and Bracket Data Sheets
NOT USED		13/4	Information to be Provided When Specifying CCTV Masts
NOT USED		13/5	(Specification for Highway Works) Typical CCTV Mast Data Sheet
NOT USED		13/6	Instructions for Completion of CCTV Mast Sheets
NOT USED		13/7	Information to be Provided When Specifying Cantilever Masts
NOT USED		13/8	(Specification for Highway Works) Typical Cantilever Masts Data Sheets 1 and 2
NOT USED		13/9	Instructions for Completion of Cantilever Masts Data Sheets
NOT USED NOT USED		14/1 14/2	<u>ELECTRICAL WORK FOR ROAD LIGHTING AND TRAFFIC SIGNS</u> Site Records Location of Lighting Units and Feeder Pillars
NOT USED NOT USED NOT USED		14/3 14/4 14/5	Temporary Lighting Electrical Equipment for Road Lighting Electrical Equipment for Traffic Signs
NOT USED NOT USED		15/1 15/2	<u>MOTORWAY COMMUNICATIONS</u> Motorway Communications Cable Duct Requirements

List 'A': List of Numbered Appendices Referred to in the Specification for Highway Works			
Page No	To Be Completed By The Operating Company*	Appendix No	Title
NOT USED		16/1	<u>PILING AND EMBEDDED RETAINING WALLS</u> General Requirements for Piling and Embedded Retaining Walls
NOT USED		16/2	Precast Reinforced and Prestressed Concrete Piles and Precast Reinforced Concrete Segmental Piles
NOT USED		16/3	Bored Cast-in Place Piles
NOT USED		16/4	Bored Piles Constructed using Continuous Flight Augers and Concrete or Grout Injection through Hollow Auger Stems
NOT USED		16/5	Driven Cast-in-Place Piles
NOT USED		16/6	Steel Bearing Piles
NOT USED		16/7	Reduction of Friction on Piles
NOT USED		16/8	Non-Destructive Methods for Testing Piles
NOT USED		16/9	Static Load Testing of Piles
NOT USED		16/10	Diaphragm Walls
NOT USED		16/11	Hard/Hard Secant Pile Walls
NOT USED		16/12	Hard/Soft Secant Pile Walls
NOT USED		16/13	Contiguous Bored Pile Walls
NOT USED		16/14	King Post Walls
NOT USED		16/15	Steel Sheet Piles
NOT USED		16/16	Integrity Testing of Wall Elements
NOT USED		16/17	Instrumentation for Piles and Embedded Walls
NOT USED		16/18	Support Fluid
Page No 159		17/1	<u>STRUCTURAL CONCRETE</u> Schedule for the Specification of Designed Concrete
Page No 163		17/2	Concrete – Impregnation Schedule
NOT USED		17/3	Concrete – Surface Finishes
Page No 164		17/4	Concrete – General
Page No 166		17/5	Buried Concrete
NOT USED		17/6	Grouting and Duct Systems for Post-tensioned Tendons
NOT USED		18/1	<u>STRUCTURAL STEELWORK</u> Requirements for Structural Steelwork
Page No 168		19/1	<u>PROTECTION OF STEELWORK AGAINST CORROSION</u> (Specification for Highway Works) Form HA/P1 (New Works) Paint System Sheet
NOT USED		19/2	Requirements for Other Work
Page No 170		19/3	(Specification for Highway Works) Form HA/P2 Paint Data Sheet
Page No 171		19/4SE	(Specification for Highway Works) Form SEDD/P3 Paint Sample Despatch List: Sheets 1 and 2

List 'A': List of Numbered Appendices Referred to in the Specification for Highway Works			
Page No	To Be Completed By The Operating Company*	Appendix No	Title
NOT USED		19/5	General Requirements <u>WATERPROOFING FOR CONCRETE STRUCTURES</u>
Page No 174		20/1	Waterproofing for Concrete Structures <u>BRIDGE BEARINGS</u>
NOT USED		21/1	Bridge Bearing Schedule <u>BRIDGE EXPANSION JOINTS AND SEALING OF GAPS</u>
NOT USED		23/1	Bridge Deck Expansion Joints Schedule
NOT USED		23/2	Sealing of Gaps Schedule (Other than in Bridge Deck Expansion Joints)
Page No 175		24/1	<u>BRICKWORK</u> Brickwork, Blockwork and Stonework <u>SPECIAL STRUCTURES</u>
NOT USED		25/1	Requirements for Corrugated Steel Buried Structures
NOT USED		25/2	Requirements for Reinforced Soil and Anchored Earth Structures
NOT USED		25/3	Requirements for Pocket – Type and Grouted – Cavity Reinforced Brickwork Retaining Wall Structures
NOT USED		25/4	Environmental Barriers
NOT USED		25/5	Requirements for Buried Rigid Pipes for Drainage Structures <u>MISCELLANEOUS</u>
Page No 177		26/1	Ancillary Concrete
NOT USED		26/2	Bedding Mortar
NOT USED		26/3	Cored Thermoplastic Node Markers <u>LANDSCAPE AND ECOLOGY</u>
Page No 178		30/1	General, sheets 1, 2 and 3
Page No 182		30/2	Weed Control
Page No 184		30/3	Control of Rabbits and Deer
Page No 185		30/4	Ground Preparation
Page No 186		30/5	Grass Seeding, Wildflower Seeding and Turfing
Page No 190		30/6	Planting
Page No 199		30/7	Grass, Bulbs and Wildflower Maintenance
Page No 201		30/8	Watering
Page No 202		30/9	Establishment Maintenance for Planting
Page No 204		30/10	Maintenance of Established Trees and Shrubs
Page No 207		30/11	Management of Waterbodies
Page No 208		30/12	Special Ecological Measures <u>MAINTENANCE PAINTING OF STEELWORK</u>
Page No 222		50/1	(Specification for Highway Works) Form HA/P1 (Maintenance) Paint System Sheet

List 'A': List of Numbered Appendices Referred to in the Specification for Highway Works			
Page No	To Be Completed By The Operating Company*	Appendix No	Title
NOT USED Page No 225		50/2 50/3	Requirements for Other Work (Specification for Highway Works) Form HA/P2 Paint Data Sheet
Page No 227		50/4SE	(Specification for Highway Works) Form HA/P3 Paint Sample Despatch List: Sheets 1 and 2
NOT USED		50/5	General Requirements

* For individual Operations Instructions the Operating Company shall compile the appropriate numbered Appendices giving specific information appropriate to the Instruction in accordance with the other provisions of this Contract.

List 'B': List of Contract-Specific Numbered Appendices devised for this Contract		
Page No.	Appendix No.	Appendix Title
Page No 47 Page No 56	1/75 1/76	<u>PRELIMINARIES</u> Operating Company Vehicle Liveries Incident Support Unit and Trunk Road Incident Support Service Operatives' Uniforms
Page No 57 Page No 58	1/77 1/78	Specification for TRISS Vehicle Mobile CCTV System Specification for Vehicle Mounted Variable Message Signs
Page No 167	17/70	<u>STRUCTURAL CONCRETE</u> Schedule for the Specification of an Alternative Designed Concrete.
Page No 209	32/1	<u>INCIDENT RESPONSE OPERATIONS</u> Incident Response
Page No 214	33/1	<u>SITE INVESTIGATION</u> Structural Investigations Test Requirements
Page No 230	62/1	<u>PROFESSIONAL SERVICES</u> Requirements for Professional Services

APPENDIX 0/4 – LIST OF DRAWINGS INCLUDED IN THIS CONTRACT

1 CONTRACT-SPECIFIC DRAWINGS SUPPLIED TO EACH TENDERER

1.1 None.

2. STANDARD DRAWINGS

2.1 Supplied to Each Tenderer

2.1.1 Standard Drawings for this Contract listed below are contained in Schedule 9 Part 3.

Drawing No.	Title
400/15/001	Pedestrian Guard Rail Type G1
500/01/337-379	Drainage and Service Ducts – Duct Groups D1 - D4
500/05/160-166	Drainage and Service Ducts – Drawpits DP1- DP2
500/05/169-178	Drainage and Service Ducts – Gully Types G1- G4
500/06/001	Headwall Type 1 – Brickwork
500/06/010	Headwall Type 1 – Mass Concrete
500/06/019	Headwall Type 3 – Reinforced Concrete
500/16/001-012	Protection of Public Utility Apparatus and Drainage – Protection Type P1 – P4
1100/01/001-019	Kerb Types K1 to K4
1100/01/025-037	Kerb Types K5 to K7
1100/01/040	Kerb Types K8 and K9
1100/01/043	Kerb Types K10 and K11
1100/01/046	Kerb Types K12 and K13
1100/01/052	Kerb Types K16 and K17
1100/01/061-082	Kerb Types K20 to K24
1100/01/085-115	Channel Types C1-C6
1100/01/118	Edging Type E1
1100/01/136-139	Kerb Type Quadrants Q1 and Q2
1100/02/124-127	Combined Kerb and Drainage System Types DK1 and DK2
1100/02/130	Combined Kerb and Drainage System Types DK3
1100/02/133	Combined Kerb and Drainage System Outfall Types DK4
1100/05/001-010	Footways, Footpaths, Paved Areas and Cycleways Types F1 to F4
1100/05/013-016	Footways, Footpaths, Paved Areas and Cycleways Types F5 and F6
1100/05/019-028	Footways, Footpaths, Paved Areas and Cycleways Types F7 to F10
1100/05/031-040	Footways, Footpaths, Paved Areas and Cycleways Types F11 to F14
1100/05/043-052	Footways, Footpaths, Paved Areas and Cycleways Types F15 to F18

Drawing No.	Title
1100/05/055-064	Footways, Footpaths, Paved Areas and Cycleways Types F19 to F22
1100/05/067-073	Footways, Footpaths, Paved Areas and Cycleways Types F23 to F25
1100/05/085 & 088	Recessed Gullies GS1 and GS2 with Kerb Surround
1200/07/001	Precast Concrete Bollard Type B1
1200/08/001,	Verge hazard marker posts Type VM1
1200/08/002	Verge hazard marker posts Type VM2A and VM2B
1200/09/001	Edge of Carriageway Hazard Markers Type ECB1
1200/10/1	Details for Sign Post Foundation Sheet 1 of 2
1200/10/2	Details for Sign Post Foundation Sheet 2 of 2
MCX 0138 (Modified)	Typical Access Steps

2.2 Inspected by Tenderer

2.2.1 None.

2.3 Brought into this Contract by Reference

HCD published by the Stationary Office (formerly HMSO) as Volume 3 of the Manual of Contract Documents for Highway Works contains the following drawings brought into this Contract by reference. Unless otherwise stated below the whole drawing is brought into this Contract.

Drawing No.	Title	Date	Aspect/Alternative(s) required if whole Drawing is not included in contract
F1	Surface Water Drains – Trench and Bedding Details	Dec 91	
F2	Filter Drains – Trench and Bedding Details	Nov 03	
F3	Type 1 Chamber (Brick or In Situ Concrete Manhole)	May 06	
F4	Type 2 Chamber (Precast Concrete Manhole)	May 06	
F5	Type 3 Chamber (Precast Concrete Manhole)	May 06	
F6	Type 4 Chamber (Precast Concrete Manhole)	May 06	
F7	Type 5 Chamber (Precast Concrete Manhole)	May 06	
F9	Type 5 Chamber Grating Details	May 01	
F10	Chamber Fittings – Ladder, Handhold and Safety Chain	Nov 03	
F11	Type 7 Chamber (1050 Catchpit)	May 06	

Drawing No.	Title	Date	Aspect/Alternative(s) required if whole Drawing is not included in contract
F12	Type 8 Chamber (600 Catchpit)	May 06	
F13	Precast and In Situ Cast Gullies	May 06	
F14	Sumpless Gully Chamber and Alternative Rising Section	May 06	
F15	Drainage Channel Blocks Types A, B and C	Nov 04	
F16	Drainage Channel Blocks Types D, E and F	Nov 04	
F17	Detail of Keyways and Keys for Manhole Tops and Kerb Type Gully Tops	Mar 98	
F18	Edge of Pavement Drains – Fin Drains and Narrow Filter Drains	Dec 91	
F19	Edge of Pavement Drains – Installation of Fin Drains	Dec 91	
F20	Edge of Pavement Drains – Installation of Narrow Filter Drains	Dec 91	
F25	Type 9 Chamber (Brick or In Situ Concrete Shallow Inspection Chamber)	May 06	
F26	Type 10 Chamber (Brick or In Situ Concrete Shallow Inspection Chamber)	May 06	
F27	Type 9 Chamber (Precast Concrete Deep Inspection Chamber)	May 06	
F28	Chamber Fittings – Guardrail	Nov 03	
H1	Temporary Fences Types 1 and 2	May 04	
H2	Temporary Fences Types 3 and 4	May 04	
H3	Motorway and Accommodation Works Timber Post and 4 (or 5) Rail Fences	May 04	
H4	Motorway and Accommodation Works High Tensile Strained Wire Deer Fences 135	May 04	
H5	Motorway and Accommodation Works High Tensile Strained Wire Deer Fences 180	May 04	
H6	Motorway and Accommodation Works High Tensile Strained Wire Deer Fences 210	May 04	
H7	Turning Posts Strained Wire Fences	Dec 91	
H8	General Details Strained Wire Fences Sheet 1	May 01	
H9	General Details Strained Wire Fences Sheet 2	Dec 01	
H10	General Details Strained Wire Fences Sheet 3	Dec 91	

Drawing No.	Title	Date	Aspect/Alternative(s) required if whole Drawing is not included in contract
H11	Accommodation Works Chain link Fences	May 04	
H12	Accommodation Works Rectangular Wire Mesh and Hexagonal Wire Netting Fences	Aug 93	
H13	Accommodation Works Strained Wire Fences (General Pattern)	May 04	
H14	Accommodation Works Timber Palisade and Close Boarded Fences	May 04	
H15	Accommodation Works Wooden Post and 3 Rail Fences	May 04	
H16	Accommodation Works Woven and Lap Boarded Panel Fences	May 04	
H17	Steel Single Field Gate	May 04	
H18	Steel Half Mesh Single Field Gate	May 04	
H19	Steel Extra Wide Single Field Gate	May 04	
H20	Steel Double Field Gate	May 04	
H21	Timber Single Field Gate	May 04	
H22	Timber Double Field Gate	May 04	
H23	Timber Wicket Gate Type 1	May 04	
H24	Timber Wicket Gate Type 2	May 04	
H25	Timber Kissing Gate	May 04	
H26	Hinges for Steel Field Gates	May 01	
H27	'D' Latch for Steel Single Field Gates	Dec 91	
H28	Sliding Bolt Latch Type B for Steel Single Field Gates	Dec 91	
H29	Tubular Steel Latch for Steel Double Field Gate	Dec 91	
H30	Hinges for Timber Field Gates	Dec 91	
H31	Spring Catch for Single Timber Field Gates	Dec 91	
H32	Latch and Drop Bolt for Timber Double Field Gate	Dec 91	
H33	Standard Gate Stops	Dec 91	
H34	Timber Stile Type 1	May 04	
H35	Timber Stile Type 2	May 04	
H36	Diagrammatic Methods of Attaching Fencing to Structures	Nov 06	
H37	Rules for the Selection of Non Structural Timber for Use in Environmental Barriers – Sheet 1	Dec 91	
H38	Rules for the Selection of Non Structural Timber for Use in Environmental Barriers – Sheet 2	Mar 98	
H39	Planting Works Fencing Rabbit and Deer Fencing Types 1 and 2	May 01	

Drawing No.	Title	Date	Aspect/Alternative(s) required if whole Drawing is not included in contract
H40	Planting Works Fencing Rabbit and Deer Fencing Types 3, 4 and 5	May 01	
H41	Planting Works Fencing Gate	May 01	
H42	Planting Works Fencing Stile Types 3, 4 and 5	May 01	
H43	Planting Works Fencing Fenced Tree Guards Types 1, 2 and 3	May 01	
H44	Planting Works Fencing Urban Area Fencing	May 01	
H45	Badger Gate	May 01	
H46	Attachment of Wire Mesh to Fencing (Sheet 1 of 3)	May 01	
H47	Attachment of Wire Mesh to Fencing (Sheet 2 of 3)	May 01	
H48	Attachment of Wire Mesh to Fencing (Sheet 3 of 3)	May 01	
K4	Typical Trench Reinstatement Details for Bituminous and Concrete Pavements	May 04	Bituminous aspect only
K5	Planting Details for Planting Large Trees	May 01	

**APPENDIX 0/5 – SPECIAL NATIONAL ALTERATIONS OF THE OVERSEEING
DEPARTMENT OF SCOTLAND**

Page No.	Appendix No.	Appendix Title
Page No 96	7/1TS	<u>ROAD PAVEMENTS – GENERAL</u> Flexible Pavement Options (Schedules 1, 2, 3, 4 and 5)
Page No 171	19/4SE	<u>PROTECTION OF STEELWORK AGAINST CORROSION</u> (Specification for Highway Works) Form SEDD/P3 Paint Sample Despatch List: Sheets 1 and 2
Page No 227	50/4SE	<u>MAINTENANCE PAINTING OF STEELWORK</u> (Specification for Highway Works) Form HA/P3 Paint Sample Despatch List: Sheets 1 and 2

APPENDIX 1/5 – TESTING TO BE CARRIED OUT BY THE OPERATING COMPANY

- 1 The Operating Company shall carry out sampling and testing as required in this Contract.

The Operating Company shall include sampling and testing as described in Notes for Guidance for the Specification for Highway Works Table NG 1.1 for the Operations in its Management System including the Quality Plan as an Inspection and Test Plan, which shall include similar sampling and testing for products not included in table NG 1.1 but proposed by the Operating Company.

Once the Overseeing Organisation has given his written consent to the Inspection and Test Plan the Operating Company shall adhere to this plan for all Operations unless a revised plan is subsequently consented to by the Overseeing Organisation. The Inspection and Test Plan shall also include the Operating Company's sampling and testing frequencies for Operations, to ensure that the frequency and type of testing across the Unit shall be compatible with this Specification and shall be acceptable to the Overseeing Organisation.

Operations falling below the minimum testing frequency shall be tested at a frequency acceptable to the Overseeing Organisation which may include the aggregating of quantities of materials at individual Sites. The Operating Company shall produce supplements to the Inspection and Test Plan acceptable to the Overseeing Organisation to cover such Operations.

APPENDIX 1/9 – CONTROL OF NOISE AND VIBRATION

- 1 The Operating Company shall comply with the following requirements:
 - (i) Mechanical plant with directional noise characteristics shall be positioned to minimise noise at adjacent properties.
 - (ii) Static machines shall be sited as far away as practicable from inhabited buildings.
 - (iii) In built up areas where it is necessary to provide power for the running of traffic signals, pumps and other powered plant at any time outwith Normal Working Hours the source of such power shall be mains electricity.

- 2 During Normal Working Hours the equivalent continuous sound level (Leq) shall not exceed the following measured 1 metre outside the facades of any adjacent occupied buildings:
 - (i) 70 dB(A) twelve hour value of Leq,
 - (ii) 73 dB(A) six hour value of Leq (provided the six hours fall within the period 0800 to 1600 hours),
 - (iii) 76 dB(A) three hour value of Leq (provided the three hours fall within the period 0900 to 1300 hours), and
 - (iv) 85 dB(A) at any instant (slow response).

- 3 The limit of twelve hour value of Leq shall always be met so that when the higher levels occur the levels permitted throughout the remainder of the normal working hours shall become progressively lower than the overall limit imposed.

APPENDIX 1/16 – PRIVATELY AND PUBLICLY OWNED SERVICES OR SUPPLIES

1 Generally motorways do not contain any privately or publicly owned services or supplies other than:

- (i) cabling for the Scottish Ministers' communication systems,
- (ii) cabling for road lighting and lit signs on the Unit,
- (iii) overhead power lines crossing the motorways, and
- (iv) a small number of major pipelines and cables which cross the motorways in ducts.

Subject to the other provisions of this Contract, Trunk Roads may contain in addition to all types of Undertakers' equipment and services, cabling for communications systems, variable message signs, automatic traffic counters, closed circuit television systems, road ice prediction sensors, road lighting systems, lit signs and other cabled equipment.

There may be overhead power and communication cables.

The Operating Company shall co-ordinate Operations with works required to be carried out by Undertakers or their contractors or other third parties.

The Operating Company shall maintain a register of apparatus installed following the grant of permission in writing pursuant to Section 109 of NRSWA, showing details of the location and nature of the apparatus, the persons to whom permission has been granted, and any conditions to which the granting of permission shall be subject.

The Operating Company shall update the register with any such apparatus and relevant associated information that it becomes aware of in the course of its Operations.

The Operating Company shall make arrangements with the Undertakers and others concerned for the phasing of any disconnections and diversion of private services affected by the Site activities.

APPENDIX 1/17 – TRAFFIC SAFETY AND MANAGEMENT

1 RESPONSIBILITY FOR TRAFFIC MANAGEMENT MEASURES

1.1 The Operating Company shall identify, provide, maintain and survey all traffic management measures necessary for its own Operations.

It shall examine proposals for and inspect installations of traffic management for activities by others on the Unit for compliance with relevant legislation and the standards referred to in this Contract and shall immediately report any failings to the organisation concerned and notify the Overseeing Organisation in writing of significant failings.

Where practicable, a photographic record of any failings shall be maintained.

1.1.1 Such activities by others include:

- (i) major works for resurfacing, reconstruction and bridgework on any part of the Unit,
- (ii) works for improvement works on any part of the Unit,
- (iii) maintenance of Traffic Scotland equipment and Scottish Roads Traffic Database equipment,
- (iv) installation, maintenance, removal, of emergency telephones and hazard warning signals, variable message signs for snow gates, matrix signals and variable message signs, automatic data collection systems and closed circuit television systems,
- (v) technical surveys and minor specialist activities,
- (vi) installation, maintenance, removal, of Undertakers' equipment and apparatus,
- (vii) landscape maintenance for Works Contracts,
- (viii) installation, maintenance, removal of Trafficmaster equipment,
- (ix) authorised works being undertaken on the Trunk Road by private developers, and
- (x) galas and events.

1.2 The Operating Company shall complete Mobile Lane Closure Risk Assessment Checklists as contained in Annex 1/17A. . The checklists shall be held within the Central Office.

1.3 All vehicles engaged in Operations, inspections or Works shall conform to Traffic Signs Manual Chapter 8 Part 2 Section 5.

Vehicles shall have a sign board reading 'Motorway Maintenance' or 'Road Maintenance' (to Diagram 7404 of Schedule 12 Part V of The Traffic Signs Regulations and General Directions 2002) fixed at the rear.

The lettering shall be 150 mm 'x height' except that for light vans and cars it shall be the largest 'x height' that can be accommodated out of the followings heights 37.5, 50, 62.5 or 100 mm.

The lettering shall be black capital letters from the alphabet described in The Traffic Signs Regulations and General Directions 2002 Schedule 13 Part II on a yellow non-reflectorised background in accordance with BS 381C colour No 355.

All vehicles engaged in Operations, inspections or Works shall be provided with roof-mounted beacons as specified in Traffic Signs Manual Chapter 8 Part 2 Section O5.3.

The roof-mounted beacons shall be switched on:

- (i) when the vehicle or Constructional Plant is manoeuvring into or out of the Site of the Operations or operating at low speed on a carriageway or hardshoulder open to vehicles, and
- (ii) when the vehicle or Constructional Plant is standing on a carriageway or hardshoulder open to vehicles.

- 1.4 All vehicles and Constructional Plant operating within any Site between sunset and sunrise and during periods of poor visibility and fog shall have mandatory lights illuminated and shall travel in the same direction of flow as the adjacent traffic.

Vehicles travelling within any Site against the adjacent traffic flow shall not have headlights on or be similarly illuminated and shall keep as far away as possible from the Lanes open to vehicles.

- 1.5 The Operating Company shall have clear method statements covering all relevant closure types used on the Unit.

The method statements confirmed in the Management System shall be in accordance with Sector Scheme 12 as referred to in Appendix A to this Specification.

- 1.6 The Operating Company shall consult all parties directly affected by any Operations, Works and or works carried out by others.

- 1.7 The Operating Company shall consult the appropriate roads authority regarding any diversion routes and shall comply with the reasonable requirements of the roads authority.

Should the roads authority stipulate any requirements for which the Operating Company considers that an Order is required to meet such requirements, or considers the requirements to be unreasonable, the Operating Company shall immediately refer such requirements to the Overseeing Organisation in writing. The Operating Company shall not undertake any Operations or Works in respect of the requirements unless required to do so by the Overseeing Organisation.

2 TRAFFIC SAFETY AND MANAGEMENT REQUIREMENTS

- 2.1 Layouts for traffic safety and management shall be in accordance with:

- (i) the advice and plans contained in Chapter 8 of the Traffic Signs Manual published by The Stationery Office.

Where constraints of the Trunk Road network do not allow full compliance with Chapter 8, alternative proposals, fully supported with risk assessments, shall be submitted for written consent by the Overseeing Organisation,

- (ii) Departmental Standards and Advice Notes as set out in the Design Manual for Road and Bridges, and
 - (iii) codes of practice in the case of works carried out pursuant to NRSWA .
- 2.2 When planning Operations, Works or co-ordinating with works by others all traffic safety and management shall comply with the Code of Practice 'The Reduction of Traffic Delays at Roadwork's' published by the Scottish Office and the County Surveyor's Society in Scotland 1992.
- 2.3 When planning Operations, Works or co-ordinating with works by others the Operating Company shall ensure that when safe access to central reservations is available the area of the central reservations protected by traffic management, including carriageway channels, is restored to a clean and tidy condition with a minimum standard of Grade B as stated in the Code of Practice on Litter and Refuse before traffic management measures are removed.
- 2.4 Operations shall take account of local events and shall be planned and carried out in accordance with any standing local agreements.
- 2.5 Guidance on the permissions, planning and organisation of galas can be obtained from <http://www.scotland.gov.uk/Publications/2005/07/14155315/53182>.
- 2.6 The Operating Company shall optimise all traffic management measures for Operations, Works and works carried out by others to minimise overall disruption to traffic.
- 2.7 The Operating Company shall liaise and co-operate with Traffic Scotland, local roads authorities and Emergency Services to ensure that traffic diverted from Trunk Roads on to the non-Trunk Road network and vice versa has the minimum impact on both networks and shall not adversely affect the performance of the Emergency Services.
- 2.8 Where others undertake work within the Unit the Operating Company shall ensure that the organisation responsible for carrying out such work erects information signs as defined in the Traffic Signs Regulations and General Directions (2002) sign reference 7008.
- 2.9 The Operating Company shall provide temporary mandatory speed restrictions at any Site involving a Type A closure as defined in Chapter 8 of the Traffic Signs Manual published by The Stationery Office subject to approval of the Overseeing Organisation and the relevant Temporary Traffic Order being in place.

The extent and temporary speed limit proposed by the Operating Company shall take cognisance of the existing speed limit, the surrounding environment (urban and rural) and the nature of the Operations.

2.10 The Operating Company shall employ methods of working within the Unit such that wherever practicable all obstructions can be removed from a carriageway and that traffic lanes or hardshoulders can be re-opened to vehicles within 30 minutes of a requirement to have the traffic management removed.

2.11 Traffic management measures shall be monitored and modified by the Operating Company to ensure traffic delays are minimised.

When traffic signals are in use queue lengths shall be monitored to ensure that the phase settings result in equal queue lengths and shall be adjusted appropriately to accommodate varying flows.

2.12 The Operating Company shall make good any damage or disturbance to temporary signs or other traffic management measures within 30 minutes on motorways and dual carriageways and 2 hours on single carriageways of the Operating Company becoming aware of such damage or disturbance.

3 TEMPORARY TRAFFIC REGULATION ORDERS

3.1 Where the Operating Company Operations or works by others require the promotion of Temporary Traffic Regulation Orders (TTROs) the Operating Company shall provide all such information as is identified in Annex 1/17B to this Appendix to the Overseeing Organisation.

Where such TTROs can be used by both the Operating Company and other bodies this shall form part of the traffic management arrangements.

Where an individual TTRO is required for the specific works or operations promoted by others these shall be the subject of an Order.

3.2 A TTRO will be promoted by the Scottish Ministers to allow one carriageway of Trunk Road motorways or dual carriageways to be closed when a contra-flow is installed and the adjacent carriageway is used as the alternative route.

The closure of only one Lane including a hardshoulder will not require a TTRO provided that the remainder of the carriageway is still available for traffic.

3.3 Where a carriageway or slip road is to be closed and the diversion involves any road other than the adjacent carriageway then a TTRO is required.

Where the Operating Company requires a TTRO for such Operations, the Operating Company shall inform the Overseeing Organisation during the planning of the Site activities that a TTRO is required for the Operations being undertaken.

3.4 Where the Operating Company requires a TTRO to impose a speed limit for an Operation the Operating Company shall inform the Overseeing Organisation during the planning of the Site activities that a TTRO is required for the Operations being undertaken.

3.5 The Overseeing Organisation will arrange for the publication and making of all TTROs.

The minimum notice required from receipt of all the information identified in sub-clause 3.6 to support the draft TTRO by the Overseeing Organisation to the making or amending of such Traffic Regulation Orders is six weeks.

- 3.6 The Operating Company when submitting information to promote a TTRO shall complete a TTRO1 Form, a draft TTRO, a press notice, a method statement and a plan of the roads affected.

The TTRO1 form, draft TTRO, press notice, and Operating Company checklist shall follow the format given in Annex 1/17B.

- 3.7 In the case of carriageway closures required as a result of an Incident, the Operating Company shall notify the Overseeing Organisation as soon as is reasonably practicable following the installation of an emergency closure.

- 3.8 If the Operating Company requires to carry out any remedial or other Site activities at its own expense and requires a TTRO to be promoted, it shall give the required notice and provide all such information identified in Annex 1/17B to allow the Overseeing Organisation to promote the TTRO and any costs incurred by the Overseeing Organisation shall be recoverable from the Operating Company.

4 RESTRICTIONS ON TRAFFIC MANAGEMENT MEASURES – ERECTION OPERATION AND REMOVAL OF TRAFFIC MANAGEMENT

- 4.1 Due to the nature of the Unit and variable traffic flows, restrictions on the hours of working shall apply to parts of the Trunk Road network.

- 4.2 The erection, operation and removal of traffic management may be undertaken by the Operating Company at any time except within the restricted working hours referred to in Table 1/17 in this Appendix.

- 4.3 With the exception of Operations carried out in respect of Winter Service and Incidents, restricted working hours as referred to in Table 1/17 of this Appendix 1/17 shall apply to all Site activities and Works Contracts in so far as it is practicable.

- 4.4 The extent of any traffic management layouts shall be limited to single Lane closures except in extreme circumstances where written consent for different arrangements shall be obtained from the Overseeing Organisation.

- 4.5 The Operating Company shall seek prior written consent from the Overseeing Organisation before undertaking Site activities or overseeing Works which are inconsistent with the constraints set out in Table 1/17 in this Appendix.

- 4.6 The Operating Company shall plan Site activities in such a way that traffic management measurements can be removed at the end of each day when work has been carried out in so far as is practicable.

- 4.7 All signs erected for traffic management purposes which are not relevant to a situation shall be removed or covered immediately.

5 PROXIMITY OF TRAFFIC MANAGEMENT MEASURES

5.1 The minimum distance between Sites, Works or works shall be as specified in paragraph D3.5 in Chapter 8 of the Traffic Sign Manual and the following.

The minimum distance from a hardshoulder closure to any other closure upstream or downstream including contraflow shall be 1.0 kilometre.

In this respect:

- (i) the distance between such sites shall be measured from the roadworks 'End' sign of the first site to the commencement of coning at the second site,
- (ii) traffic management shall not be installed upstream or downstream of an existing layout and then extended to or from the existing layout.

An existing layout may be extended downstream.

6 DRIVER INFORMATION SIGNS

6.1 Information signs forming part of the traffic management arrangements shall be provided.

7 DIVERSION ROUTES

7.1 Standard Incident Diversion Routes

7.1.1 Standard Incident Diversion Routes have been developed for use on the network. These routes are set out in a protocol document, a controlled copy of which is held by all the roads authorities and police authorities within or adjacent to the Unit. The Operating Company will assume responsibility for the operation, management and updating of Standard Incident Diversion Routes established for use in any response to an Incident in accordance with the protocol document.

7.1.2 The Operating Company shall take action to ensure that all Standard Incident Diversion Routes documentation and protocols be kept under regular review and shall be modified to ensure the requirements of this Contract are met at all times. The Operating Company shall arrange and attend an annual meeting of all the relevant roads authorities and police authorities to ensure to discuss any amendments required to the Standard Incident Diversion Routes or their operation following which meeting any amendments to routes, procedures or signing shall be effected within one month of the date of the meeting. The Operating Company shall only make amendments in consultation with the roads authorities and police authorities affected by the Standard Incident Diversion Routes and with the prior consent of the Overseeing Organisation. The Operating Company shall provide copies of any amendments to Standard Incident Diversion Routes to the holders of controlled copies.

7.2 Non-Standard Incident Diversion Routes

7.2.1 If non-standard incident diversion routes are proposed by the Operating Company, the Operating Company shall fully liaise with all relevant roads authorities and the police.

A full set of plans and schedules for each route shall be prepared and copies of these distributed to the appropriate authorities.

7.3 Traffic Orders for Diversion Routes

The Overseeing Organisation will arrange all associated Traffic Orders required on the Trunk Road Network.

TABLE 1/17 – Working Hours Restrictions for Operations Affecting One Lane Only

Route No	Section	General Restrictions (Dates Days and Hours)	Additional Restrictions and Comments (Dates Days and Hours)
A9	Inveralmond to Luncarty	Monday-Friday 0730-0930 and 1600 - 1800	0600 - 2000 1 July to 31 August
A9	Inshes to North Kessock junction (including slip roads)	Monday-Saturday 0700 - 1900	0600 - 2000 1 July to 31 August and Public Holidays and Local Events.
A9	North Kessock to Tore (northbound)	Monday-Friday 1600 - 1800	0600 - 2000 1 July to 31 August and Public Holidays and Local Events.
A9	North Kessock to Tore (southbound)	Monday-Friday 0730 - 0930	0600 - 2000 1 July to 31 August and Public Holidays and Local Events.
A9	Thurso	Monday-Friday 0730 - 0930 and 1600 - 1800	0600 - 2000 1 July to 31 August
A82	Fort William	Monday-Friday 0730 - 0930 and 1600 - 1800	0600 - 2000 1 July to 31 August and Public Holidays and Local Events.
A82	Fort Augustus	None	0600 - 2000 1 July to 31 August
A82	Drumnadrochit	None	0600 - 2000 1 July to 31 August
A82	Tomnahurich Bridge to Kenneth Street	Monday-Friday 0730 - 0930 and 1600 - 1800	0600 - 2000 1 July to 31 August and Public Holidays and Local Events.
A82	Kenneth Street – Longman roundabout	Monday – Saturday 0730 - 0930 and 1600 - 1800	0600 - 2000 1 July to 31 August and Public Holidays and Local Events.
A82	Stonemollan to Tarbet	None	0600 - 2000 Saturday & Sunday 1 April to 30 September and local Public Holidays and Local Events.

Route No	Section	General Restrictions (Dates Days and Hours)	Additional Restrictions and Comments (Dates Days and Hours)
A82	Tarbet to Crainlarich	None	0600 - 2000 Saturday & Sunday 1 April to 30 September and local Public Holidays and Local Events.
A84	Stirling - Craigforth East to A84/B8075 junction	Monday-Friday 0730 - 0900 and 1600 - 1800	
A84	Callander - Eastern most speed limit to Tulipan Crescent	Monday-Friday 0730 - 0900 and 1600 - 1800	0600 - 2000 Saturday & Sunday 1 April to 30 September & public local holidays
A85	Crieff High Street - Dollerie Terrace to A822 Burrell Street	Monday-Friday 0730 - 0900 and 1600 - 1800	0600 - 2000 Saturday & Sunday 1 April to 30 September & public local holidays
A85	Oban - 30 mph to Argyll Square	Monday-Friday 0730 - 0900 and 1600 - 1800	0600 - 2000 Saturday & Sunday 1 April to 30 September & public local holidays
A86	Kingussie Main Street	Monday-Friday 0730 - 0900 and 1600 - 1800	0600 - 2000 1 July to 31 August
A86	Newtonmore Main street	Monday-Friday 0730 - 0900 and 1600 - 1800	0600 - 2000 1 July to 31 August
A87	Invergarry to Kyle of Lochalsh	None	0600 - 2000 1 July to 31 August
A87	Kyle of Lochalsh to Uig	Sunday 0000 - 2400	0600 - 2000 1 July to 31 August
A828	Connel Ferry Bridge - Approach to bridge north & south	All works to be agreed and programmed as required	
A830	Fort William to Corpach	Monday-Friday 0730 - 0900 and 1600 - 1800	0600 - 2000 1 July to 31 August
A830	Mallaig – 1 mile south of Mallaig		0900-1800 1 July to 31 August
A835	Maryburgh Roundabout	Monday-Friday 0730 - 0900 and 1600 - 1800	

ANNEX 1/17A – MOBILE LANE CLOSURE RISK ASSESSMENT CHECKLISTS

1 Checklist: Advance Planning For a Mobile Lane Closure

(All questions should be answered and comments provided where answer is No or supportive information is considered necessary)

In Column P "X" Denotes – Do not proceed with mobile Lane closure if answer is "No".

"G" Denotes – Refer to general guidance information before deciding to proceed with the mobile Lane closure.

No.	Question	Yes	No	Comments	P
1	Is mobile Lane closure suitable for the Operations?				X
2	Are traffic flows likely to be below specified levels in Table 6.8 of Chapter 8, Part 1.				X
3	Can normal (15 – 20%) heavy goods vehicle flows be expected?				G
4	Do sight stopping distances conform to the distances stated in the Highway Code?				X
5	Will you be prepared to abort the work during poor visibility?				G
6	Will the Site activities avoid introducing a north/south lane closure on a left hand bend?				G
7	Is there a hard shoulder?				G
8	Is the hard shoulder continuous?				G
9	If no hard shoulder, can advance sign vehicles/trailers be located on verge or close to north/south of carriageway without blocking the north/south lane?				X
10	If no hard shoulder, are suitable places on the verge available to site warning vehicles within 1 km before the Site activities?				X
11	Will the sun be in a position such that it does not blind drivers throughout?				X
12	Will all the Site activities be done so as to avoid dawn / dusk?				X
13	Will the mobile lane closure allow more than one lane to remain open?				G
14	Will the Site activities avoid the need for a north/south lane closure?				G
15	Can the Site activities avoid being slow moving?				G
16	Will traffic flows be monitored regularly throughout by the team leader / supervisor?				G

No.	Question	Yes	No	Comments	P
17	Are uphill gradients less than 4%?				G
18	Are downhill gradients less than 4%?				G
19	Is the length of Site activities free of junctions?				G
20	Are the Site activities to be carried out over a long distance?				G
21	Can all the Site activities be carried out from vehicles?				G
22	Are variable message signs available and able to be used?				G
23	For a 3 lane carriageway involving a 2 Lane closure can lanes 2 and 3 be closed to avoid slow moving traffic changing lanes?				G
24	Will the Site activities not take place (or be suspended) if there is a risk of vehicles skidding?				G
25	Has there been consultation with the police?				G
26	Has the proposed closure been included in the weekly closure notification to Transport Scotland?				G
27	Is the team leader clear that mobile Lane closures shall only proceed or remain in place if traffic checks show that flow rates are well within limits?				G
28	At night if hard shoulder is less than 3.3 metres wide has this been considered in planning / accepting the Site activities?				G
29	If verge marker posts have not been provided, has consideration been given to how vehicles will maintain positions?				G
30	Will the Site activities last less than the time required to set up and dismantle the necessary advance signs and taper required for the static closure(s) that would otherwise be required to complete the operations.				G
31	Are there any other special conditions applying to these Site activities?				

Checklist – For Use At Start Of Mobile Lane Closure

No.	Question	Yes	No	Comments
1	Are all vehicle drivers trained and fully competent in the mobile Lane closure technique?			
2	Will everyone working on the carriageway have high visibility clothing?			
3	Are all advance sign and block vehicles painted yellow and in clean condition?			
4	Are operational vehicles fitted with amber warning beacons?			
5	Are lorry mounted crash cushions fitted to block vehicles?			
6	Is the weight of the block vehicles (including ballast) in the range 7.3 – 17 tonnes?			
7	Are head restraints fitted to the drivers and other occupants seats in advance sign and block vehicles?			
8	If additional equipment/switches have been provided in the block vehicles cab has a safety survey been carried out?			
9	Has a reliable 2 way communications system been provided?			
10	Does the communications system include contractors' vehicles?			
11	Is it possible to use a dedicated radio channel?			
12	Has a contingency plan for failure of communications been made?			
13	Are all signs to appropriate standards?			
14	Will all signs on the carriageway be vehicle or trailer mounted and attended at all times?			
15	Can you confirm that signs will not be manually changed when the vehicle is standing in a live traffic Lane?			
16	Do the vehicles rear lights, reflectors and number plates remain clearly visible when the backing board for the sign is fitted?			
17	Can you confirm that signs can/will be covered or removed from view when not in use or normal driving of sign vehicle has been resumed?			

No.	Question	Yes	No	Comments
18	Are working and block vehicle drivers aware of the minimum/maximum separation distances?			
19	Have additional block vehicles been provided where the Site activities require them?			Refer to appropriate layout(s)
20	Are variable message signs available and able to be used?			
21	For a 3 Lane carriageway involving a 2 Lane closure can Lanes 2 and 3 be closed to avoid slow moving traffic changing Lanes?			
22	Where the working vehicle/personnel are operating on the hard shoulder has a block vehicle with a lorry mounted crash cushions been provided and correctly positioned?			NB for this work if Site activities vehicle is substantial e.g. gully cleaner / sweeper and is fitted with a lorry mounted crash cushions block vehicle may be dispensed with.
23	If no hard shoulder can advance sign vehicles/trailers be located on verge or close to n/s of carriageway without blocking the n/s Lane?			
24	If no hard shoulder are suitable places on the verge available to site warning vehicles within 1 km of the start of the Site activities?			
25	For Site activities on foot can worker remain within the area on the non-trafficked side between the front of the leading vehicle and 10 metres in front of the second vehicle?			Refer to appropriate layout(s)
26	For Site activities on foot on a central reserve to prevent traffic passing between the block vehicle and the central reserve safety fence is an additional block vehicle required?			Refer to appropriate layout(s)
27	Will suitable high visibility clothing be provided and worn?			
28	Can all advance sign display and covering for mobile lane closure be carried out on the hard shoulder (if available) or on a lightly trafficked road?			NB. The establishment or covering of vehicle mounted signs should never be undertaken on an on-slip or off-slip road.
29	Has a team leader(s) been appointed and made known to all drivers including contractors?			
30	If circumstances require has an additional supervisor been provided and responsibilities clearly established?			

No.	Question	Yes	No	Comments
31	Has the need for a relief driver fully trained and capable of replacing any other driver been considered and provided if required?			
32	Can you confirm that all personnel have received adequate training?			
33	If heavy goods vehicle levels are 30% have vehicle flow levels been decreased by 10%			See traffic count
34	For Site activities at night where there is an occasional short discontinuity of the hard shoulder has the maximum traffic flow been reduced by 10%?			

ANNEX 1/17B – TEMPORARY TRAFFIC REGULATION ORDERS

Sample Request Form for Temporary Traffic Regulation Order Request [TTRO1]

A TTRO request in the following format shall be completed by the Operating Company and sent by e-mail to the relevant Area Manager and Network Administrator in TRBO with a draft Order, Press Notice and Method Statement (hard copies shall follow by post together with completed Operating Company checklist).

(i) Name and Route Number of Trunk Road

(ii) Type of Order

- | | |
|---------------------------------------|------------------------|
| Temporary Prohibition of Traffic | (Full Temporary Order) |
| Temporary Restriction of Traffic | (Full Temporary Order) |
| Blue Notice – Danger | (Maximum 21 days) |
| Blue Notice – Works | (Maximum 5 days) |
| Other (Specify type of Traffic Order) | |

(iii) State the reason(s) for requesting the Traffic Order

(iv) Give a full description of length(s) of Trunk Road over which traffic is to be prohibited

(v) Give full descriptions of prohibited turns (if applicable)

(vi) If request is for a Prohibition of Traffic or Specified Turns (or both) state the alternative route(s)

(vii) If the Traffic Order is to Prohibit or Restrict traffic (or a particular manoeuvre) please state types of vehicles, which may be excepted from the terms of the Order, e.g. Police, Fire, Ambulance, Works etc

(viii) If request is for a Full Temporary Order please give names of suitable newspapers (indicate if daily or weekly) in which Press Notices can be published

- (ix) Give start and finish dates for the Traffic Order or Notice _____
to _____
- (x) Any other information or instructions?

- (xi) Please sketch below the alternative route(s) in relation to the affected section of road(s) or attach a plan
- (xii) Please state the name, address and telephone number of the Operating Company official who can be contacted if any additional information is required

[A copy of the made Traffic Order will be sent to this official. He/she shall also arrange for the display of Blue Notices locally and advise the Emergency Services of road closures etc authorised by a Blue Notice.]

Form completed by:

NAME IN BLOCK CAPITALS _____

Designation _____ Telephone No _____

Signature _____ Date _____

Operating Company – Roads and Traffic Order Checklist

	Checked by Area Engineer (initial & date)	Checked by Journey Time Reliability Coordinator (initial & date)
<p>Order and Press Notice</p> <p>1 Has the correct template been used?</p> <p>2. Is the title of the Traffic Order exactly the same as in Article 1 of the Traffic Order?</p> <p><i>Note: The title of the Traffic Order shall only refer to the number of the Trunk Road, e.g. "A96 Trunk Road" and shall not include any place names at the beginning or end of the road in question.</i></p> <p>3. Is the Traffic Order title identical to the heading of the Press Notice?</p> <p>4. Is the date quoted in the Traffic Order identical to the date quoted in the Press Notice?</p> <p>5. Is the description of the affected lengths of road in the Press Notice identical to that in the Schedule to the Traffic Order? <i>The name(s) of Trunk Road(s) shall be quoted in the descriptions, e.g. A96 Aberdeen – Inverness Trunk Road.</i></p> <p>6. Does the information in the TTRO1/PTRO1/Method Statement correspond with the details in the Order and Press Notice?</p> <p>7. Have the alternative routes been checked to ensure they are accurate and easily understood? <i>The numbers and names of roads shall be quoted.</i></p> <p>8. If certain vehicles are to be excluded from the terms of the Traffic Order, have they been mentioned in the Press Notice?</p> <p>9. Where a Traffic Order includes a contingency period to take account of weather or other unforeseen problems does the Press Notice also describe the anticipated duration of the work? e.g. <i>It is anticipated that the work will be carried out over two weekends during the above period.</i></p>		

	Checked by Area Engineer (initial & date)	Checked by Journey Time Reliability Coordinator (initial & date)
<p>Plan</p> <p>10. For temporary Traffic Orders, has the plan of the alternative routes been checked for accuracy and does it correspond with the descriptions contained in the Press Notice?</p> <p>11. For all permanent Traffic Orders, has the plan been checked for accuracy and does it correspond with the descriptions in the Schedule to the Traffic Order?</p> <p>12. Are the names of roads/reference points referred to in the Schedule clearly marked on the plan? In the case of Roads (Scotland) Act Orders, are the title of the plan, the plan number and the numbers allocated to the affected lengths of road consistent with the Schedule to the Traffic Order?</p>		

Template for Press Notice

THE [] UNIT TRUNK ROADS AREA (TEMPORARY PROHIBITIONS OF TRAFFIC, TEMPORARY PROHIBITIONS OF OVERTAKING AND TEMPORARY SPEED RESTRICTIONS) ([]) ORDER 200?

The Scottish Ministers give notice that they propose to make the above Order temporarily prohibiting traffic, temporarily prohibiting overtaking and temporarily restricting the speed of vehicles on the lengths of road identified in the Schedule to this Notice during the periods corresponding to those lengths of road specified in the Schedule to this Notice.

The Order, which is required because works are being or are proposed to be executed on or near the lengths of road for certain purposes in relation to the lengths of road stated in the Schedule to this Notice, will be in operation from [] until midnight on [], but will only have effect in relation to such part or parts of the lengths of road as are indicated by the appropriate traffic signs and during the periods corresponding to those lengths of road specified in the Schedule to this Notice. The provisions relating to temporary prohibitions of traffic do not apply to vehicles being used in an emergency for fire brigade, ambulance, police or coastguard purposes or vehicles used for carrying out the works. There are no exemptions for those vehicles in respect of temporary prohibitions of overtaking and temporary speed restrictions unless otherwise provided by law.

Where the closure of a carriageway on a dual carriageway road is involved the alternative route for traffic will be the adjacent carriageway by means of contraflow working. Other alternative route or routes for traffic in relation to the lengths of road affected by the Order during a prohibition will be signposted. Detailed descriptions can also be obtained [].

Network Manager, Network Management Directorate
A member of the staff of the Scottish Ministers
Transport Scotland
Buchanan House
58 Port Dundas Road
Glasgow
G4 0HF

SCHEDULE

- (a) Description of road: The following length of the [] Trunk Road:
1. []
- (b) Duration:
- (c) Purpose:
- (d) Alternative route or routes for traffic will be signposted.

Template For Traffic Order

Scottish Statutory Instruments

[] No.

ROAD TRAFFIC

The [] Unit Trunk Roads Area (Temporary Prohibitions of Traffic, Temporary Prohibitions of Overtaking and Temporary Speed Restrictions) (No.[]) Order 200?

Made – – – []

Coming into force – – []

The Scottish Ministers, in exercise of the powers conferred by section 14(1) and (4) as read with section 2(1) and (2) of the Road Traffic Regulation Act 1984(1), and of all other powers enabling them in that behalf, being satisfied that the traffic on the lengths of road specified in the Schedule to this Order should be restricted or prohibited as hereinafter provided because works are being or are proposed to be executed on or near the said lengths of road and having had regard to the existence of alternative routes suitable for the traffic which will be affected by this Order, hereby make the following Order:

Citation, commencement and cessation

- 1 This Order may be cited as the [] Unit Trunk Roads Area (Temporary Prohibitions of Traffic, Temporary Prohibitions of Overtaking and Temporary Speed Restrictions) ([]) Order [], shall come into force on [] and shall cease to have effect at midnight on [].
2. In this Order a reference to a numbered column is to the column in the Schedule to this Order bearing that number.

(1) 1984 c.27, section 14 was substituted by the Road Traffic (Temporary Restrictions) Act 1991 (c.26), section 1(1) and Schedule 1. Section 2 was amended by the New Roads and Street Works Act 1991 (c.22), Schedule 8, paragraph 18. The Scottish Ministers are the traffic authority by virtue of section 121A of the Road Traffic Regulation Act 1984 (inserted by the New Roads and Street Works Act 1991 (c.22), Schedule 8, paragraph 70 and amended by the Scotland Act 1998 (Consequential Modifications) Order 2001 (S.I. 2001/1400)) as read with section 151(1) of the Roads (Scotland) Act 1984 (c.54). The functions of the Secretary of State were transferred to the Scottish Ministers by section 53 of the Scotland Act 1998 (c.46).

Temporary prohibition on use of a road

3. Subject to Article 6, no person shall use, or permit the use of, any vehicle on each length of road specified in column 1 during the period corresponding to that length of road specified in column 2 when a prohibition is identified as applying to a part or parts of that length of road by means of traffic signs prescribed by the Traffic Signs Regulations and General Directions 2002(2).
4.
 - (1) Subject to paragraph (2) of this Article, no person shall use, or permit the use of, any vehicle in such a way that it overtakes any other moving vehicle on each length of road specified in column 1 during the period corresponding to that length of road specified in column 2 when a prohibition is identified as applying to a part or parts of that length of road by means of a traffic sign prescribed in Diagram 632 of the Traffic Signs Regulations and General Directions 2002.
 - (2) Nothing in paragraph (1) of this Article shall prohibit any person from using, or permitting the use of, any vehicle in such a way that it overtakes a cycle, motor cycle, tricycle or any other vehicle not being a motor vehicle in accordance with section 140 of the Road Traffic Regulation Act 1984(3).

Temporary speed restriction

5.
 - (1) Subject to paragraph (2) of this Article, no person shall drive any vehicle on the lengths of road specified in column 1 of Parts 2 and 3 of the Schedule to this Order during the period corresponding to that length of road specified in column 2 at a speed exceeding that specified in column 3 when a restriction is identified as applying to a part or parts of that length of road by means of a traffic sign prescribed in Diagram 670 of the Traffic Signs Regulations and General Directions 2002.
 - (2) When convoy working is in operation and indicated by one or more of the signs shown in Diagrams 7025, 7026, 7027, 7028 and 7029 of the Traffic Signs Regulations and General Directions 2002, no person shall drive any vehicle on the length of road specified in column 1 of Part 3 of the Schedule at a speed exceeding 10 mph when a restriction is identified as applying to a part or parts of that length of road by means of a traffic sign prescribed in Diagram 670 of the Traffic Signs Regulations and General Directions 2002.

-
- (2) S.I. 2002/3113.
 - (3) 1984 c.27, section 140 was amended by the Road Traffic (Consequential Provisions) Act 1988 (c.54), Schedule 3, paragraph 25(9).

Exemption for emergency and works vehicles

Nothing in Article 3 of this Order shall apply to a vehicle being used in an emergency for fire brigade, ambulance, police or coastguard purposes or a vehicle while being used for carrying out the works.

Network Manager, Network Management Directorate
A member of the Staff of the Scottish Ministers
Transport Scotland,
Buchanan House
58 Port Dundas Road
Glasgow G4 0HF

SCHEDULE

PART 1

Articles 3 and 4

1	2
Description of particular lengths of road	Duration of restriction or prohibition

PART 2

Articles 3, 4 and 5 (1)

1	2	3
Description of particular lengths of road	Duration of restriction or prohibition	Speed restriction

PART 3

Articles 3, 4, 5 (1) and (2)

1	2	3
Description of particular lengths of road	Duration of restriction or prohibition	Speed restriction

APPENDIX 1/20 – RECOVERY VEHICLES FOR BREAKDOWN

SHEET 1

- 1 Recovery Vehicles to be provided:
 - 1.1 Recovery vehicles shall be provided as part of the traffic management arrangements and for the period required when ordered by the Overseeing Organisation.
 - 1.2 The Operating Company shall provide the number of heavy recovery vehicles and light recovery vehicles stated in the Order.
- 2 Locations for Recovery Vehicles:
 - 2.1 When not engaged in recovery operations the ordered recovery vehicles shall be positioned in locations stated in the Order.
- 3 Limits of Service:
 - 3.1 The limits of the vehicle recovery operations will be stated in the Order.
- 4 Locations for Vehicle Removal:
 - 4.1 The Operating Company shall carry out a risk assessment of possible locations on the hardshoulder or hardstrip adjacent to an operational emergency telephone, or off the Trunk Road at an interchange and shall obtain the written consent of the Overseeing Organisation to these locations not less than 14 days before the commencement of vehicle recovery provision.
 - 4.2 Any broken down or accident damaged vehicles on the operating carriageway within the limits of the vehicle recovery operations shall be moved immediately to a pre-identified location as stated in the Order.
- 5 Records:
 - 5.1 The Operating Company shall complete record sheets as referred to in CI 120.26 in the format shown below.

SHEET 2 – Information to be provided by the Operating Company

Form For 'Recovery Vehicle Daily Check Sheet'

RECOVERY VEHICLE DAILY CHECK SHEET							
					Week Commencing:		
Driver's Name:		Vehicle Type/Registration No:			Mileage:		
Driver to initial against check list below:							
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
OIL LEVEL							
WATER							
ENGINE							
CLEANLINESS – interior							
CLEANLINESS – exterior							
WIPER/WASHERS							
TYRES							
LIGHTS							
Driver's Report (detail any problems):							
Action Taken (to solve above problems):							
Date:				Supervisor's Signature:			
COMPLETED SHEET TO BE RETURNED TO OVERSEEING ORGANISATION EACH WEEK							

SHEET 3 – Information to be provided by the Operating Company

LEAFLET FOR ISSUE BY RECOVERY VEHICLE OPERATIVES TO DRIVERS OF ALL BROKEN-DOWN OR ACCIDENT DAMAGED MOTOR VEHICLES

Name of Scheme:

[Operating Company: Insert accurate name of the scheme]

.....

Vehicle Recovery Service – Explanatory Leaflet authorised by the Scottish Government for issue to drivers of broken-down and accident-damaged motor vehicles within the above works.

Leaflet to be distributed by recovery vehicle operatives of the appointed recovery firm on behalf of the Scottish Government.

1. The roadworks commence at the "Roadworks Ahead – 2 miles" sign and end at the "Roadwork End" sign. [*Operating Company: See Note 1 below*]
2. The recovery service provided along the extent of the roadworks is free.
3. Vehicles will be recovered clear of the roadworks tounless otherwise directed by the police. [*Operating Company: See Note 2 below*]
4. It will then be at the discretion of individual drivers of broken-down or accident-damaged vehicles requiring assistance to arrange for assistance or the removal of their vehicle to a garage of their choice. The operators of the free recovery service do not make such arrangements.

Useful contact numbers are given below:

Local Garage.....

AA.....

RAC.....

Greenflag.....

Assistance will also be given by telephoning [*compiler: See Note 3 below*]

If a motorway emergency telephone is used, the police will assist.

[Notes to compiler:

- (1) If different, replace with the appropriate limits of service for the Works.
- (2) The chosen location should take into account safety, security and the availability of a telephone, see IAN 65/05.
- (3) The telephone number should be agreed with the police prior to the commencement of the Works.]

APPENDIX 1/75 – OPERATING COMPANY'S VEHICLE LIVERIES

1 LOGO REQUIREMENTS

1.1 Transport Scotland Logo

The Transport Scotland logo is Transport Scotland's official brand and is aimed at customers so they can recognise and access its services as well as identify accountability and credit for these services.



The logo consists of two elements: the first is a graphical representation of a road and railway line, and the second is the text "TRANSPORT SCOTLAND" using the typeface Gill Sans.

The main elements to Transport Scotland's logo and branding requirements are detailed in the *Transport Scotland Identity Guidelines*.

2 LIVERY REQUIREMENTS

2.1 General

This livery is to be applied to all Operating Company fleet vehicles used for operational duties on the Unit.

This Appendix only addresses the issues of branding and style for a selection of different vehicle types. The Operating Company shall ensure that individual vehicles comply with the requirements for vehicle base colour, safety markings and conspicuity requirements in this Contract, the relevant national guidelines and Legislation.

Seven general vehicle classes have been selected as the basis for illustrating the vehicle livery scheme to be applied. These are:

- (i) estate car,
- (ii) gritter,
- (iii) TRISS van,
- (iv) small car,
- (v) van,
- (vi) mini-van, and
- (vii) goods vehicle.

These vehicle types have been selected to provide a spread of livery options that can be readily adapted to cover the majority of vehicle body types that may be employed by the Operating Company during the course of Operations.

Should the Operating Company wish vehicles to have a fleet number present then it shall be small and inconspicuous, and placed in an area outwith that of the specified livery scheme markings.

Where this livery scheme has identified the need for chevrons these shall meet the road visibility requirements laid out in Chapter 8 of the Traffic Signs Manual, published by the Government's Department for Transport. These chevrons shall conform to the latest industry standards and Legislation and be made from industry recognised vinyls and materials.

If the Operating Company is unable to apply a livery scheme to a vehicle type without a significant departure from the prescribed scheme, the Operating Company shall submit an alternative proposal to the Director for approval.

2.2 **Vehicle Markings**

The type and style of permitted Transport Scotland markings to be used on Operating Company vehicles is detailed in the *Transport Scotland Identity Guidelines*. All markings are available as graphics files from the Director in an "eps" or "jpeg" format.

The aspect ratio must be preserved when re-sizing the Transport Scotland marking to suit different vehicles.

Should a departure from the prescribed scheme be required the Operating Company shall submit an alternative proposal to the Director for approval.

Care shall be taken when placing markings to avoid any vehicle features such as door slides, handles and non-body coloured trim that would conflict with the clarity of the marking.

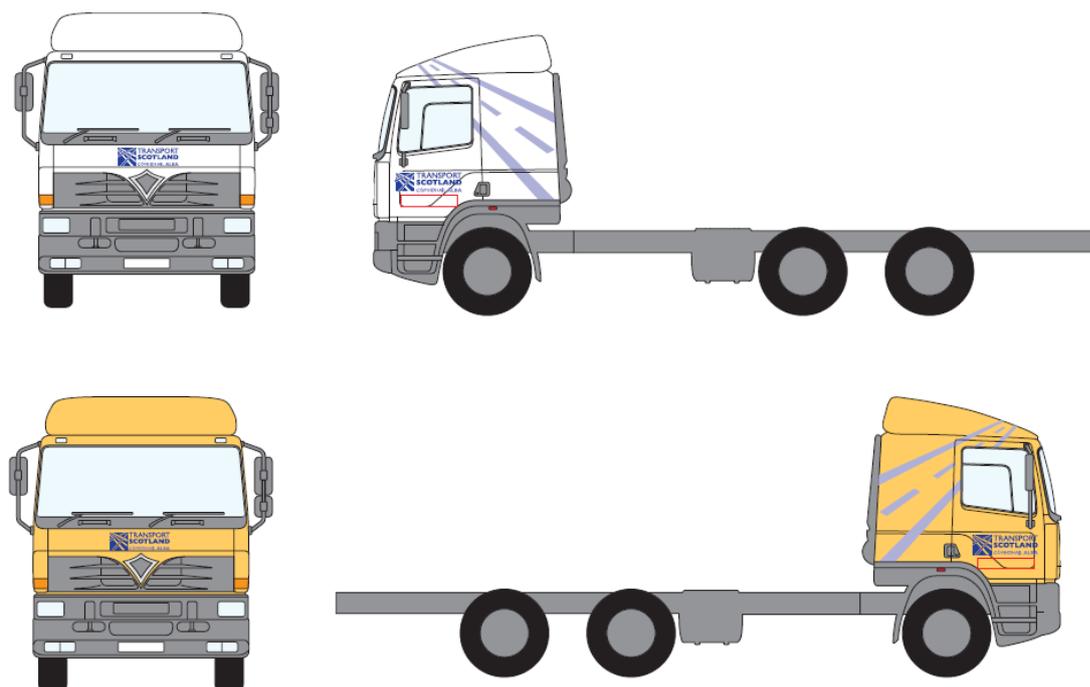
ANNEX A

Vehicle Livery Schemes

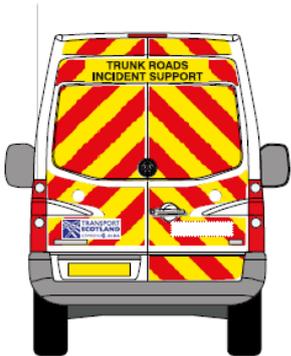
Estate Car



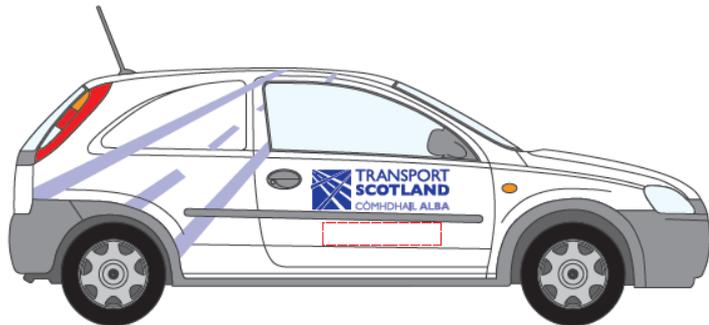
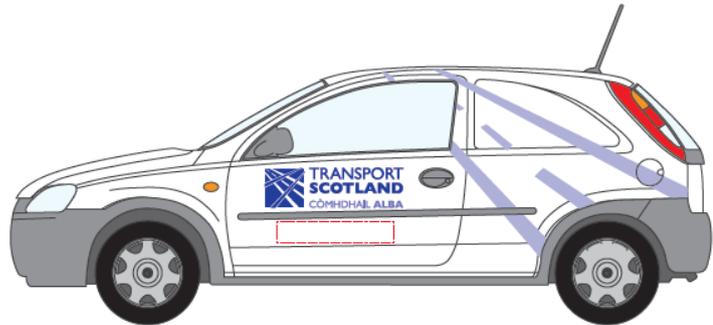
Gritter



TRISS Van



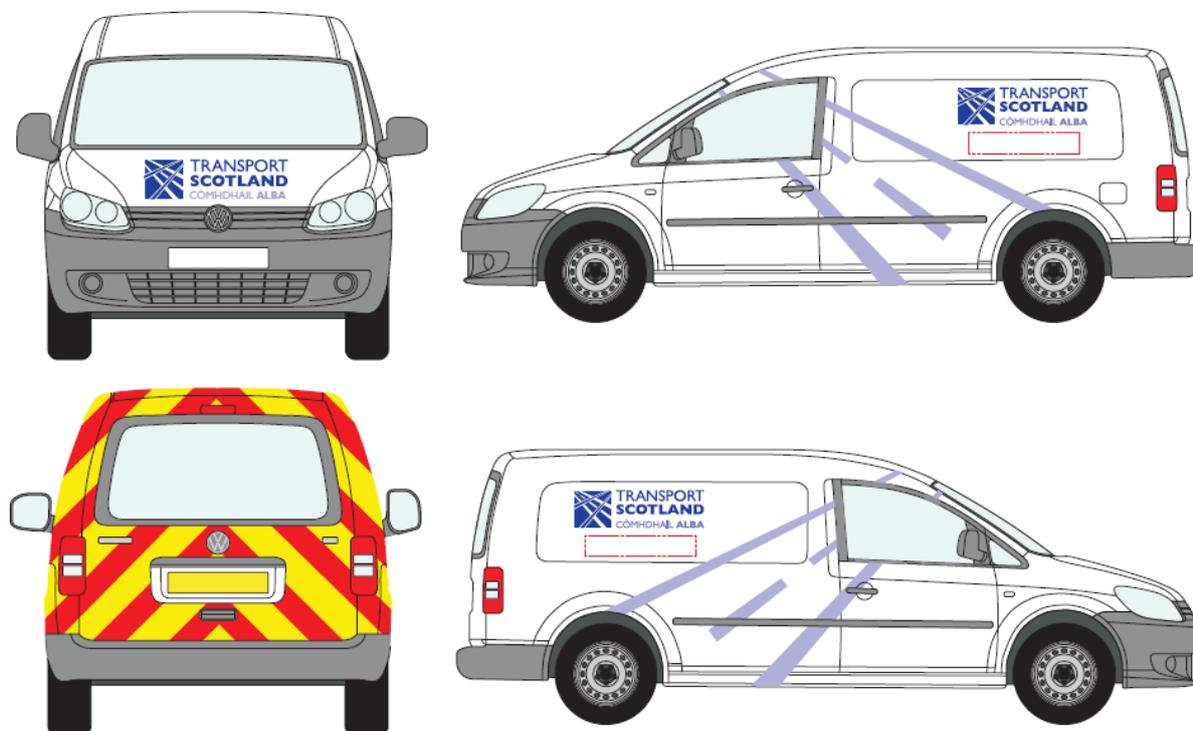
Small Car



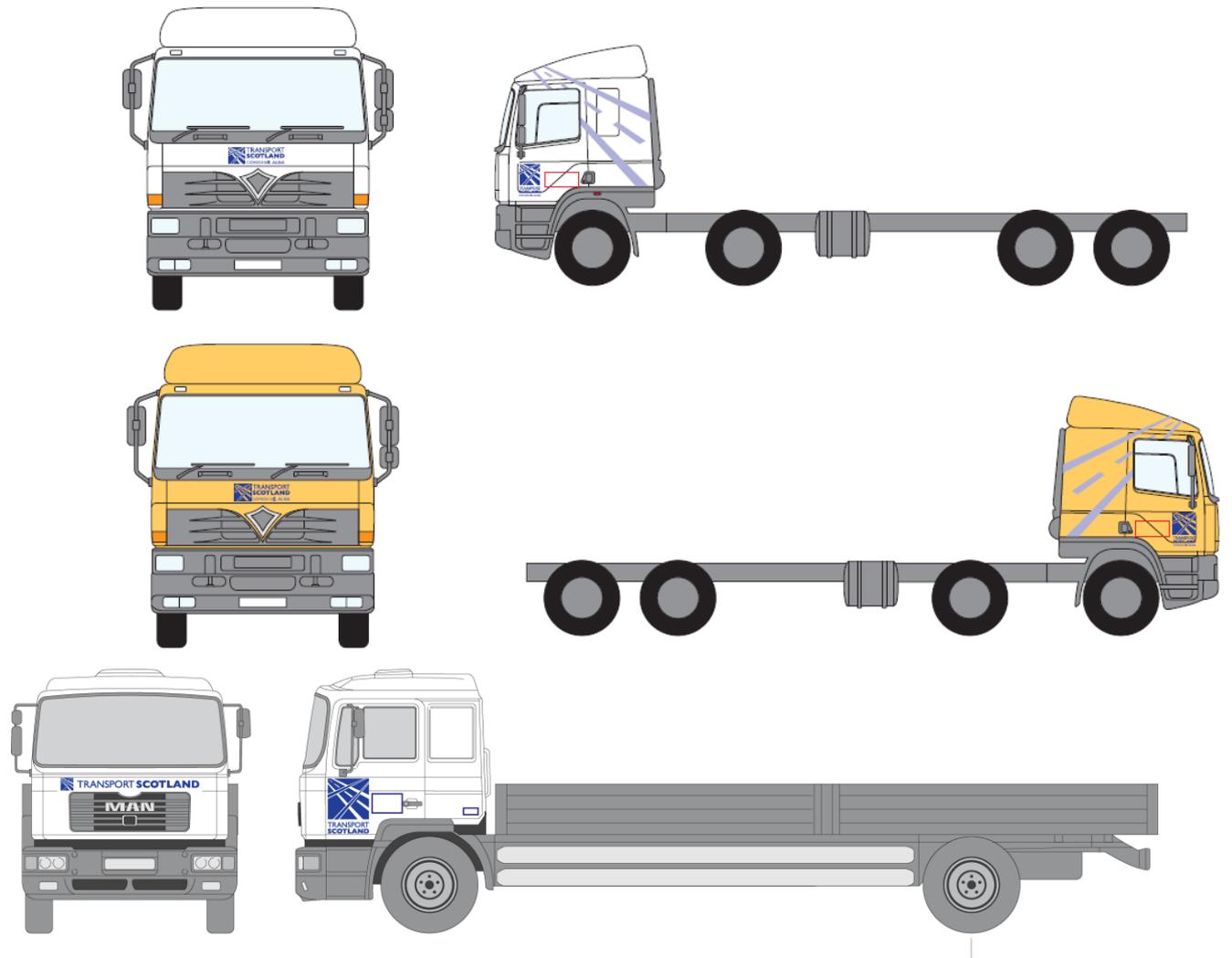
Van



Mini-Van



Goods Vehicle



APPENDIX 1/76 – ISU AND TRISS OPERATIVES' UNIFORMS

ISU and TRISS operatives shall be suitably attired with appropriate uniform style clothing and personal protection equipment.

Uniforms and personal protection equipment shall be appropriately badged.

APPENDIX 1/77 – SPECIFICATION FOR TRISS VEHICLE MOBILE CCTV SYSTEM

- 1 The Trunk Road Incident Support (TRISS) vehicles shall be equipped with a small and rugged pan tilt zoom (PTZ) camera, as described below, mounted on a pneumatic mast which can be raised and lowered from the vehicle via a remote control device located in the vehicle. The pneumatic mast shall be extendable to a height of approximately 6 metres above vehicle floor level and shall retract so that the camera height above the vehicle roof is minimal.
- 2 A 6.8" LCD/TFT Colour monitor shall be provided within the vehicle cab to provide an onsite confirmation of camera operation.
- 3 The camera shall connect to an encoder unit with a minimum of 4 video feeds which enables onward transmission of the video signal to the Traffic Scotland Control Centre and resilience rooms, Events control rooms, Silver Command Centres and Police control rooms. The Traffic Scotland Control Centre operators will be able to control the camera pan and tilt functions without assistance from the TRISS operatives.
- 4 The system shall allow multiple users viewing access.
- 5 The Operating Company may view the images at their depot with the written approval of the Director.
- 6 The transmitted image must be able to be displayed on the Traffic Scotland MOSAIC System. The images sent to the Control Centre must be able to be recorded at high resolution onto a plug in hard drive, to allow historical viewing of footage at full resolution and at a rate of 5 images a second when the vehicle returns to base.
- 7 The host server will be Traffic Scotland's which is compatible with the Traffic Scotland MOSAIC System. The Operating Companies chosen equipment shall be compatible with this server. Subject to the Director's consent, the Operating Company may provide their own host server which is compatible with their chosen equipment, and which shall be integrated with the Traffic Scotland MOSAIC system.
- 8 The vehicle mounted pan, tilt and zoom(PTZ) camera shall have the following features:
 - (a) 1/3" colour/monochrome, charge coupled device (CCD), high resolution, 480 television lines (TVL),
 - (b) High Resolution – 4CIF Display Capability, 2CIF for Transmission,
 - (c) provide good quality Images in all weather conditions,
 - (d) built-in optical auto zoom lens - magnification of 18:1,
 - (e) be waterproof with a lens wiper,
 - (f) be vandal resistant,
 - (g) be operable remotely by Traffic Scotland Control Centre staff only.
- 9 Prior to ordering the CCTV system the Operating Company shall submit details to the Director for approval.

APPENDIX 1/78 – SPECIFICATION FOR VEHICLE MOUNTED VARIABLE MESSAGE SIGNS

The vehicle roof mounted variable message signs shall:

- (a) have a power lift system and be suitable for the vehicle,
- (b) display legible messages under all conditions,
- (c) automatically detect and correct errors and faults,
- (d) be of robust, weather resistant construction with excellent rust and corrosion protection,
- (e) be easy to maintain and repair,
- (f) be capability of being deploy and operate while vehicle travels at low speed,
- (g) be battery powered and charged from the vehicle system with status display,
- (h) have a spare battery,
- (i) work while the vehicle engine is off.

The message panel shall have:

- (a) a panel size approximately 2m wide x 1.2m,
- (b) a matrix size approximately 27 x 48 pixels,
- (c) a pixel size approximately 33mm x 30mm,
- (d) a minimum of 12 characters per line,
- (e) a minimum of 3 lines,
- (f) a minimum of 6 available fonts,
- (g) full matrix graphics capability,
- (h) LED display technology.

The message panel control consol shall have:

- (a) ultra low powered solid state console circuitry,
- (b) a waterproof, backlit, alphanumeric console keyboard,
- (c) a LCD 8 line x 40 character with graphics back lit console display,
- (d) proprietary, field upgradeable programming software,
- (e) pre-programmed and user programmed minimum 50 message capacity,
- (f) minimum 2 messages each sequence capacity,
- (g) real time clock and calendar time and date control,
- (h) user-selectable (0.1 to 60 seconds) message display time,
- (i) instantaneous display update time,
- (j) separate backup battery non-volatile memory,
- (k) user selectable, multi level password protection,
- (l) easy to use menus for operator interface.

APPENDIX 2/3 – RETENTION OF MATERIAL ARISING FROM SITE CLEARANCE

The Table below shall be completed for an individual Order when required.

Description of material	Location	Delivered to	Requirements

Equipment which is not to be immediately re-erected shall be transported to a Depot and stored.

The equipment shall remain the property of the Scottish Ministers.

APPENDIX 3/1 – FENCES GATES AND STILES

- 1 Fencing for the protection of planted areas shall be hexagonal wire netting fencing complying with BS 1722-2 Section 8 and in accordance with HCD Drawing Number H39 Fencing Type 1.
- 2 Where required, wire mesh shall be attached to permanent or existing fencing in accordance with HCD Drawing Numbers H46 or H47.

APPENDIX 4/1 – ROAD RESTRAINT SYSTEMS (VEHICLE AND PEDESTRIAN)

- 1 Location
 - 1.1 Vehicle Restraint Systems
 - 1.1.1 The location, Containment Level, Impact Severity Level (ISL), Working Width Class, maximum height that allows the required visibility, and the Length of Need requirements for safety barriers and transitions shall be determined by the Operating Company in accordance with this Contract.
 - 1.1.2 The location, Containment Level, Impact Severity Level (ISL) and Working Width Class requirements for vehicle parapets shall be determined by the Operating Company in accordance with this Contract.
 - 1.1.3 The location, Performance Class, Impact Severity Level (ISL), Permanent Lateral Displacement Zone (PLDZ) Characteristic, Exit Box Class (D), and maximum height that allows the required visibility requirements for terminals shall be determined by the Operating Company in accordance with this Contract.
 - 1.1.4 The location, Performance Level, confirmation of whether a redirective (R) or non-redirective (NR) type of crash cushion, Impact Severity Level (ISL), Redirection Zone Class (Z), Permanent Lateral Displacement Zone Class (D) and maximum height that allows the required visibility requirements for crash cushions shall be determined by the Operating Company in accordance with this Contract.
 - 1.2 Vehicle Restraint Systems
 - 1.2.1 Where Annual Average Daily Traffic (AADT) exceeds 25,000 vehicles/day, or it is estimated that this level of traffic will be reached on the relevant part of the Trunk Road within 20 years, the Operating Company shall so inform the Overseeing Organisation in writing. The Overseeing Organisation will inform the Operating Company if concrete safety barrier complying with clause 401.2 is required in the relevant location, and if it is required will issue an Order confirming this requirement.
 - 1.3 Pedestrian Restraint Systems
 - 1.3.1 The location for pedestrian parapets and pedestrian guardrails shall be determined by the Operating Company in accordance with this Contract.
 - 1.4 Anti-glare Screens
 - 1.4.1 The location for anti-glare screens shall be determined by the Operating Company in accordance with this Contract.
2. Other Details
 - 2.1 Safety Barriers, Terminals, Transitions and Crash Cushions
 - 2.1.1 Any special requirements shall be determined by the Operating Company in accordance with this Contract.

- 2.1.2 Specific connection requirements to existing safety barriers, vehicle parapets or other structures shall be determined by the Operating Company in accordance with this Contract.
- 2.2 Vehicle Parapets Including Anchorages and Attachment Systems
 - 2.2.1 Any special requirements including any aesthetic requirements shall be determined by the Operating Company in accordance with this Contract.
- 2.3 Pedestrian Restraint Systems
 - 2.3.1 Any special requirements shall be determined by the Operating Company in accordance with this Contract.
- 2.4 Temporary Safety Barriers
 - 2.4.1 When necessary to ensure the safety of the users of the Unit pending permanent repair of a Defect, temporary safety barriers shall be installed in accordance with TD 19/06 and the manufacturers' latest instructions and drawings.

The Operating Company shall have immediate access to at least 90 metres of temporary safety barrier and the necessary plant and qualified personnel to commence erection of the barrier as soon as practicable but within 24 hours of the need for the barrier being known to the Operating Company.

Records of temporary safety barrier use including risk assessments shall be held within the Operating Company's Quality System.

Schedule of Road Restraint Systems (Vehicle and Pedestrian)

[To be completed by the Operating Company]

Location & Start Chainage * (m)	Finish Chainage (m)	Position on Cross-Section +	Type of Road Restraint System** (Safety barriers, vehicle parapets, transitions, terminals, crash cushions, pedestrian parapets, pedestrian guardrails)	Set-back (m)	Containment Level** (Safety barriers, vehicle parapets, transitions) Performance Class (P)** (Terminals)	Impact Severity Level (ISL) ** (Safety barriers, vehicle parapets, transitions, terminals, crash cushions)	Working Width Class** (Safety barriers, vehicle parapets, transitions)	Performance Level and whether Redirective (R) or Non-redirective (NR) (Crash Cushions)	Permanent Lateral Displacement Zone (PLDZ) Characteristic** (Terminals) Permanent lateral Displacement Zone Class (D) Crash Cushions)	Exit Box Class** (Terminals) Redirection Zone Class (Z) (Crash Cushions)	Other Requirements/ Comments ** ++ +++

NOTES:* e.g. Road name, verge, central reserve, slip road etc. ** Enter temporary safety barrier where required.
 + e.g. LH verge, central reserve, RH hand verge etc. ++ Height requirements etc. +++ Anti-glare Screens

APPENDIX 4/2 – INFORMATION REQUIRED TO DEMONSTRATE COMPLIANCE OF ROAD RESTRAINT SYSTEMS TO BS EN 1317-1, BS EN 1317-2, BS EN 1317-3 AND DD ENV 1317-4:2002

The Operating Company shall submit the following supporting information demonstrating compliance with BS EN 1317-1, BS EN 1317-2, BS EN 1317-3 and DD ENV 1317-4:2002 to the Overseeing Organisation for acceptance:

EUROPEAN COMMITTEE FOR STANDARDISATION (CEN) COMPLIANCE ¹

Initial submission documents to be supplied for consideration of initial type test shall be as follows:

- 1 Test report in accordance with BS EN 1317-1, clause 9 (and including any additional test data required under BS EN 1317-3, clauses 7.3 and 7.4 and DD ENV 1317-4:2002, clauses 7.3 and 7.4).
- 2 Video/high speed film of test annotated showing date, test number and performance class.
- 3 Still photographs of complete installation including anchorage points.
- 4 Still photographs of vehicle before and after impact.
- 5 Full drawings of tested items.
- 6 Certification from the manufacturer that the item tested complies with drawings supplied.
- 7 Certificate from test house accredited in accordance with the requirements of Series 400 (MCHW 1.400).

Additional information which will be required on acceptance of initial type test prior to installation:

- 8 Manufacturer's specification.
- 9 Installation drawings.
- 10 Manufacturer's installation instructions including foundation requirements and test methods to verify their performance.
- 11 Manufacturer's repair and maintenance manual.
- 12 Certificate of compliance with the Quality Management Scheme 1 for the Manufacture of Fencing Components.²
- 13 Compliance with the Quality Management Sector Scheme 2 – Supply and Installation of Fences:
 - (i) Sector Scheme 2B for Vehicle Restraint Systems.²
- 14 Certificate of compliance for the Quality Management Sector Scheme 5 for the Fabrication and Installation of Bridge Parapets and Cradle Anchorages.³

- (i) Sector Scheme 5A for The Manufacture of Parapets for Road Restraint Systems, and

Sector Scheme 5B for The Installation of Parapets for Road Restraint Systems.

- 15 Nominal loads (direct forces, moments and co-existent shears) to be transferred from the parapet to the structure or foundation. ^{2 & 3}

Notes:

- 1 All documents, which are not in English, shall have an English translation.
If they are in a language other than French or German the promoter will be required to supply a full translation.
- 2 Items 12 and 13 are required for safety barrier systems and transitions
- 3 Items 14 and 15 are required for vehicle parapets.

SUBMISSION FOR COMPLIANCE WITH BS EN 1317-1, BS EN 1317-2, BS EN 1317-3 and DD ENV 1317-4:2002				
TYPE OF VEHICLE RESTRAINT SYSTEM:				
CONTAINMENT PERFORMANCE CLASS/PERFORMANCE LEVEL/PERFORMANCE CLASS (*):				
TEST REPORT NUMBER: (Test of)				
Test Type: (Primary/Complementary Test) (*)				
TEST NUMBER: TEST DATE: (*) delete as appropriate				
COMPANY NAME:				
CONTACT:				
ADDRESS:				
Tel:/Fax:/E-mail:				
PRODUCT NAME:				
Initial submission documents to be supplied for consideration of Initial Type Test (ITT).				
Item		Comment	Item Received (Y or N)	Date requested
1	Test report	In accordance with BS EN 1317-1, clause 9 (and including any additional test data required under BS EN 1317-3, clauses 7.3 and 7.4 and DD ENV 1317-4:2002, clauses 7.3 and 7.4).		
2	Video/high speed film	Of test coverage as specified in relevant part of BS EN 1317 or DD ENV 1317-4:2002. Annotated showing date, test number and performance class.		
3	Still photographs	Of complete installation including anchorage points.		
4	Still photographs	Of vehicle before and after impact.		
5	Drawings	Fully detailed drawings of tested item.		
6	Certification from the manufacturer	Confirming that the item tested complies with drawings supplied.		
7	Confirmation from test house	That the test conforms to the relevant requirements of BS EN 1317-1 (and including and additional test data required under BS EN 1317-2, BS EN 1317-3 and DD ENV 1317-4:2002).		
Additional information, which will be required on acceptance of initial type test prior to installation.				
8	System specification	Manufacturer's specification.		
9	Installation details	Manufacturer's drawings.		
10	Installation procedures	Manufacturer's installation instructions		
11	Maintenance Manual	Manufacturer's inspection, repair, and maintenance instructions.		
12	Certificate of compliance	With the Quality Management Scheme 1 for Manufacture of Fencing Components. ²		
13	Certificate of compliance	With the Quality Management Sector Scheme 2B for the Supply and Installation of Vehicle Restraint Systems. ²		
14	Certificate of compliance	With the Quality Management Sector Schemes 5A and 5B for the Manufacture and Installation of Bridge Parapets and Cradle Anchorages. ³ (i)Sector Scheme 5A for The Manufacture of Parapets for Road Restraint Systems, and (ii)Sector Scheme 5B for The Installation of Parapets for Road Restraint Systems.		
15	Support loads	Nominal loads (direct loads, bending moments and shear forces) that have to be transferred from the vehicle restraint system to the supporting structure or foundation. ³		
Notes:				
1. All documents, which are not in English, will have to be translated. If they are in a language other than French or German the promoter will be required to supply a full translation.				
2. Items 12 and 13 are required for safety barrier systems and transitions.				
3. Items 14 and 15 are required for vehicle parapets. See also Note 1 under Sector Scheme B in Appendix A of the Specification for Highway Works.				
Signature:		Name:		
Date:				

SUBMISSION FOR COMPLIANCE WITH BS EN 1317-1, BS EN 1317-2, and DD ENV 1317-4:2002						
TYPE OF VEHICLE RESTRAINT SYSTEM: Safety Barrier, Vehicle Parapet or Transition (*)						
CONTAINMENT PERFORMANCE CLASS/LEVEL(*)						
TEST REPORT NUMBER: (Test of)						
Test Type: (Primary/Complementary Test) (*)						
TEST NUMBER: TEST DATE: (*) delete as appropriate						
COMPANY NAME:						
CONTACT:						
ADDRESS:						
Tel./Fax:/E-mail:						
PRODUCT NAME:						
			Specified	Actual	Satisfactory (Yes or No)	Compliance
BS EN 1317-1, Table 1	Vehicle Details	Impact Condition(s)				
		Total vehicle mass (kg)(+)			
		Speed (km/h)	.....(0,+7%)			
		Angle (degrees)	.....(-1,+1.5)			
		Centre of Gravity				
		Vertical height (m)	.....(± 10%)			
		Longitudinal (m)	.....(± 10%)			
		Lateral (m)	±			
		Model				N/A
BS EN 1317-2, Clause 4.2	Vehicle Restraint System (VRS) Behaviour	1)The VRS shall contain and redirect the vehicle without breakage of principal longitudinal elements of the system. 2)No major part of the VRS shall become totally detached or present an undue hazard to other traffic, pedestrians or personnel in a work zone. 3)Elements of the VRS shall not penetrate the passenger compartment of the vehicle. Deformations of, or intrusions into the passenger compartment that can cause serious injuries are not permitted. 4)Ground anchorages and fixings shall perform according to the design of the VRS.				
BS EN 1317-2, Clause 4.3	Vehicle Behaviour	1)The centre of gravity (CG) of the vehicle shall not cross the centreline of the deformed system. 2)The vehicle shall remain upright during and after impact, although moderate rolling, pitching and yawing are acceptable. 3)The vehicle shall leave the VRS after impact, so that the wheel track does not cross a line parallel to the initial traffic face of the VRS, at a distance A (2.2m) plus vehicle width + 16% of the length of the vehicle within a distance B (10m) from the final intersection (break) of wheel track with the initial traffic face of the VRS.				
BS EN 1317-2, Clause 5.3.2	Installation	1)The length of the VRS shall be sufficient to demonstrate the full performance characteristics of the system. 2)If the VRS has to develop tension, end anchorages shall be provided in accordance with the VRS specification. Post foundation shall meet the design specification.				
BS EN 1317-2, Clause 4.4.	Severity Indices	SPECIFIED THIV Limit 33 km/h Limit 33 km/h PHD Limit 20 g ASI Limit 1.4 Limit 1.4	ACTUAL THIV..... km/h km/h PHD..... g g ASI..... .			
BS EN 1317-2, Clause 5.7, Figure 3	Photographic coverage	1)Photographic coverage shall be sufficient to clearly describe behaviour and vehicle motion during and after impact. 2)High speed cameras shall be operated at a minimum of 200 frames per second and stills. 3)As recommended in Clause 5.7 and Figure 3.				
	Drawings	Drawings included			N/A = Not Applicable	
FULLY COMPLIES WITH STANDARD: BS EN 1317-1, BS EN 1317-2, DD ENV 1317-4:2002						
Signature:				Name:		
Date:						

SUBMISSION FOR COMPLIANCE WITH BS EN 1317-1 and BS EN 1317-3						
TYPE OF VEHICLE RESTRAINT SYSTEM: Crash Cushion (Redirective [R] or Non-redirective [NR])(*)						
TEST REPORT NUMBER:			TEST TYPE: (Primary/Complementary Test) (*)			
PERFORMANCE LEVEL:			VELOCITY CLASS: (Test of)			
TEST NUMBER:			TEST DATE: (*) delete as appropriate			
COMPANY NAME:						
CONTACT:						
ADDRESS:						
Tel./Fax:/E-mail:						
PRODUCT NAME:						
			Specified	Actual	Satisfactory (Yes or No)	Compliance
BS EN 1317-1	Vehicle Details	Impact Condition(s)				
		Total vehicle mass (kg)(+ ...)			
		Speed (km/h)	.....(0,+7%)			
		Angle (degrees)	.....(-1,+1.5)			
		Centre of Gravity				
		Vertical height (m)	.....(± 10%)			
		Longitudinal (m)	.....(± 10%)			
		Lateral (m)	±.....			
		Model				N/A
BS EN 1317-3, Clause 6.2	Crash Cushion Behaviour	1)Elements of the crash cushion shall not penetrate the passenger compartment of the vehicle. Deformations of, or intrusions into, the passenger compartment that could cause serious injuries are not permitted. 2)No major element of the crash cushion, having a solid mass greater than or equal to 2.0 kg, shall become totally detached, unless this is required by the working of the crash cushion. No major element of the crash cushion shall impede the path of adjacent traffic. The final position of the detached element shall be considered to determine the displacement classification.				
BS EN 1317-3, Clause 6.3	Vehicle Behaviour	1)The vehicle shall remain upright during and after the collision although yawing and moderate rolling and pitching are acceptable. The post-impact trajectory of the test vehicle shall be controlled by means of the exit box shown in Figure 2 and specified as detailed in Tables 11 and 12.				
BS EN 1317-3, Clause 7.3.2	Installation	1)The installation of the crash cushion for the test shall comply with the structural design details and the on-road system details as given in the design specification.				
BS EN 1317-3, Clause 5.4. and Table 4	Impact Severity Levels	SPECIFIED Level A:THIV ≤ 44km/h (Tests 1, 2 & 3) THIV≤ 33km/h (Tests 4 & 5) ASI≤ 1.0 Level B:THIV≤ 44km/h (Tests 1, 2 & 3) HIV ≤ 33km/h (Tests 4 & 5) ASI≤ 1.4 Levels A & B: PHD ≤ 20g	ACTUAL			
BS EN 1317-3, Clause 7.7 Figure 4	Photographic coverage	1)High speed cameras and/or high speed video cameras shall be operated at minimum of 200 frames per second. 2)Stills 3)As recommended in Clause 7.7 and Figure 4.				
	Drawings	Drawings included				
					N/A = Not Applicable	
FULLY COMPLIES WITH STANDARD: BS EN 1317-1 and BS EN 1317-3						
Signature:				Name:		
Date:						

SUBMISSION FOR COMPLIANCE WITH BS EN 1317-1 and DD ENV 1317-4:2002						
TYPE OF VEHICLE RESTRAINT SYSTEM: Terminal						
PERFORMANCE CLASS: (Test of)						
Test Type: (Primary/Complementary Test) (*)						
TEST TYPE NUMBER:						
TEST NUMBER: TEST DATE: (*) delete as appropriate						
COMPANY NAME:						
CONTACT:						
ADDRESS:						
Tel:/Fax:/E-mail:						
PRODUCT NAME:						
			Specified	Actual	Satisfactory (Yes or No)	Compliance
BS EN 1317-1, Table 1, DD ENV 1317-4:2002, Clauses 7.4 & 7.5	Vehicle Details	Impact Condition(s)				
		Total vehicle mass (kg)(± ...)			
		Speed (km/h)	.....(0,+7%)			
		Angle (degrees)	.....(-1,+1.5)			
		Centre of Gravity	.....(± 10%)			
		Vertical height (m)	.....(± 10%)			
		Longitudinal (m)	±			
		Lateral (m)				
		Model				N/A
DD ENV 1317-4:2002, Clauses 5.4 & 5.5.2	Terminal Behaviour	1)Elements of the terminal shall not penetrate the passenger compartment of the vehicle. Deformations of, or intrusions into, the passenger compartment that could cause serious injuries are not permitted. 2)No major part of the terminal shall become totally detached and come to rest outside the permanent lateral displacement zones defined in Clause 5.4. 3)Anchorages and fixings shall perform to the terminal design specifications and other specified requirements as listed in the test report.				
BS EN 1317-4:2002 Clause 5.5.3	Vehicle Behaviour	1)The vehicle shall not overturn, although rolling, yawing and moderate pitching may be accepted. For the Performance Class P1 rolling onto a side may be accepted. 2)The exit box values for the specified test are as defined in Figures 5.6 and 7 (as appropriate).				
DD ENV 1317-4:2002, Clause 7.3.2	Installation	1)The terminal shall conform to the structural design details and with the system installation details as given in the design specification of the manufacturer.				
BS EN 1317-4:2002, Clause 5.5.4 & Table 5	Impact Severity Levels	SPECIFIED		ACTUAL		
		Level A: THIV ≤44km/h (Tests 1,2 &3)				
		THIV ≤33km/h (Tests 4 &5)				
		ASI ≤ 1.0				
		Level B: THIV ≤ 44km/h (Tests 1,2&3)				
		THIV≤ 33km/h (Tests 4 & 5)				
		ASI ≤ 1.4				
		Levels A & B: PHD≤ 20g				
DD ENV 1317-4:2002, Clause 7.7. & Figure 7	Photographic coverage	1)Photographic coverage shall be sufficient to describe clearly terminal and vehicle motion during and after impact. 2)High speed cameras and/or high speed video cameras at a minimum of 200 frames per second. 3)Stills				
	Drawings	Drawings included				
					N/A = Not Applicable	
FULLY COMPLIES WITH STANDARD: BS EN 1317-1 and DD ENV 1317-4:2002						
Signature:				Name:		
Date:						

APPENDIX 5/1 – DRAINAGE REQUIREMENTS

1 The Design for new drainage systems shall be in accordance with other provisions of this Contract.

The permitted alternative pipe/trench options for carrier drains shall be as given below:

Permitted Alternative Pipe/Bedding Combinations												
Pipe Diameter (mm)	Pipe Group No.	Vitrified Clay					Pre-cast Concrete			Ductile Iron	GRP	Thermoplastic (Structured Wall)
		L	95	120	160	200	Class L	Class M	Class H			
100	1				ASBFN	ASBFN				S	S	ST
100	2				ASBFN	ASBFN				S	S	ST
100	3				ASBFN	ASBFN				S	S	ST
100	4				ASBFN	ASBFN				S	S	ST
100	5				ASBFN	ASBFN				S	S	ST
100	6				ASBFN	ASBFN				S	S	ST
100	17				Z	Z				Z	Z	Z
150	1				ASBFN	ASBFN	ASBFN	ASBFN		S	S	ST
150	2				ASBFN	ASBFN	ASBFN	ASBFN		S	S	ST
150	3				ASBFN	ASBFN	ASBFN	ASBFN		S	S	ST
150	4				ASBFN	ASBFN	ASBFN	ASBFN		S	S	ST
150	5				ASBFN	ASBFN	ASBF	ASBFN		S	S	ST
150	6				ASBFN	ASBFN	ASBF	ASBFN		S	S	ST
150	17				Z	Z	Z	Z		Z	Z	Z
225	1				ASBFN	ASBFN	ASBF	ASBFN		S	S	ST
225	2				ASBFN	ASBFN	ASBF	ASBFN		S	S	ST
225	3				ASBFN	ASBFN	ASBF	ASBF		S	S	ST
225	4				ASBFN	ASBFN	ASBF	ASBF		S	S	ST
225	5				ASBFN	ASBFN	ASB	ASBF		S	S	ST

Permitted Alternative Pipe/Bedding Combinations												
Pipe Diameter (mm)	Pipe Group No.	Vitrified Clay					Pre-cast Concrete			Ductile Iron	GRP	Thermoplastic (Structured Wall)
		L	95	120	160	200	Class L	Class M	Class H			
225	6				ASBF	ASBFN	ASB	ASBF		S	S	ST
225	17				Z	Z	Z	Z		Z	Z	Z
300	1				ASBFN	ASBFN	ASBF	ASBF		S	S	ST
300	2				ASBFN	ASBFN	ASB	ASBF		S	S	ST
300	3				ASBFN	ASBFN	ASB	ASBF		S	S	ST
300	4				ASBFN	ASBFN	ASB	ASB		S	S	ST
300	5				ASBFN	ASBFN	ASB	ASB		S	S	ST
300	6				ASBFN	ASBFN	AS	ASB		S	S	ST
300	17				Z	Z	Z	Z		Z	Z	Z
375	1				ASBFN	ASBFN	ASB	ASBF	ASBFN			
375	2				ASBFN	ASBFN	ASB	ASBF	ASBF			
375	3				ASBFN	ASBFN	AS	ASBF	ASBF			
375	4				ASBFN	ASBFN	AS	ASBF	ASBF			
375	5				ASBFN	ASBFN	A	ASB	ASBF			
375	6				ASBFN	ASBFN	A	ASB	ASBF			
375	17				Z	Z	Z	Z	Z			
450	1			ASBF	ASBFN		AS	ASBF	ASBFN			
450	2			ASBF	ASBFN		AS	ASBF	ASBF			
450	3			ASBF	ASBFN		A	ASBF	ASBF			
450	4			ASBF	ASBFN			ASB	ASBF			
450	5			ASBF	ASBFN			ASB	ASBF			
450	6			ASBF	ASBFN			ASB	ASB			
450	17			Z	Z		Z	Z	Z			
600	1	ASB	ASBF					ASBF	ASBFN	S	S	ST
600	2	ASB	ASBF					ASBF	ASBF	S	S	ST
600	3	AS	ASBF					ASBF	ASBF	S	S	ST
600	4	AS	ASBF					ASBF	ASBF	S	S	ST
600	5	A	ASB					ASB	ASBF	S	S	ST
600	6	A	ASB					ASB	ASB	S	S	ST

Permitted Alternative Pipe/Bedding Combinations												
Pipe Diameter (mm)	Pipe Group No.	Vitrified Clay					Pre-cast Concrete			Ductile Iron	GRP	Thermoplastic (Structured Wall)
		L	95	120	160	200	Class L	Class M	Class H			
600	17	Z	Z					Z	Z	Z	Z	Z
750	1						ASB	ASBF	ASBFN			
750	2						ASB	ASBF	ASBF			
750	3						AS	ASB	ASBF			
750	4						AS	ASB	ASBF			
750	5						A	ASB	ASBF			
750	6						A	ASB	ASB			
750	17						Z	Z	Z			
900	1						ASB	ASBF	ASBFN	S	S	ST
900	2						ASB	ASBF	ASBFN	S	S	ST
900	3						AS	ASBF	ASBF	S	S	ST
900	4						AS	ASB	ASBF	S	S	ST
900	5						A	ASB	ASBF	S	S	ST
900	6						A	ASB	ASBF	S	S	S
900	17						Z	Z	Z	Z	Z	Z

Note 1 Bed Types shall be in accordance with Drawings F1 and F2 of the Highway Construction Details

Note 2 Replacement pipes in an existing system shall match the existing where practicable.

- 2 Covers to Chambers and Gullies: Covers to chambers and gullies shall comply with the loading category of BS EN124 as follows:
 - 2.1 Chambers
 - 2.1.1 Ductile heavy duty double triangular three point suspension non rock cover Class D400. Opening to be square.
 - 2.1.2 Ductile medium duty double triangular three point suspension non rock cover Class B225.
 - 2.1.3 Triple two piece gully type gratings Class D400 with waterway area 3330 cm².
 - 2.2 Gullies
 - 2.2.1 Single piece hinged gully grating Class C250 with waterway area 1240 cm².
 - 2.2.2 Double triangular two piece non rock gully grating Class D400 with waterway area 1870 cm².
 - 2.3 Rodding Eyes
 - 2.3.1 Ductile non-rocking cover Class D400, B225 or C250 as appropriate to the location. The required loading category shall be determined by the Operating Company in accordance with this Contract.
- 3 Adjustment of level to covers and frames
 - 3.1 Manhole and chamber covers shall be set or reset to the final levels prior to the laying of the uppermost wearing course or, if no surfacing Site activities are being undertaken, to the level of the surrounding ground surface.
 - 3.2 Gully frames shall be set 6 mm below the level of the adjacent surface.
 - 3.3 Covers and frames together with any shims, tiles, brick or other authorised material used to adjust the level shall be bedded using polyester epoxy or ultra-rapid hardening cementitious mortar applied in accordance with the manufacturer's written instructions.
- 4 Joints
 - 4.1 The requirement for watertight joints shall be determined by the Operating Company in accordance with this Contract.
 - 4.2 Use of rigid joints shall be determined by the Operating Company in accordance with this Contract.
- 5 Saddles
 - 5.1 Use of saddles on existing pipes shall be permitted except where otherwise determined by the Operating Company in accordance with this Contract.

6 Connections

6.1 Requirements for connections to existing drains shall be determined by the Operating Company in accordance with this Contract.

7 Chambers

7.1 Chambers shall be constructed in accordance with HCD Drawings F3, F4, F5 and F11.

8 Gullies

8.1 Gullies shall be trapped or un-trapped as determined by the Operating Company in accordance with this Contract.

9 Cleaning

9.1 All existing drainage systems within the Unit shall be cleaned in accordance with Clauses 520 and 521, Series 6100 and Schedule 7 Part 1.

APPENDIX 5/2 – SERVICE DUCT REQUIREMENTS

- 1 The permitted alternative design groups for service ducts shown on HCD I2 shall be types D1 to D4 as shown on drawings number. 500/01/337-339 in Schedule 9, Part 3.
- 2 Depth to top of ducts shall be 600 mm in all cases.
- 3 Chambers shall be constructed with 225 mm thick walls of bricks complying with Clause 2406 set in Class 1 mortar laid on a base slab 150 mm thick of mix ST4 concrete.
- 4 Covers and frames shall be bedded on Class 1 mortar.
- 5 Drawpits Types DP1 and DP2 shall be constructed in accordance with drawing numbers. 500/05/160-166 in Schedule 9, Part 3.
- 6 Service ducts shall be built in to the walls of the chambers.
- 7 Draw ropes for service ducts shall be secured by tying/fixing the draw rope to stoppers as detailed on drawings number. 500/01/337-339 in Schedule 9, Part 3. Two metres of slack rope shall be provided at both ends of every duct.

APPENDIX 5/3 – SURFACE WATER CHANNELS AND DRAINAGE CHANNEL BLOCKS

Surface Water Channels and Drainage Channel Blocks shall be constructed as shown on drawings numbers 1100/01/085-115 in Schedule 9, Part 3.

APPENDIX 5/4 – FIN DRAINS AND NARROW FILTER DRAINS

Details of permitted types of fin drains and narrow filter drains together with any specific performance criteria shall be determined by the Operating Company in accordance with this Contract.

APPENDIX 5/5 – COMBINED DRAINAGE AND KERB SYSTEMS

Combined drainage and kerb systems shall be type DK1 to DK4 inclusive as referred to on drawings number 1100/02/124 to 127 inclusive, 1100/02/130 and 1100/02/133 in Schedule 9, Part 3.

APPENDIX 5/7 – THERMOPLASTICS STRUCTURAL WALL PIPES AND FITTINGS

Information to be provided by the Operating Company

The Operating Company shall provide the following information in accordance with sub-Clause 518.2 for the range of pipes and fittings (to be verified by the Certification body – see sub-Clause 518.15).

1. Technical drawings showing dimensions and tolerances including sealing rings and weight per metre, together with properties, as specified in sub-Clauses 518.3 and 518.5.
2. Material specification shall be in accordance with sub-Clause 518.2:

Table 1 – Unplasticised polyvinyl-chloride (PVC-U)

Property	Test method reference	Specification
Tensile Properties	BS EN ISO 6259, BS EN ISO 527-1	
Vicat	BS EN 727	
Longitudinal reversion	BS EN ISO 2505	
K-value	BS EN 922	
PVC content	EN 1905	
Density	BS EN ISO 1183-3,	
Heat Reversion	ISO 12091	
Effects of heating (injection moulded fittings only)	BS EN ISO 580	

Table 2 – Polyethylene (PE)

Property	Test method reference	Specification
Tensile Properties	BS EN ISO 6259, BS EN ISO 527-1	
Oxygen induction time	BS EN 728	
Melt Flow Rate	BS EN ISO 1133	
Density	BS EN ISO 1183-3	
Melt Flow Rate	ISO 1133:2005	
Heat Reversion	ISO 12091	
Effects of heating (injection moulded fittings only)	BS EN ISO 580	

Table 3: Polypropylene (PP)

Property	Test method reference	Specification
Tensile Properties	BS EN ISO 6259, BS EN ISO 527-1	
Oxygen induction time	BS EN 728	
Melt Flow Rate	BS EN ISO 1133	
Density	BS EN ISO 1183-3	
Heat Reversion	ISO 12091	
Effects of heating (injection moulded fittings only)	BS EN ISO 580	

APPENDIX 6/1 – REQUIREMENTS FOR ACCEPTABILITY AND TESTING ETC OF EARTHWORKS MATERIALS

- 1 The acceptability of earthworks materials shall be determined by compliance with the Specification, including Table 6/1, as amended by this Appendix.
- 2 The Operating Company shall be responsible for the assessment and selection of materials in earthworks and shall be responsible for the classification of materials on site, or off site, as appropriate. Fill materials shall be assessed at the place of excavation or deposition, as required by the Operating Company.
- 3 Class 3 material shall not be used.
- 4 Material for disposal shall be removed to a licensed disposal facility.

Table 6/1 – Acceptable Earthworks Materials: Classification Requirements (see footnotes)

Class				General Material Description	Typical Use	Permitted Constituents (all subject to requirements of Class 601 and Appendix 6/1)	Material Properties Required for Acceptability (in addition to requirements on use of fill materials in Class 601 and testing in Clause 631)				Compaction Requirements in Clause 612	Class		
							Property (see exceptions in previous column)	Defined and tested in accordance with:	Acceptable Limits Within:					
									Lower	Upper				
G E N E R A L	1	A	–	Well graded granular material	General Fill	Any material or combination of materials other than chalk and material designated as Class 3 in this Contract. (Properties i, ii and iv in the next column, shall not apply to chalk) Recycled aggregate.	(i) grading	BS 1377: Part 2	Tab 6/2	Tab 6/2	Tab 6/4 Method 2	1	A	–
							(ii) uniformity coefficient	See Note 5 (OE)	10	–				
							(iii) mc	BS 1377: Part 2	Omc - 2%	Omc + 2%				
							(iv) MVC	Clause 632	App 6/1	App 6/1				
							(v) IDD of chalk	Clause 634	–	App 6/1				
G R A N U L A R	1	B	–	Uniformly graded granular material	General Fill	Any material or combination of materials other than chalk. Recycled aggregate	(i) grading	BS 1377: Part 2 (OE)	Tab 6/2	Tab 6/2	Tab 6/4 Method 3	1	B	–
							(ii) uniformity coefficient	See Note 5	–	10				
							(iii) mc	BS 1377: Part 2 (OE)	Omc - 2%	Omc + 1%				
							(v) MCV	Clause 632						
F I L L	1	C	–	Coarse granular material	General Fill	Any material or combination of materials other than material designated as Class 3 in this Contract. (Properties (i) and (ii) in the next column, shall not apply to chalk. Recycled Aggregate	(i) grading	BS 1377: Part 2 (OE)	Tab 6/2	Tab 6/2	Tab 6/4 Method 5	1	C	–
							(ii) uniformity coefficient	See Note 5	5	–				
							(iii) Los Angeles coefficient	Clause 635	–	50				

Class				General Material Description	Typical Use	Permitted Constituents (all subject to requirements of Class 601 and Appendix 6/1)	Material Properties Required for Acceptability (in addition to requirements on use of fill materials in Class 601 and testing in Clause 631)				Compaction Requirements in Clause 612			Class		
							Property (see exceptions in previous column)	Defined and tested in accordance with:	Acceptable Limits Within:							
									Lower	Upper						
GENERAL COHESIVE	2	A	-	Wet cohesive material	General Fill	Any material or combination of materials other than material designated as Class 3 in this Contract. (Properties i), ii), iii) lower limit and iv) in the next column, shall not apply to chalk	(i) grading	BS 1377: Part 2 (OE)	Tab 6/2	Tab 6/2	Tab 6/4 Method 1 except: – i) for materials with liquid limit greater than 50, determined by BS 1377: Part 2, only deadweight tamping or vibratory tamping rollers or grid rollers shall be used. ii) for chalk all types of vibratory rollers of Categories over 1800 kg shall not be used.	2	A	-		
							(ii) plastic limit (PL)	BS 1377: Part 2 (OE)	-	-						
							(iii) mc	BS 1377: Part 2 (OE)	Optimum mc -2%	Optimum mc +2%						
							(iv) MCV	Clause 632	8	14						
							(v) Undrained shear strength of remoulded material	Clause 633	App 6/1	App 6/1						
GENERAL COHESIVE FILL	2	B	-	Dry cohesive material	General Fill	Any material or combination of materials other than chalk	(i) grading	BS 1377: Part 2 (OE)	Tab 6/2	Tab 6/2	Tab 6/4 Method 2	2	B	-		
							(ii) plastic limit (PL)	BS 1377: Part 2 (OE)	-	-						
							(iii) mc	BS 1377: Part 2 (OE)	-	PL – 4%						
							(iv) MCV	Clause 632	8	14						
							(v) Undrained shear strength of remoulded material	Clause 633	App 6/1	App 6/1						

Class				General Material Description	Typical Use	Permitted Constituents (all subject to requirements of Class 601 and Appendix 6/1)	Material Properties Required for Acceptability (in addition to requirements on use of fill materials in Class 601 and testing in Clause 631)				Compaction Requirements in Clause 612		Class		
							Property (see exceptions in previous column)	Defined and tested in accordance with:	Acceptable Limits Within:						
									Lower	Upper					
2	C	-		Stony cohesive material	General Fill	Any material or combination of materials, other than chalk	(i) grading	BS 1377: Part 2 (OE)	Tab 6/2	Tab 6/2	Tab 6/4 Method 2	2	C	-	
							(ii) plastic limit (PL)	BS 1377: Part 2 (OE)	-	-					
							(iii) MCV	Clause 632	8	14					
							(iv) Undrained shear strength of remoulded material	Clause 633	App 6/1	App 6/1					
2	D	-		Silty cohesive material	General Fill	Any material or combination of materials, other than chalk	(i) grading	BS 1377: Part 2 (OE)	Tab 6/2	Tab 6/2	Tab 6/4 Method 3	2	D	-	
							(ii) mc	BS 1377: Part 2	App 6/1	App 6/1					
							(iii) MCV	Clause 632	8	14					
							(iv) Undrained shear strength of remoulded material	Clause 633	App 6/1	App 6/1					
2	E	-		Reclaimed pulverised fuel ash cohesive material	General Fill	Reclaimed material from lagoon or stockpile containing not more than 20% furnace bottom ash	(i) mc	BS 1377: Part 2 (OE)	To enable compaction to Clause 612		End product 95% of maximum dry density of BS 1377: Part 4 (2.5 kg rammer method)	2	E	-	
							(ii) bulk density	BS 1377: Part 9	App 6/1	App 6/1					

Class			General Material Description	Typical Use	Permitted Constituents (all subject to requirements of Class 601 and Appendix 6/1)	Material Properties Required for Acceptability (in addition to requirements on use of fill materials in Class 601 and testing in Clause 631)				Compaction Requirements in Clause 612	Class			
						Property (see exceptions in previous column)	Defined and tested in accordance with:	Acceptable Limits Within:						
								Lower	Upper					
	4	-	-	Various	Fill landscape areas to	See Appendix 6/1	(i) grading	BS 1377: Part 2 (OE)			See Clause 620	4	-	-
							(ii) MCV	Clause 632	8	14				
							(iii) MCV	Clause 632	App 6/1	App 6/1				
T O P S O I L	5	A	-	Topsoil, or turf, existing on Site	Topsoiling	Topsoil or turf designated as Class 5A in this Contract	(i) grading	Clause 618	-	Clause 618	-	5	A	-
	5	B	-	Imported topsoil	Topsoiling	General purpose grade complying with BS 3882	-	-	-	-	-	5	B	-

Class				General Material Description	Typical Use	Permitted Constituents (all subject to requirements of Class 601 and Appendix 6/1)	Material Properties Required for Acceptability (in addition to requirements on use of fill materials in Class 601 and testing in Clause 631)				Compaction Requirements in Clause 612	Class				
							Property (see exceptions in previous column)	Defined and tested in accordance with:	Acceptable Limits Within:			Lower	Upper	6	A	-
									Lower	Upper						
S E L E C T E D G R A N U L A R F I L L	6	A	-	Selected well graded granular material	Below water	Natural gravel, natural sand, crushed gravel, crushed rock other than argillaceous rock, crushed concrete, chalk, well burnt colliery spoil or any combination thereof. (Properties (i) and (ii) in next column, shall not apply to chalk. Recycled aggregate.	(i) grading	BS 1377: Part 2 (On-site) (OE)	Tab 6/2	Tab 6/2	No compaction	6	A	-		
								BS EN 933-2 (Off-site)	Tab 6/5	Tab 6/5						
							(ii) uniformity	See Note 5	10	-						
							(iii) plasticity index	BS 1377: Part 2 (OE)	Non-plastic							
6	B	-	Selected coarse granular material	Starter layer	Natural gravel, natural sand, crushed gravel, crushed rock, crushed concrete, chalk, well burnt colliery spoil, slag or any combination thereof. (Properties (ii) and (iii) in next column, shall not apply to chalk. Recycled aggregate.	(i) grading	BS 1377: Part 2 (OE) (On-site)	Tab 6/2	Tab 6/2	Tab 6/4 Method 5	6	B	-			
							BS EN 933-2 (Off-site)	Tab 6/5	Tab 6/5							
						(ii) plasticity index	BS 1377: Part 2 (OE)	Non-plastic								
						(iii) Los Angeles Coefficient	Clause 635	-	50 kN							

Class				General Material Description	Typical Use	Permitted Constituents (all subject to requirements of Class 601 and Appendix 6/1)	Material Properties Required for Acceptability (in addition to requirements on use of fill materials in Class 601 and testing in Clause 631)				Compaction Requirements in Clause 612		Class		
							Property (see exceptions in previous column)	Defined and tested in accordance with:	Acceptable Limits Within:						
		Lower	Upper												
S E L E C T E D G R A N U L A R	6	C	-	Selected uniformly graded granular material	Starter layer	Natural gravel, natural sand, crushed gravel, crushed rock other than argillaceous rock, crushed concrete, chalk, well burnt colliery spoil, slag or any combination thereof. (Properties (iii) and (iv) in next column, shall not apply to chalk. Recycled aggregate.	(i) grading	BS 1377: Part 2 (OE) (On-site)	Tab 6/2	Tab 6/2	Tab 6/4 Method 3	6	C	-	
								BS EN 933-2 (Off-site)	Tab 6/5	Tab 6/5					
							(ii) uniformity coefficient	See Note 5	-	10					
							(iii) plasticity index	BS 1377: Part 2 (OE)	Non-plastic						
							(iv) Los Angeles Coefficient	Clause 635	-	50					
(v) mc	BS 1377: Part 2 (OE)	Optimum mc -2%	Optimum mc +1%												
F I L L	6	F	2	Selected granular material (coarse grading)	Capping	Any material, or combination of materials, other than unburnt colliery spoil and argillaceous rock. (Property (i) in next column shall not apply to chalk.) Recycled aggregate. Property (iv) in the next column shall not apply if Class A (asphalt) content is 20% or less.	(i) grading	BS 1377: Part 2 (OE)	Tab 6/2	Tab 6/2	Tab 6/4 Method 6	6	F	2	
							(ii) optimum mc	BS 1377: Part 4 (vibrating hammer method) (OE)	-	-					
							(iii) mc	BS 1377: Part 2(OE)	Optimum mc -2%	Optimum mc					
							(iv) Los Angeles Coefficient	Clause 635	-	50					
							(v) Class A asphalt content	Clause 710	-	50%					
							(vi) bitumen content	BS EN 12697-1 or BS EN 12697-39	-	2.0%					

Class				General Material Description	Typical Use	Permitted Constituents (all subject to requirements of Class 601 and Appendix 6/1)	Material Properties Required for Acceptability (in addition to requirements on use of fill materials in Class 601 and testing in Clause 631)				Compaction Requirements in Clause 612		Class		
							Property (see exceptions in previous column)	Defined and tested in accordance with:	Acceptable Limits Within:						
									Lower	Upper					
S E L E C T E D	6	G	-	Selected granular material	Gabion filling	Natural gravel, crushed rock, crushed concrete or any combination thereof. None of these constituents shall include any argillaceous rock.	(i) grading	BS 1377: Part 2 (On-site) (OE)	Tab 6/2	Tab 6/2	None	6	G	-	
								BS EN 933-2 (Off-site)	Tab 6/5	Tab 6/5					
							(ii) Los Angeles Coefficient	Clause 635	-	50					
G R A N U L A R F I L L	6	N	-	Selected well graded granular material	Fill structures to	Natural gravel, natural sand, crushed gravel, crushed rock, crushed concrete, slag, well burnt colliery spoil, or any combination thereof. None of these constituents shall include any argillaceous rock. Recycled aggregate except recycled asphalt.	(i) grading	BS 1377: Part 2 (On-site) (OE)	Tab 6/2	Tab 6/2	End product 95% of maximum dry density of BS 1377: Part 4 (vibrating hammer method)	6	F	2	
								BS EN 933-2 (Off-site)	Tab 6/5	Tab 6/5					
							(ii) uniformity coefficient	See Note 5	10	-					
							(iii) Los Angeles Coefficient	Clause 635	-	40					
							(iv) undrained shear parameters (c and ϕ)	Clause 633	To be determined by the Operating Company	-					
							(v) effective angle of internal friction (ϕ') and effective cohesion (c')	Clause 636	To be determined by the Operating Company	-					

Class				General Material Description	Typical Use	Permitted Constituents (all subject to requirements of Class 601 and Appendix 6/1)	Material Properties Required for Acceptability (in addition to requirements on use of fill materials in Class 601 and testing in Clause 631)				Compaction Requirements in Clause 612	Class		
							Property (see exceptions in previous column)	Defined and tested in accordance with:	Acceptable Limits Within:			6	N	-
									Lower	Upper				
S E L E C T E D G R A N U L A R F I L L	6	N	-	Selected well graded granular material	Fill to structures	Natural gravel, natural sand, crushed gravel, crushed rock, crushed concrete, slag, well burnt colliery spoil, or any combination thereof. None of these constituents shall include any argillaceous rock. Recycled aggregate except recycled asphalt.	(vi) permeability	Clause 640	To be determined by the Operating Company	-		6	N	-
							(vii) mc	BS 1377: Part 2 (OE)	To be determined by the Operating Company	To be determined by the Operating Company				
							(viii) MCV	Clause 632	To be determined by the Operating Company	To be determined by the Operating Company				

Footnotes to Table 6/1

- 1 App = Appendix
2. Tab = Table
3. Where in the Acceptable Limits column reference is made to Appendix 6/1, only those properties have limits ascribed to them in Appendix 6/1 shall apply.

Where Appendix 6/1 give limits for other properties not listed in this Table such limits shall also apply.

4. Where BS 1377: Part 2 is specified for mc, this shall mean BS 1377: Part 2 or BS EN 1097-5 as appropriate.
5. Uniformity coefficient is defined as the ratio of the particle diameters
D60 to D10 on the particle-size distribution curve, where:
D60 = particle diameter at which 60% of the soil by weight is finer
D10 = particle diameter at which 10% of the soil by weight is finer
6. The limiting values for Class U1B material are given in Appendix 6/14 and Appendix 6/15
7. The above table contains details of materials which are considered to be those most commonly encountered on the network. However, it this does not preclude the use of other materials, whose use shall be determined by the Operating Company in accordance with other provisions of the Operating Company.

APPENDIX 6/2 – REQUIREMENTS FOR DEALING WITH CLASS U1B AND CLASS U2 UNACCEPTABLE MATERIALS

For specific Schemes where Class U1B or Class U2 unacceptable material is encountered the Operating Company shall submit its proposals for dealing with the material to the Overseeing Organisation.

**APPENDIX 6/3 – REQUIREMENTS FOR EXCAVATION, DEPOSITION, COMPACTION
(OTHER THAN DYNAMIC COMPACTION)**

- 1 The use of a nuclear moisture/density gauge is permitted for measuring field dry densities of fill to Structures and fill above structural foundations where an end product compaction requirement is specified in Table 6/1.
- 2 Embankments shall be constructed in general with side slopes not steeper than 1 in 2.

APPENDIX 6/5 – GEOTEXTILES USED TO SEPARATE EARTHWORKS MATERIALS

Geotextile Type 1 shall be a general purpose woven or non-woven geotextile of nominal weight 100 g/m².

APPENDIX 6/8 – TOPSOILING

1. The thickness of topsoil to be deposited shall be determined by the Operating Company in accordance with this Contract.
2. Tracked vehicle shall not be used to spread topsoil.
3. The use of topsoil class 5B shall be determined by the Operating Company in accordance with this Contract.

APPENDIX 6/10 – GROUND ANCHORAGES, CRIB WALLING AND GABIONS

1. Unless stated otherwise in an Order gabions shall be constructed using a cage of 80 mm nominal mesh opening filled with Class 6G material of grading 100 mm to 200 mm.

Any variation in nominal mesh opening together with overall cage dimensions to suit specific Scheme requirements shall be determined by the Operating Company.

2. Where a plastic geomesh is proposed the properties shall determined by the Operating Company.

APPENDIX 6/14 – LIMITING VALUES FOR POLLUTION OF CONTROLLED WATER

1. The Operating Company shall determine for each Scheme the limiting values in a material for pollution of controlled waters.

These values may be expressed as total concentrations in the material or preferably as concentrations of cumulative leached amounts in standard leaching tests carried out on the materials.

2. The Operating Company shall through consultation with the Scottish Environment Protection Agency establish generic guideline values for given soil conditions or shall undertake Scheme specific risk assessments in order to derive such values. Any values established in this manner shall be approved by Scottish Environment Protection Agency.
3. The Operating Company shall include for all testing requirements in relation to this Appendix in its Management System as part of its Inspection and Test Plan in accordance with the requirements of Appendix 1/5.

APPENDIX 6/15 – LIMITING VALUES FOR HARM TO HUMAN HEALTH AND THE ENVIRONMENT

1. The Operating Company shall determine for each Scheme the limits on the amount of contaminants in a material which if exceeded shall lead to a significant possibility of significant harm to human health or the environment.
2. The Operating Company shall through consultation with the Scottish Environment Protection Agency establish generic guideline values for given soil conditions or shall undertake Scheme specific risk assessments in order to derive such values. Any values established in this manner shall be approved by Scottish Environment Protection Agency.
3. The Operating Company shall include for all testing requirements in relation to this Appendix in its Management System as Part of its Inspection and Test Plan in accordance with the requirements of Appendix 1/5.

APPENDIX 7/1 – TS – FLEXIBLE PAVEMENT OPTIONS

- 1 Permitted Pavement Options – Schedule 1 – Not Used
- 2 General Requirements – Schedule 2

Schedule 2 : General Requirements		
Grid for checking surface levels of pavement courses (702.4)	Longitudinal Dimension	10 m
	Transverse Dimension	Centre joint Middle of lane 300mm from each channel
Surface regularity (702.7)	Category of Road	A* * required on daily surfacing lengths of 250m or greater.
Interval for measurement of longitudinal regularity		Continuous in any line or lines parallel to the edge of pavement
Interval for measurement of transverse regularity		10 meters
Surface texture is required: Note – Not applicable to TS2010, details given in Schedule 5: Requirements for Construction Materials.		In accordance with the Specification
Measurement of surface texture is required Note – Not applicable to TS2010, details given in Schedule 5: Requirements for Construction Materials.		Yes, on daily surfacing lengths of 75m or greater.
Full documentation of the manufacturer's design shall be supplied to the Overseeing Organisation for his written consent before the commencement of laying of any material designed in accordance with MCHW.		

3 Permitted Construction Materials – Schedule 3

Schedule 3: Permitted Construction Materials		
Pavement Options		
Pavement Layer	Material Reference	Thickness (mm)
Surface Treatment	HFS	Scheme Specific*
Surface Course	SCT, SCH, SCM, SCS	Scheme Specific*
Binder Course	BCa, BCb, BCc, BCR, BEMa, BEMb	Scheme Specific*
Base	Ba, Bb, Bc, BEMa, BEMb	Scheme Specific*
Subbase	SB1, SB2	Scheme Specific*
Regulating	RCa, RCb	Varies
Total Thickness*		Scheme Specific

* Scheme Specific Information shall be determined by the Operating Company in accordance with the other provisions of this Contract.

4. General Requirements for Construction Materials – Schedule 4

Schedule 4: General Requirements for Construction Materials	
Clause	Requirement
801.2 and 801.3	Limiting distance for deposition of unbound mixtures shall be 500mm
801.7	All materials shall be non frost susceptible
802.4	Materials up to 225mm thickness shall be spread and compacted in one layer
900 Series	All supplies of Asphalt materials shall be approved under Sector Scheme 14, "Quality Assurance of the Production of Asphalt Mixes".
901.3 and 942.5	In addition to the requirements of clauses 901.3 and 942.5 the coarse aggregate in all base and binder course materials shall be crushed rock. Blast furnace slag and steel slag are not permitted as coarse aggregate.
901.9 and 903.27	In addition to the requirements of CI 901.9, temporary running surfaces shall have a minimum PSV of 55. Where binder course and base are to be trafficked, limestone aggregates shall not be used.
903.25	Sealant shall be applied to any freestanding edge of the finished pavement.

- (i) The minimum PSV and maximum AAV requirements for the permitted surface course materials listed in Schedule 5 of this Appendix shall be Scheme specific and shall be determined in accordance with Tables 3.1 and 3.2 of HD 36/06 or equivalent of the Design Manual for Road and Bridges respectively.

The required values for each Scheme shall be determined by the Operating Company in accordance with the other provisions of this Contract.

- (ii) Individual layer thicknesses shall be Scheme specific and the required values for each Scheme shall be determined by the Operating Company in accordance with other the provisions of this Contract.
- (iii) Cement and other Hydraulically Bound Mixtures complying with Clauses 810 to 880 shall only be permitted for use with the prior written consent by the Overseeing Organisation.

The requirements for these materials when proposed for use shall be determined by the Operating Company in accordance with the other provisions of this Contract.

5 Requirements for Construction Materials – Schedule 5

Schedule 5: Requirements For Construction Materials				
Material Ref.	Clause	Description	Grade of Binder	Requirement
HFS	924	High Friction Surface		<p>Minimum PSV: 70</p> <p>Classification: Type 1– to be determined by the Operating Company in accordance with the other provisions of this Contract.</p> <p>Min PSV and Max AAV: See note (i) in Schedule 4 above .</p> <p>Coloured surfaces may be required in for some areas.</p>
SCT	942	<p>Thin Surface Course System</p> <p>Note: The use of this material shall be subject to written consent by the Overseeing Organisation on a Scheme specific basis with the exception of small areas of repair to existing surface courses where Clause 942 material has been used.</p>	Nominated by supplier to meet requirements	<p>The following parameters shall be determined by the Operating Company in accordance with the other provisions of this Contract:</p> <ol style="list-style-type: none"> 1. Traffic count in cvd/l/day 2. Site Classification 3. Minimum wheel-tracking level required on BBA HAPAS Roads and Bridges Certificate 4. Resistance to permanent deformation. Level 3 shall apply unless otherwise stated on the order, or otherwise agreed 5. Road/tyre noise level relative to HRA required on BBA HAPAS Roads and Bridges Certificate 6. Macrotexture shall be in accordance with Clause 942.13 and CI 942.14 unless stated on the Order or otherwise agreed. 7. Clause 942.15 and 942.16 shall apply unless otherwise stated on the Order, or otherwise agreed. <p>Note: Where repairs require to be carried out to a surface of area less than 100m² which shall be composed of a Thin Surface Course System the material used shall be of type previously used.</p>

Schedule 5: Requirements For Construction Materials				
Material Ref.	Clause	Description	Grade of Binder	Requirement
SCS	974AR	Transport Scotland SMA (2010)	Nominated to suit requirements	As Clause 974AR.
SCM	971AR	SMA	Nominated to suit requirements	As Clause 971AR.
SCH	911TS	Hot Rolled Asphalt Surface Course (Design Mix)	40/60	HRA 35/14 C surf 40/60. HRA 35/14 F surf 40/60. 14/20 Pre coated chippings to CI 915 shall be used. Min PSV and Max AAV of chippings: See note 4.1 of this Appendix. Surface Macrotexture is required in accordance with Clause 921.
Ba Bb Bc	929	Base Asphalt Concrete	As Requirement	Sub clauses 945.1 and 945.2 shall apply. Void content at refusal is to be monitored in the permanent works in accordance with clause 929.3 Deformation resistance is required in accordance with Class 2, Table D2 of PD 6691 Deformation resistance shall be monitored in accordance with Clause 929.5 Ba : AC32 HDM base 40/60 des. Bb : AC32 dense base 40/60 des. Bc : AC32 HMB base 30/45 des.

Schedule 5: Requirements For Construction Materials				
Material Ref.	Clause	Description	Grade of Binder	Requirement
BCa BCb BCc	929	Binder Course Asphalt Concrete	As Requirement	Sub Clauses 945.1 and 945.2 shall apply. Void content at refusal is to be monitored in the permanent works in accordance with clause 929.3 Deformation resistance is required in accordance with Class 2, Table D2 of PD 6691 Deformation resistance shall be monitored in accordance with Clause 929.5 BCa : AC20 HDM bin 40/60 des. BCb : AC20 dense bin 40/60 des. BCc : AC20 HMB bin 30/45 des.
BCR	906	Dense Binder Course Asphalt Concrete (Recipe)	100/150 40/60	AC20 dense bin 100/150 rec. AC20 dense bin 40/60 rec. AC32 dense base 100/150 rec. AC32 dense base 40/60 rec.
BEMa BEMb	930	EME Base and Binder Course Asphaltic Concrete	As Requirement	BEMa: AC 10 EME2 bin/base 15/25 des. BEMb: AC 14 EME2 bin/base 15/25 des.
RCa RCb	907	Regulating	As Requirement	Tolerance: Laid to achieve the appropriate horizontal tolerances to clause 702. Stone Mastic Asphalt to CI 937 shall be used where thicknesses are less than 55mm. CI 929 binder course shall be used where thicknesses exceed 55 mm. RCa : AC20 dense bin 40/60 des. RCb : Appropriate binder/aggregate size from CI 937. Max coarse agg size 14mm.

Schedule 5: Requirements For Construction Materials				
Material Ref.	Clause	Description	Grade of Binder	Requirement
SB1	803	Type 1 Granular Material		Crushed Gravel Coarse Aggregate – shall be permitted with the written consent by the Overseeing Organisation. Minimum CBR – 30%. Trafficking Trial – Not Required.
SB2	804	Type 2 Granular Material		Minimum CBR – 30%. More than 50% asphalt arisings – Not permitted.

6 Thin Surface Course Systems: Information to Be Provided By The Operating Company - Schedule 6

The Operating Company shall provide the following information:

- (i) A copy of the British Board of Agreement HAPAS Roads and Bridges Certificate or Certificates or equivalent for the Thin Surface Course System or Systems that shall be proposed for use in the Scheme, together with a copy of the quality plan and Installation Method Statement associated with each Certificate.
- (ii) For any Certificate that covers several variants of one Thin Surface Course System, proposed variant or variants of the system to be used in the Scheme *[variants of a system occur from any option that results in different values being reported on the Certificate for one or more properties, and could involve changes in nominal maximum aggregate size, aggregate type, aggregate grading, binder type, binder content, fibres or other additives, type and rate of spread of bond coat]*.
- (iii) If required or if the Thin Surface Course System shall not be produced under a Sector Scheme, the proposed component materials to be used in the Thin Surface Course System and their proportions for each proposed System.
- (iv) Proposed source or sources of coarse aggregate together with statement of properties including Polished Stone Value, Aggregate Abrasion Value, Los Angeles Coefficient and flakiness index.
- (v) If regulating material shall be used, evidence of its deformation resistance either independently or in combination with the Thin Surface Course System.

7 Modified Binder and Mixture Data Requirements - Schedule 7

The following data shall be provided to the Overseeing Organisation for modified binders as required in sub-Clause 937.4, and for materials the subject of a Design in

accordance with 911, 929 and 930 in respect of the proposed binder [note: all these Clauses cover materials that shall be designed by the supplier].

The data shall not be more than 26 weeks old. Appendix 7.1/Table 7/1 in which the binder data may be recorded is given at the end of this section.

7.1 Binder Samples

Bituminous binders shall be sampled from the delivery according to BS EN 58. For modifiers blended with the other component materials of the mixture at the mixer a simulated binder shall be prepared. Such modifiers are generally less intimately mixed with the bitumen and less well dispersed throughout the mixture than when pre-blended. Evidence that the simulated binder offers the same performance as the binder produced when the modifier is added at the mixer shall be provided to the Overseeing Organisation.

7.2 Penetration

Binder penetration at 25°C (BS EN 1426), 100g 5secs and at 5°C 200g 60secs, before and after hardening in the Rolling Thin Film Oven Test in accordance with BS EN 12607-1, or alternatively after RTFOT and Ageing in accordance with Clause 955.

7.3 Product Identification Test and Rheological Properties

Results for the binder(s) proposed shall comprise rheological data for each binder in the form of complex shear (stiffness) modulus (G^*) and phase angle (δ) determined in accordance with Clause 956 for binder as supplied, after RTFOT and Ageing in accordance with Clause 955.

7.4 Storage Stability Test

All binders shall be stored strictly in accordance with the manufacturer's instructions. Polymer modified binders claimed to remain homogeneous in storage without agitation shall be tested for storage stability in the manner described in Clause 958. The mean of the differences in softening point between the top and bottom samples, of not less than five pairs of such samples shall not exceed 5°C. Manufacturers of pre-blended modified binders shall state in writing what precautions shall be necessary to ensure that adequate homogeneity shall be maintained during storage.

7.5 Photomicrograph

A typical photomicrograph of the modified binder and binder using ultra-violet or other technique to provide maximum contrast of the polymer structure to the binder before modification shall be supplied together with details of sample preparation techniques.

7.6 Cohesion

Vialit Pendulum cohesion test curve of the binder, in accordance with Clause 957 for the binder as supplied, after RTFOT and after RTFOT and Ageing in accordance with Clause 955.

7.7 FRAASS Brittle Point (IP 80)

FRAASS brittle point measured using BS EN 12593 shall be provided on the binder as supplied, after RTFOT and Ageing in accordance with Clause 955.

Table 7/1 - Modified Binder and Mixture Data Requirements

Manufacturer of Binder	Product Name		
Binder Type		Batch Reference	
Binder source			
Softening point difference in storage stability test			
Test	Supplied Binder	After RTFOT	After Ageing
Penetration at 25°C 0,1 mm (100g and 5secs)			
Penetration at 5°C 0,1 mm (200g and 60secs)			
Vialit pendulum cohesion See Clause 957 maximum peak value J/cm2	#	#	#
Fraass brittle point			
Other properties the Operating Company considers useful and/or necessary			

Where indicated with # the Operating Company shall attach a graphical output to this schedule.

8 Mixture Data Requirements - Schedule 8

The following data shall be provided to the Overseeing Organisation for materials designed in accordance with clause 901.17, clause 911, clause 929, and clause 930 in respect of the proposed mixture:

- (i) Saturation Ageing Tensile Stiffness (SATS) ratio – as described in clause 953.

9 EME2 Base and Binder Additional Requirements for Joints

9.1 Joints in EME2 shall when possible be formed "hot to hot".

- 9.2 "Hot to hot" joints shall be formed by multiple pavers working in echelon. The distance between the pavers shall be as short as possible to ensure the open joint between the two pavers is kept hot. The screed of the second paver shall overlap the first by a minimum of 20mm.
- 9.3 "Hot to cold" joints shall be well compacted, free from cracks and angled at a minimum ratio of 1:2. This angle shall be produced by a joint former on the paver screed and a compaction pinch wheel on the roller.
- 9.4 During the first pass of the roller, along the longitudinal joint, the edge shall be compacted and shaped by the compaction pinch wheel. The compaction pinch wheel shall be mounted on the front roller on a tandem crab steer roller.
- 9.5 If the paver does not form the joint correctly, the defective area must be removed in a straight line. The new joint shall be cut in hot material only and checked with a suitable straightedge and marked to the full extent of the defective area.
- 9.6 Open joints shall be cut and shaped using the following methods:
- Cut while hot with a cutting disk on the roller
 - Milling off with a planer
 - By hand shaping with a shovel or rake (Small areas only).
- 9.7 To protect the joint, the cut-away waste material shall be left in place, until the new EME2 is to be laid. After removal of the cut-away material, the joint shall be cleaned and prepared as in the paragraph below.
- 9.8 The joint shall be cleaned of all deleterious material and specialised hot polymer modified bitumen complying with BS EN 14188-1:2004, Grade N2 shall be applied to all inclined faces of EME2. It shall be hot sprayed over the entire inclined face of the joint at a rate of 0.2 litres /m per 40mm depth and the runoff shall collect on the existing base or binder. Adjustments to spread rate shall be made for deeper layers on a pro-rata basis.
- 9.9 Where there is a vertical joint between existing and new materials that have different characteristics, hot applied joint materials complying with BS EN 14188-1:2004, Grade N1 or polymer modified bitumen sealing strips shall be used in accordance with the manufacturer's instructions.
- 9.10 Transverse day joints shall be kept to a minimum and constructed in the same way as longitudinal "Hot to Cold" joints.

APPENDIX 7/2 – EXCAVATION, TRIMMING AND REINSTATEMENT OF EXISTING SURFACES

- 1 The cross sectional diagram of a typical trench reinstatement shall be as shown in HCD Drawing K4.

APPENDIX 7/3 – SURFACE DRESSING – PERFORMANCE SPECIFICATION

SHEET 1

- 1 The design for surface dressing shall be carried out by the Operating Company in accordance with clause 922 and TRL Road Note 39 (6th Edition) together with the requirements of this Appendix.

The Code of Practice for Surface Dressing (RSDA 2004) is referred to within TRL Road Note 39 and shall be complied with for this work.

Where there is conflict between the requirement of clause 922 and Road Note 39, Road Note 39 shall take precedence.

- 2 Patching and crack repair of the existing carriageway shall be carried out at least 21 days in advance of the surface dressing.

Patching with a high stone content material shall have a similar hardness to existing adjacent surfacing and shall not have horizontal sealing strip applied.

- 3 Seasons and Weather Conditions – in accordance with TRL Road Note 39 Table 14.3.

- 4 Permitted options shall be restricted to 'racked-in' surface dressing systems and double surface dressing systems.

- 5 Binder shall be modified Premium Grade. Both cut-back bitumen and bitumen emulsion are permitted.

- 6 Binder cohesivity shall be a minimum of 1.2 J/cm².

- 7 Binder Rate of Spread – in accordance with TRL Road Note 39 adjusted where appropriate for local conditions and experience. Accuracy of binder sprayer shall be as Table NG 9/14 Category 2*.

- 8 Chippings Rate of Spread – in accordance with TRL Road Note 39 Section 9. Accuracy of chipping spreader shall be as Table NG 9/15. Category 2.

- 9 Values for PSV and AAV shall be determined in accordance with this Contract (HA design Manual for Roads and Bridges).

- 10 Maximum pavement temperature – in accordance with TRL Road Note 39 Table 14.3.

- 11 The Operating Company shall obtain an independent measurement of surface texture using the High Speed Texture Meter or the High Speed Road Monitor and shall submit details of the results to the Overseeing Organisation.

Measurement of Sensor Measured Texture Depth shall be made in the nearside and offside wheel tracks of all Lanes.

The texture depth shall be measured after 11 months and before 13 months following initial trafficking and finally after 22 months and before the end of the guarantee period.

The minimum average Sensor Measured Texture depth at any time up to 2 years after opening to traffic shall be 1.05 mm for every 100 metre Lane length.

In addition the percentage decrease in Sensor Measured Texture Depth between 1 and 2 years shall not exceed 40 per cent.

In the case of non-compliance detailed examination of the printout and the areas in question shall be undertaken by the Operating Company.

Remedial works shall be for a minimum length of 100 metres and full lane width.

Surface dressings shall be visually monitored by the Operating Company for 2 years after opening to traffic and if, the following values are exceeded, remedial measures shall be undertaken:

- (i) Fattening Up, Tracking, and Bleeding: Table NG 9/20.
- (ii) Scabbing and Tearing: Table NG 9/21.
- (iii) Fretting: Table NG 9/22.
- (iv) Streaking: Table NG 9/23.

- 12 The Operating Company shall determine the extent of failures and undertake remedial measures.

The Overseeing Organisation's written consent for proposed remedial measures shall be obtained prior to remedial work taking place.

- 13 The speed of traffic allowed onto new surface dressing shall be limited to 15 mph by a suitable temporary traffic management scheme including the use of slow moving control vehicles.

The surface dressing shall be designed such that by the end of each work shift the surface dressing is stable and all excess chippings shall be removed by suitable suction sweeper with no requirement for further sweeping.

In addition to the design proposal and binder data sheet the Operating Company shall keep, compile and maintain the records required by Road Note 39 clause 8.4 together with the following:

- (i) type of surface dressing,
- (ii) site sample peak binder cohesivity and the temperature range over which the specified minimum applies,
- (iii) weather condition including humidity measurement,
- (iv) road surface temperature,
- (v) Sensor Measured Texture Depth measurements (12 and 24 months).

SHEET 2 – Information to be provided by the Operating Company

The Operating Company shall provide the following information to the Overseeing Organisation, upon request:

1. A copy of BS EN ISO 9001 certificate showing at least the name of the company, the name of the certification body and the reference number and date of the certificate.

A copy of the relevant part of the company Quality Assurance document showing the appropriate scope and limitations of the certification.

The Overseeing Organisation may wish to inspect all or any of the company's Quality Assurance documentation as part of the vendor assessment system and may wish to satisfy himself on the nature of the Quality Assurance systems of the company's material suppliers.

2. Proposed binders together with their data sheets, product identification data and cohesivity data as specified.
3. Proposed source or sources of chippings together with statement of properties including target grading, target flakiness, minimum declared PSV and AAV.
4. A method statement for each site or group of similar sites showing how it shall be proposed to carry out the Site activities in conformance with the Specification.
5. Proposals for traffic control and aftercare for each Site and reaction times for carrying out remedial measures and sweeping.
6. Contingency plans in the event of any breakdown of plant or failure of the dressing and provision for dusting.
7. A Type Approval Installation Trial certificate within the Sector Scheme for the Production of Surface Dressing or in the event of no certificates being issued, a statement of any previous applications on roads similar in site type and road hardness, containing the same data as listed in Sheet 3 of this Appendix.
8. A statement of relevant experience and expertise, naming managers, supervisors and teams responsible for and allocated to this Contract.
9. Design proposal for Surface Dressing for each location.
10. Estimated design life of the Surface Dressing for each location.
11. For the performance specification the results of any other tests or other data the Operating Company considers would assist the Overseeing Organisation in assessing the technical merit of the design.
12. An 'As Built Manual' as specified in sub-clause 922.18.

Binder Data Sheet – Appendix 7/3 Surface Dressing – Performance Specification			
Manufacturer of Binder:	Product Name:		
Binder type:	Batch no:		
Binder Grade (highlight as required)	Conventional		Intermediate
	Premium		Super-premium
Binder source:	Supplied Binder	Aged Binder	Recovered Binder
Test	As supplied to Site	Recovered in accordance with clause 955	Age Binder in accordance with clause 955
Penetration at 25°C 0,1 mm (100g and 5 secs)			
Penetration at 5°C 0,1 mm (200g and 60 secs)			
Manufacturer's Quality Assurance viscosity test for supplied cutback binder within temperature range 100°C to 160°C or alternatively penetration at 5°C 0,1 mm (100g and 5 secs)	†		
Vialit pendulum cohesion, see clause 957 maximum peak value J/cm ²	†#	#	#
Product identification test sub-clause 922.6. Complex shear (stiffness) modulus (G*) and phase angle (δ) data. See clause 956.			#
Minimum viscosity STV 4 mm cup at 40°C or Redwood II at 85°C, (required to prevent binder flow on road – normal camber)	‡		
Other properties this Operating Company considers useful and/or necessary			
Weather limits – information from binder manufacturer: road or air temperatures, humidity, wind chill adjustment, tolerance of surface dampness and other weather related factors	Temperature max: Temperature min: Other:		

Where indicated with # this Operating Company shall attach a graphical output to this schedule.

† Cutback binders only.

‡ Emulsions only.

 Shaded cells do not require data.

SHEET 3 – TAIT Certificate Information to Be Provided By The Operating Company

The Operating Company shall provide the TAIT Certificate containing at least the following information for each Scheme:

Company Name and Address:

Quality Assurance reference number and certifying body:

TAIT reference number:

Date of TAIT:

Self-certified within the Sector Scheme for the Production of Surface Dressing or certified by British Board of Agreement (BBA):

Proprietary Name:

Description of material:

Design procedure or method:

Material thickness (if applicable):

Macrottexture depth at 1 year (as measured and as a percentage of the initial value):

Colour retention (if applicable):

Other optional claims as declared by the installer (e.g. Profile improvement, reduced tyre-road noise emission or RSI, ability to accommodate a variable substrate, skid resistance if greater than PSV and macrottexture would indicate, etc.)

Expected life (Estimated Design Life):

Field of application for the particular material:

Traffic – maximum commercial vehicles per Lane per day

Traffic – total traffic per Lane per day

Traffic – Speed limit

Degree of Site difficulty, see HD 36 (Design Manual for Road and Bridges 7.5.1) or equivalent for categories.

Constraints on application for the particular material:

Time of year

Temperature

Variability of existing surface hardness or type

Other as declared by the installer.

Name and signature of company representative responsible for the TAIT.

APPENDIX 7/4 – BOND COATS, TACK COATS AND OTHER BITUMINOUS SPRAYS

SHEET 1

- 1 Polymer modified bond coats shall be used beneath all bituminous layers on bridge decks.
- 2 All street furniture, ironwork and drop-kerbs shall be masked.

SHEET 2 – Information to be provided by the Operating Company

The Operating Company shall compile the following information prior to the commencement of Operations and shall obtain the following information prior to the commencement of Works:

- 1 The product or products proposed, together with their data sheets, product identification data, cohesivity data as specified.
- 2 For each product, a copy of the BS EN ISO 9001 certificate showing the name of the manufacturer the name of the certification body and the reference number and date of the certificate.
- 3 The spraying equipment proposed and a test certificate.
- 4 The source or sources of blinding material proposed.
- 5 Contingency plans in the event of any breakdown.
- 6 The results of any other tests or other data the Operating Company considers would assist the Overseeing Organisation in assessing the technical merit of the treatment such as:
 - (ii) Tackiness test and/or trafficability time and methods of test.
 - (iii) Breaking time test results for different weather conditions and substrates.
 - (iv) Test results for bond to newly laid concrete. The data supplied shall be not more than 26 weeks old.

Binder Data Sheet – Appendix 7/4	Bond Coats, Tack Coats and Other Bituminous Sprays			
Manufacturer of Binder:	Product Name:			
Binder type:	Batch no:			
Binder Grade (highlight as required)				
Conventional Other	Intermediate	Premium	Super-premium	Non-tack
Binder	Source	→	Recovered Binder	Recovered Binder after Ageing Test
Test			Recovered in accordance with clause 955	Aged in accordance with clause 955
Penetration at 25°C 0,1 mm (100g and 5 secs)				
Penetration at 5°C 0,1 mm (200g and 60 secs)				
Vialit pendulum cohesion see clause 939 maximum peak value J/cm ²			The Operating Company shall attach a report and graphical output to this schedule as specified in clause 957	The Operating Company shall attach a report and graphical output to this schedule as specified in clause 957
Product identification test. The provision of data for identification and ageing is optional for unmodified bituminous emulsions to BS 434 and for bitumen to BS EN 12591 and cutback bitumen to BS 3690. Complex shear (stiffness) modulus (G*) and phase angle (δ) data. See clause 928.			The Operating Company shall attach a report and graphical output to this schedule as specified in clause 956	The Operating Company shall attach a report and graphical output to this schedule as specified in clause 956
Other properties the Operating Company considers useful and/or necessary: Minimum Binder Content Binder temperature range for spray application Emulsion Properties and Viscosity Break time Breaking Agent type Weather limits – information from binder manufacturer: road or air temperatures, humidity, wind chill adjustment, tolerance of surface dampness and other weather related factors Temperature maximum: Temperature minimum: Other:				

APPENDIX 7/6 – BREAKING UP OR PERFORATION OF EXISTING PAVEMENTS

- 1 Where perforation of existing pavements is required the Operating Company shall perforate the full depth of the existing carriageway construction with holes of 100 mm minimum diameter on a 500 mm x 500 mm grid.
- 2 No perforation shall be made within 750 mm of a chamber, cover, box or grating in the pavement surface or of an edge of a pavement.

APPENDIX 7/7 – SLURRY SURFACING INCORPORATING MICROSURFACING

1. Slurry sealing and microsurfacing shall be in accordance with clause 918.
2. Special Restrictions: Guarantee period if not 2 years shall be stated on the Order.
3. Where stated on the Order a coloured surfacing shall be provided.
4. Preparation and masking requirements: Street furniture, road markings, and kerbs shall be masked unless otherwise stated on Order.
5. Minimum macrotexture depth at end of guarantee period shall be in accordance with Table NG 9/1 of MCHW Vol 2.
6. Maximum texture depth after 4 weeks trafficking: 3mm shall be required if stated on Order.
7. Maximum percentage decrease in macrotexture initially measured and at end of the guarantee period shall be 40%.
8. Class of area Defects (% area affected) acceptable shall be in accordance with Table NG 9/4 and 9/5 of MCHW Vol 2.
9. Class of linear Defects (metre per 100 metres) acceptable shall be in accordance with Table NG 9/3.
10. Class of transverse regularity shall be in accordance with Table NG 9/4 and 9/5 of MCHW Vol 2.
11. Class of longitudinal regularity shall be in accordance with Table NG 9/6 and 9/7 of MCHW Vol 2.

APPENDIX 7/7 – SLURRY SURFACING INCORPORATING MICROSURFACING (CONTD)

SHEET 1 – Information to be provided the Operating Company in accordance with the other provisions of this Contract.

- 1 Location.
- 2 Traffic Count.
- 3 Traffic Speed, 85 percentile and site speed limit.
- 4 Category of site.
- 5 Description of existing surface.
- 6 Thickness of Slurry Surfacing.
- 7 Minimum declared PSV of coarse aggregate.
- 8 Maximum AAV of coarse aggregate.
- 9 Definition of colour required.
- 10 Surface finish required for footways (if not by transverse brushing).

APPENDIX 7/7 – SLURRY SURFACING INCORPORATING MICROSURFACING (CONTD)

SHEET 2 – Information to be provided by the Operating Company

The Operating Company shall provide the following information to the Overseeing Organisation, upon request:

- 1 A copy of
 - (i) BS EN ISO 9001 certificate showing at least the name of the company, the name of the certification body and the reference number and date of the certificate, and
 - (ii) the relevant part of the company Quality Assurance document showing the appropriate scope (Slurry Surfacing and Sector Scheme) and limitations of the certification.

The Overseeing Organisation may wish to inspect all or any of the company's QA documentation as part of the vendor assessment system and may wish to satisfy himself on the nature of the QA systems of the Company's material suppliers.

- 2 Design Proposal for Slurry Surfacing for each location and target binder content with tolerances.
- 3 Estimated Design Life of the Slurry Surfacing for each location.
- 4 A copy of the Type Approval Installation Trial Certificate within the Sector Scheme for Slurry Surfacing for the proposed system together with its supporting data.

In the event of no certificates being issued a statement of any previous applications on roads similar in site type to this Contract's Sites containing the same data as listed in NG Sample Appendix Sheet 3.
- 5 A method statement for each Site or group of similar Sites showing how it is proposed to carry out the works in conformance with the specification.
- 6 Proposed source or sources of coarse aggregate together with statements of properties including target grading, declared PSV and AAV.
- 7 Proposed source or sources of fine aggregate including target grading and other constituents together with statements of properties.
- 8 Proposed binder together with data sheets and cohesivity data.
- 9 Proposals for traffic control and aftercare for each Site and reaction times for: carrying out remedial measures, sweeping, and Site visits with the Overseeing Organisation.
- 10 Contingency plans in the event of any breakdown of plant or failure of the Slurry Surfacing.
- 11 An 'As Built Manual' as specified in sub-clause 918.30.

- 12 If available, the following information shall be provided in order to assist the Overseeing Organisation to assess the technical merits of the design proposal:
- (i) Test method for binder content.
 - (ii) Test for thickness of Slurry Surfacing.
 - (iii) Trafficability time, including method of test.
 - (iv) Wheel tracking test results at 45°C or 60°C or other suitable measure of the ability of the proposed system to resist deformation and flow.
 - (v) Water sensitivity test results from the test used by BBA/HAPAS thin surfacing Guidelines Document or from wet wheel tracking (whichever is available).
 - (vi) Permeability test carried out on the system, if it is claimed that the process seals the existing surface together with the method of test.
 - (vii) Accelerated ageing test results in accordance with the appropriate BBA/HAPAS test.
 - (viii) Bond test results using the BBA/HAPAS test on either a bituminous or a concrete substrate as appropriate to the site or Bond Coat binder BBA/HAPAS certificate.
 - (ix) Shaking Abrasion test results.
 - (x) Slurry surfacing mix cohesion.
 - (xi) The results of any other tests or other data this Operating Company considers would assist the Overseeing Organisation in assessing the technical merit of the Design Proposal.

Binder Data Sheet – Appendix 7/7	Slurry Surfacing Incorporating Microsurfacing		
Manufacturer of Binder:	Product Name:		
Binder type:	Batch No:		
Binder source:			
Test	Binder as supplied to Site	Recovered binder in accordance with clause 955	Aged binder in accordance with clause 955
Penetration at 25°C 0,1 mm (100g and 5 secs)			
Penetration at 5°C 0,1 mm (200g and 60 secs)			
Vialit pendulum cohesion see clause 957 maximum peak value J/cm ²		#	#
Product identification test sub-clause 918.7. Complex shear (stiffness) modulus (G*) and phase angle (δ) data. See clause 956..		#	#
Other properties this Operating Company considers useful			
Weather limits – information from binder manufacturer: road or air temperatures, humidity, wind chill adjustment, etc.	Temperature Max: Temperature Min: Other:		

Where indicated with # the Operating Company shall attach a graphical output to this schedule. Shaded cells do not require data.

APPENDIX 7/9 – COLD-MILLING (PLANING) OF BITUMINOUS BOUND FLEXIBLE PAVEMENT

- 1 The location of areas to be cold-milled (planed) together with details of whether profile planing or constant depth planing is required shall be determined by the Operating Company in accordance with this Contract.
- 2 Areas to be cold-milled shall be swept in accordance with clause 709.11.

APPENDIX 7/12 - ARRESTER BEDS

Route	Location and RMM Inventory Number	Frequency
A9	Dowally (n/b)	6 monthly
A9	Berriedale (n/b)	6 monthly
A9	Dunbeath (n/b)	6 monthly

APPENDIX 7/13 – SAW-CUT AND SEAL BITUMINOUS OVERLAYS ON EXISTING JOINTED CONCRETE PAVEMENTS

1. The location of saw-cut and sealing of bituminous overlays on existing jointed concrete pavements shall be determined by the Operating Company in accordance with this Contract.
2. The tolerance on co-linearity of the crack initiation slot with the underlying joint or saw-cut shall be ± 5 mm for target overlay thickness less than 100 mm, and ± 10 mm for target overlay thickness 100 mm and greater.

APPENDIX 7/14 – PREPARATION OF JOINTED CONCRETE PAVEMENTS PRIOR TO OVERLAYING AND SAW-CUT AND SEAL OF THE BITUMINOUS OVERLAY

- 1 The location of the preparation of jointed concrete pavements prior to overlaying and saw-cut and sealing of the bituminous overlay shall be determined by the Operating Company in accordance with this Contract.
2. The treated surface shall be bond coated in accordance with Appendix 7/4 prior to overlaying.

APPENDIX 7/18 – SITE SPECIFIC DETAILS AND REQUIREMENTS FOR COLD RECYCLED BITUMEN BOUND MATERIAL

The Site specific details and requirements for cold recycled bitumen bound material shall be determined by the Operating Company in accordance with this Contract.

APPENDIX 7/22 –REPAIRS TO POTHOLES

1 General

- 1.1 Temporary repairs to small areas of pavement courses including holes for road stud sockets shall be carried out in accordance with clause 946 paragraphs 4, 6 and 7.

Standing water shall be removed before filling the hole.

2 Temporary Repair Materials

- 2.1 The Operating Company shall list in the following table proposed temporary repair materials suitable for use on the Trunk Road network.

The Operating Company shall select the most appropriate temporary repair material from the completed table.

Table of Materials for Temporary Repairs - Sheet 1

Reference Number	Temporary Repair material

Table of Materials for Temporary Repairs - Sheet 2

Column 1	Column 2	Column 3						
Locations On The Unit Where Temporary Repair Materials May Be Used.	Climatic Conditions/ Seasonal/Time Conditions Where Temporary Repair Materials May Be Used.	Type of Repair						
		Holes Less Than 0.5m ² In Area	Holes Exceeding 0.5m ² But Not Exceeding 1.0m ² In Area	Holes Greater Than 1.0m ² In Area	Road Stud Sockets	Depressions Not Exceeding 0.5m ² In Area	Depressions Exceeding 0.5m ² But Not Exceeding 1.0m ² In Area	Depressions Exceeding 1.0m ² In Area

Notes for completion of Table of Materials for Temporary Repairs - Sheet 2

1. In column 1 the Operating Company shall state in which location the particular temporary repair material is suitable for use which can be generic for example 'all motorways' or specific for example 'routes XXX'.
2. In column 2 the Operating Company shall state under what conditions the temporary repair material is suitable for use e.g. summer, winter, temperatures greater than x degrees, wet conditions, etc.
3. In column 3 the Operating Company shall insert the reference number of the temporary repair material.

APPENDIX 11/1: KERBS, FOOTWAYS AND PAVED AREAS

1. Details of Kerbs, Channels, Edgings, Footways, Paved areas shall be as shown on Standard Drawings Series 1100/01 listed in Schedule 9 Part 3.
2. Footways and Paved Areas shall be laid using materials and to thicknesses detailed in the Tables below, and as shown on Standard Drawings Series 1100/05 listed in Schedule 9 Part 3.
3. All materials shall be machine laid where possible. Where hand laid flexible surfacing to footways and cycleways shall comply with level tolerance requirements of BS 594987 Table 7.
4. Concrete flags shall comply with BS EN 1339 and Table 11/1D below. Surface levels of paved areas shall be to BS 7533-4: Tables B1 and B2.
5. Concrete paving blocks shall comply with BS EN 1338 and Table 11/1B below. Surface levels of paved areas shall be to BS 7533-3: Annex B.

Flexible Construction: Type F1 (New/replacement construction)

Pavement Layer	Clause	Material	Binder Grade	Thickness (mm)	Special Requirements
Surface course	909	6mm Dense Asphalt Concrete Surface Course	125	20	AC 6 dense surf 100/150 PSV 55 to BS EN 13108-1: 2006. Crushed rock aggregate excluding limestone.
Binder Course	906	Dense Binder Course Asphalt Concrete	125	40	AC 20 dense bin 100/150 to BS EN 13108-1: 2006. Crushed rock aggregate.
Sub base	803	Type 1	--	100	
Total thickness				160	

Flexible Construction: Type F2 (New/replacement construction)

Pavement Layer	Clause	Material	Binder Grade	Thickness (mm)	Special Requirements
Surface course	909	6mm Dense Asphalt Concrete Surface Course	125	20	AC 6 dense surf 100/150 PSV 55 to BS EN 13108-1: 2006. Crushed rock aggregate excluding limestone.
Binder Course	906	Dense Binder Course Asphalt Concrete	125	60	AC 20 dense bin 100/150 to BS EN 13108-1: 2006. Crushed rock aggregate.
Sub base	803	Type 1	--	150	
Total thickness				230	

Flexible Construction: Type F3 (Overlay existing paved area)

Pavement Layer	Clause	Material	Binder Grade	Thickness (mm)	Special Requirements
Surface course	909	6mm Dense Asphalt Concrete Surface Course	125	20	AC 6 dense surf 100/150 PSV 55 to BS EN 13108-1: 2006. Crushed rock aggregate excluding limestone.
Binder Course	906	Dense Binder Course Asphalt Concrete	125	40	AC 20 dense bin 100/150 to BS EN 13108-1: 2006. Crushed rock aggregate.
Regulating	907	Regulating course	--	Varies	
Total thickness				Varies	

Flexible Construction: Type F4 (Overlay existing paved area)

Pavement Layer	Clause	Material	Binder Grade	Thickness (mm)	Special Requirements
Surface course	909	6mm Dense Asphalt Concrete Surface Course	125	20	AC 6 dense surf 100/150 PSV 55 to BS EN 13108-1: 2006. Crushed rock aggregate excluding limestone.
Regulating	907	Regulating course	--	Varies: max 55mm	
Total thickness				Varies	

Concrete Construction: Type F5 (New/replacement construction)

Pavement Layer	Clause	Material	Binder Grade	Thickness (mm)	Special Requirements
Surface course	1001.2	Concrete	--	75	ST5 Concrete. Crimped surface finish.
Separation Membrane					
Sub base	803	Type 1	--	100	
Total thickness				175	

Concrete Construction: Type F6 (Overlay existing paved area)

Pavement Layer	Clause	Material	Binder Grade	Thickness (mm)	Special Requirements
Surface course	1001.2	Concrete	--	75	ST5 Concrete. Crimped surface finish.
Existing surface					
Total thickness				75	

Flagged Construction: Type F7 (New/replacement construction)

Layer	Clause	Material	Grade of Binder	Thickness (mm)	Special Requirements
Surface Course	1104	Concrete Flags	--	63	Plan Dimensions 450x450mm
Joints		Mortar			6mm wide. BS 7533 Part 4 Table 4
Laying Course	--	Mortar	--	25	BS 7533 Part 4 Table 3
Sub base	803	Type 1	--	100	
Total Pavement Thickness				188	

Flagged Construction: Type F8 (Overlay existing paved area)

Layer	Clause	Material	Grade of Binder	Thickness (mm)	Special Requirements
Surface Course	1104	Concrete Flags	--	63	Plan Dimensions 450x450mm
Joints		Mortar			6mm wide. BS 7533 Part 4 Table 4
Laying Course	--	Mortar	--	25	BS 7533 Part 4 Table 3
Existing surface					
Total Pavement Thickness				88	

Flagged Construction: Type F9 (New/replacement construction)

Layer	Clause	Material	Grade of Binder	Thickness (mm)	Special Requirements
Surface Course	--	Concrete Flags	--	70	Plan Dimensions 450x450mm.
Jointing		Sand			BS7533 Part 4 Table 6
Laying Course	--	Sand	--	25 compacted thickness	BS7533 Part 4 Table 5 Site Category III
Sub base	803	Type 1	--	150	
Total Pavement Thickness				245	

Flagged Construction: Type F10 (New/replacement construction)

Layer	Clause	Material	Grade of Binder	Thickness (mm)	Special Requirements
Surface Course	1104	Concrete Flags	--	70	Plan Dimensions 450x450mm.
Joints		Mortar			6mm wide. BS 7533 Part 4 Table 4
Laying Course	--	Mortar	--	25	BS 7533 Part 4 Table 3
Base	1030	Wet Lean Concrete	--	100	C8/10
Total Pavement Thickness				195	

Flagged Construction: Type F11 (New/replacement construction)

Layer	Clause	Material	Grade of Binder	Thickness (mm)	Special Requirements
Surface Course	1104	Concrete Flags	--	100	Plan Dimensions 450x450mm.
Joints		Mortar			6mm wide. BS 7533 Part 4 Table 4
Laying Course	--	Mortar	--	25	BS 7533 Part 4 Table 3
Sub base	803	Type 1	--	150	
Total Pavement Thickness				275	

Flagged Construction: Type F12 (New/replacement construction)

Layer	Clause	Material	Grade of Binder	Thickness (mm)	Special Requirements
Surface Course	1104	Concrete Flags	--	100	Plan Dimensions 450x450mm.
Joints		Mortar			6mm wide. BS 7533 Part 4 Table 4
Laying Course	--	Mortar	--	25	BS 7533 Part 4 Table 3
Sub base	803	Type 1	--	150	
Total Pavement Thickness				275	

Flagged Construction: Type F13 (Overlay existing paved area)

Layer	Clause	Material	Grade of Binder	Thickness (mm)	Special Requirements
Surface Course	1104	Concrete Flags	--	70	Plan Dimensions 450x450mm
Jointing		Sand			BS7533 Part 4 Table 6
Laying Course	--	Sand	--	25 compacted thickness	BS7533 Part 4 Table 5 Site Category III
Sub base	803	Type 1	--	varies	
Existing surface					
Total Pavement Thickness				Varies	

Flagged Construction: Type F14 (Overlay existing paved area)

Layer	Clause	Material	Grade of Binder	Thickness (mm)	Special Requirements
Surface Course	1104	Concrete Flags	--	100	Plan Dimensions 450x450mm
Joints		Mortar			6mm wide. BS 7533 Part 4 Table 4
Laying Course	--	Mortar	--	25	BS 7533 Part 4 Table 3
Sub base	803	Type 1	--	varies	
Existing surface					
Total Pavement Thickness				Varies	

Concrete Paving Block Construction: Type F15 (New/replacement construction)

Layer	Clause	Material	Grade of Binder	Thickness (mm)	Special Requirements
Surface Course		Concrete Paving blocks	--	60	Plan Dimensions 200x100mm
Jointing		Sand			BS7533 Part 3 Table D4
Laying Course	--	Sand	--	50 compacted thickness	BS7533 Part 3 Table D2 and D3 Site Category III
Sub base	803	Type 1	--	100	
Total Pavement Thickness				210	

Concrete Paving Block Construction: Type F16 (New/replacement construction)

Layer	Clause	Material	Grade of Binder	Thickness (mm)	Special Requirements
Surface Course		Concrete Paving blocks	--	80	Plan Dimensions 200x100mm
Jointing		Sand			BS7533 Part 3 Table D4
Laying Course	--	Sand	--	50 compacted thickness	BS7533 Part 3 Table D2 and D3 Site Category III
Sub base	803	Type 1	--	150	
Total Pavement Thickness				280	

Concrete Paving Block Construction: Type F17 (Overlay existing paved area)

Layer	Clause	Material	Grade of Binder	Thickness (mm)	Special Requirements
Surface Course		Concrete Paving blocks	--	60	Plan Dimensions 200x100mm
Jointing		Sand			BS7533 Part 3 Table D4
Laying Course	--	Sand	--	30 compacted thickness	BS7533 Part 3 Table D2 and D3 Site Category III
Existing Surface					
Total Pavement Thickness				90	

Flagged Construction (Tactile): Type F18 (New/replacement construction)

Layer	Clause	Material	Grade of Binder	Thickness (mm)	Special Requirements
Surface Course	1104	Concrete Flags: Tactile Paving	--	70	Tactile Paving to DD CEN/TS 15209:2008. Pattern and colour to be agreed. Plan Dimensions 450x450mm
Jointing		Sand			BS7533 Part 4 Table 6
Laying Course	--	Sand	--	25 compacted thickness	BS7533 Part 4 Table 5 Site Category III
Sub base	803	Type 1	--	150	
Total Pavement Thickness				245	

Flagged Construction (Tactile): Type F19 (Overlay existing paved area)

Layer	Clause	Material	Grade of Binder	Thickness (mm)	Special Requirements
Surface Course	1104	Concrete Flags: Tactile Paving	--	70	Tactile Paving to DD CEN/TS 15209:2008. Pattern and colour to be agreed. Plan Dimensions 450x450mm
Jointing		Sand			BS7533 Part 4 Table 6
Laying Course	--	Sand	--	25 compacted thickness	BS7533 Part 4 Table 5 Site Category III
Existing surface					
Total Pavement Thickness				95	

Concrete Ramped Footway Construction: Type F20 (New/replacement construction)

Layer	Clause	Material	Binder Grade	Thickness (mm)	Special Requirements
Surface course	1001.2	Concrete	--	75	C20 Concrete. Crimped surface finish. See drawing 1100/05/055-064 for layout
Sub base	803	Type 1	--	150	
Total thickness				225	

Flexible Ramped Construction: Type F21 (New/replacement construction)

Layer	Clause	Material	Binder Grade	Thickness (mm)	Special Requirements
Surface course	909	6mm Dense Asphalt Concrete Surface Course	125	25	AC 6 dense surf 100/ 150 PSV 55 to BS EN 13108-1: 2006. Crushed rock aggregate excluding limestone. See drawing 1100/05/055-064 for layout
Binder Course	906	Dense Binder Course Asphalt Concrete	125	60	AC 20 dense bin 100/150 to BS EN 13108-1: 2006. Crushed rock aggregate.
Sub base	803	Type 1	--	150	
Total thickness				235	

Concrete Footway Construction: Type F22 (New/replacement construction)

Layer	Clause	Material	Binder Grade	Thickness (mm)	Special Requirements
Surface course	1001.2	Concrete	--	100	C20 Concrete. Crimped surface finish. See drawing 1100/05/055-064 for layout
Sub base	803	Type 1	--	100	
Total thickness				200	

Concrete Footway Construction: Type F23 (Overlay existing paved area)

Layer	Clause	Material	Binder Grade	Thickness (mm)	Special Requirements
Surface course	1001.2	Concrete	--	100	C20 Concrete. Crimped surface finish.
Sub base	803	Type 1	--	Varies	
Existing Surface					
Total thickness				Varies	

Concrete Paving Block Construction: Type F24 (Overlay existing paved area)

Layer	Clause	Material	Grade of Binder	Thickness (mm)	Special Requirements
Surface Course		Concrete Paving blocks	--	80	Plan Dimensions 200x100mm
Jointing		Sand			BS7533 Part 3 Table D4
Laying Course	--	Sand	--	50 compacted thickness	BS7533 Part 3 Table D2 and D3 Site Category III
Sub base	803	Type 1	--	Varies: max 100mm	
Existing Surface					
Total Pavement Thickness				Varies	

Concrete Paving Block Construction: Type F25 (New/replacement construction)

Layer	Clause	Material	Grade of Binder	Thickness (mm)	Special Requirements
Surface Course		Concrete Paving blocks	--	80	Plan Dimensions 200x100mm
Jointing		Sand			BS7533 Part 3 Table D4
Laying Course	--	Sand	--	30 compacted thickness	BS7533 Part 3 Table D2 and D3 Site Category III
Base	1030	Wet Lean Concrete	--	100	C8/10
Sub base	803	Type 1	--	150	
Existing Surface					
Total Pavement Thickness				360	

Table 11/1A General Requirements for Permitted Construction Materials	
Clause	Requirement
801.7	All materials used within 450mm of the pavement finished surface shall not be frost susceptible
802.4	Material up to 225mm compacted thickness shall be spread in one layer
901.2 and 942.5	In addition to the requirements of clauses 901.2 and 942.5 the coarse aggregate in all base, binder course and surface course materials shall be crushed rock
920.1	All Bituminous surfaces shall be treated with either a tack coat or bond coat prior to overlay. The use of a tack coat or bond coat shall be as stated in Appendix 7/4

Table 11/1B Particular Requirements for Concrete Blocks: BS EN 1338

Requirement	Specification
Shape	Rectangular
Dimensions	200 x 100mm in plan. 60mm or 80mm thick as specified
Colour	As instructed
Weathering & Abrasion Resistance	Class 3
Slip/skid resistance	Minimum pendulum value 45
Characteristic tensile splitting strength	>3.6MPa
Minimum Load at Failure	250N/mm

Table 11/1C General Requirements for Block Paving

No	Requirement
1	Blocks shall be laid in a 45 degree herringbone pattern, unless otherwise instructed. Block paver layout details shall be as shown in the drawings
2	Formation to footways to be treated with an appropriate weed killer in accordance with manufacturer's instructions prior to construction.
3	Infill blocks shall be cut using a shielded water based diamond tipped cutter to remove dust. All cut edges to be lightly chamfered to match adjoining edges. Blocks of less than one third full size should not be used. Splitting of blocks is not permitted.
4	All paving shall be jointed with kiln dried jointing sand brushed into the joints before and between two passes with a rubber soled vibrating plate. Repeat at regular intervals thereafter whenever necessary to ensure that joints remain full.
5	All fully sanded joints in flexible paving shall be sealed with an appropriate PVA joint stabilising fluid or applied in accordance with the manufacturer's instructions.

Table 11/1D Particular Requirements for Concrete Flags: BS EN 1339

Requirement	Specification
Shape	Rectangular or square
Dimensions	As specified
Colour	As instructed
Water Absorption	Class 2
Slip/skid resistance	Minimum pendulum value 45
Characteristic bending strength	Class 3

APPENDIX 11/2 – ACCESS STEPS

Details of access steps to feeder pillars, communications, cabinets, traffic counter cabinets, Ice Prediction sites and other monitored apparatus shall be as shown on Standard Drawing No MCX 0138 (modified) listed in Schedule 9 Part 3.

APPENDIX 12/1 – TRAFFIC SIGNS: GENERAL

1 General

1.1 Sign schedules for Schemes which detail the individual requirements for sign assemblies shall be prepared by the Operating Company in accordance with the other provisions of this Contract. The schedules shall include:

- (i) sign face details, dimensions and location,
- (ii) mounting height,
- (iii) post details, including details for passively safe posts, and
- (iv) foundation details.

2. Sign faces

2.1 Sign faces shall be made using Class RA2 material to BS EN 12899-1 or microprismatic material to BS 8408 2005 as determined by the Operating Company in accordance with this Contract.

2.2 Where determined by the Operating Company in accordance with this Contract, sign faces shall be protected with dew resistant sheeting.

3 Foundations

3.1 Details of foundations for sign posts and signal posts shall be shown on Drawings number 1200/10/1 and 1200/10/2 in Schedule 9, Part 3, Annex 9/3A.

4 Round or Rectangular Sign Posts

4.1 Base Plates

Each post shall have a base plate and this shall be fixed to the post in order to prevent any rotation of the post.

It shall be of square section with the side dimensions being at least twice the width of the post.

4.2 Base Housings

The minimum diameter of base housings on tubular posts shall be 168 mm.

Rectangular posts requiring an electrical supply shall be fitted with an integral flush fitting door above ground level.

Detachable root boxes are not to be used.

The internal base housing shall:

- (i) contain a baseboard manufactured from marine plywood or hardwood with a minimum thickness of 15 mm and minimum dimensions of 100 x 380 mm,

- (ii) be mounted securely to the back of the compartment on which the electrical equipment shall be mounted,
- (iii) have a minimum distance of 100 mm from the face of the baseboard to the inside of the front of the housing,
- (iv) have a brass or stainless steel earthing screw or stud 8 mm diameter complete with two brass washers and a brass nut and locknut in a suitable and easily accessible position,
- (v) have a door aperture measuring not less than 110 x 400 mm,
- (vi) be positioned such that the lower edge of the door is not less than 300 mm above ground level, once installed.

4.3 End Caps

All round or rectangular posts shall be supplied complete with plastic end caps. End caps shall be shaped to shed water to the outside of the post and shall be the same colour as the post.

4.4 Protective Finish

The post shall be covered in bitumen in accordance with BS EN 40-5 both outside and inside the post up to 150 mm above proposed ground level.

5 Passively Safe Sign Posts

All passively safe sign posts shall be designed and installed accordance with BS EN 12767: 2007.

6 Permanent Bollards

Internally illuminated bollards shall be base illuminated.

7 Sign Fix Clips

Sign fix clips shall be made of stainless steel.

8 Ducting

Ducting installed through the foundations of posts into which electrical equipment shall be installed shall be 50 mm diameter uPVC street lighting duct with a wall thickness of 5 mm.

9 Identification Numbers

9.1 Identification numbers shall be as follows:

- (i) Each sign shall be identified by a unique system of letters and numbers for maintenance and inspection purposes. The number shall be fixed to the sign by an appropriate adhesive.

- (ii) Letters and numbers shall be provided on both sides of sign located in the central reservation. On all other signs the numbers shall face oncoming traffic.
- (iii) Letters and numbers shall be black on a yellow background with characters 75 mm high at a minimum height of 1.5 metres and a maximum height of 2.5 metres above ground level.
- (iv) Letters and numbers shall be screen printed onto reflective self adhesive vinyl mounted on 3 mm thick Foamex.

APPENDIX 12/2 – TRAFFIC SIGNS: MARKER POSTS

- 1 Hazard Marker Posts
 - 1.1 Hazard marker posts shall be capable of being overrun by vehicles in order that they shall deflect and spring back to an upright position without shattering in all weather conditions and with little or no vehicular damage.
 - 1.2 Hazard marker posts shall be fitted with anti-removal tabs below the ground.
 - 1.3 The reflectors shall be of retroreflective sheet material to comply with Diagram 561 of Traffic Signs Regulations and General Directions 2002.
 - 1.4 The retroreflective sheeting shall be protected from damage from over-running vehicles by raised edges or other acceptable methods.
 - 1.5 The hazard marker post shall have the main body self-coloured black with a highly visible weather resistant white band to the sizes quoted in paragraph 16.1 in Chapter 4 of the Traffic Signs Manual.
 - 1.6 The top of the hazard marker post shall be installed in order that the top of the post is 750 mm-1000 mm above ground level.
- 2 Verge Hazard Marker Posts
 - 2.1 Verge hazard marker posts shall be as shown on drawing numbers 1200/08/001 and 002 and are defined as follows:
 - (i) Type VM1 – stake type fixing which shall include a timber pressure impregnated stake and automatic stake locking mechanism.
 - (ii) Type VM2A – Extended Base Fixing backfilled with excavated material.
 - (iii) Type VM2B – Extended Base Fixing backfilled with concrete type ST2.
 - 2.2 Verge hazard marker posts shall be constructed of material resistant to damage and vandalism and maintenance free.

The posts shall have two integrally moulded shatterproof reflectors angled to give maximum visibility to traffic travelling from either direction on bends and a high visibility band integrally moulded into its body minimum 155 mm.
 - 2.3 Verge hazard marker post shall be installed in accordance with the manufacturer's instructions.
- 3 Motorway Distance Marker Posts
 - 3.1 Motorway distance marker posts shall be as specified in the Manual of Contract Documents for Highways Works Volume 3 Highway Construction Details Drawing E Series.

- 4 Edge of Carriageway Hazard Markers
 - 4.1 Edge of carriageway hazard markers Type ECB1 shall be as shown on drawing number 1200/09/001.
 - 4.2 The edge of carriageway marker shall be installed in accordance with the manufacture's written instructions.
 - 4.3 A 150 mm retroreflective red and white band shall be attached to the marker.

APPENDIX 12/3 – TRAFFIC SIGNS: ROAD MARKINGS AND STUDS

1 Road Markings

1.1 The colour location and material type for permanent or temporary road markings shall be determined by the Operating Company in accordance with this Contract.

1.2 Ribbed road markings shall be formed of hot applied thermoplastic formulated to allow the formation of transverse ribs.

The transverse ribs shall not be less than 8 mm and not greater than 10 mm high and shall be at 500 mm spacing except on slip roads where the spacing shall be reduced to 250 mm.

1.3 The requirement for drainage gaps in raised rib markings shall be determined by the Operating Company in accordance with this Contract.

1.4 All road markings shall provide a skid resistance level of 55.

1.5 Where existing road markings are required to be covered over the cover application shall comply with BS EN 60832:1997.

2 Road Studs

2.1 General Requirements

Road studs shall be placed in new sockets with a clearance of at least 300 mm from any existing sockets.

Refurbished road stud shoes may be re-used but fitted with new inserts.

2.2 Road studs with red and green reflectors shall be uni-directional. Road studs with white shall be bi-directional. Road studs with amber reflectors shall be of the corner-cube reflection type.

2.3 Temporary road studs shall be either hot melt adhesive type or self adhesive type.

APPENDIX 12/5 – TRAFFIC SIGNS: TRAFFIC SIGNALS

- 1 Temporary Traffic Signals
 - 1.1 Temporary traffic signals used to control alternate one-way working shall comply with current versions of Department of Transport specifications TR2502A for portable traffic signal control equipment and TR2504A for vehicle detection equipment. The signals shall be located and operated in accordance with Chapter 8 of the Traffic Signs Manual.
 - 1.2 The Operating Company shall obtain the prior written consent of the Overseeing Organisation for multiphase temporary traffic signals.
 - 1.3 The Operating Company shall provide to the Overseeing Organisation a drawing to a scale of 1:500 with the position of the signals indicated by a dot and an arrow from the dot indicating the direction of the lights and a key to symbols used shall be shown.

The position of signals shall be accurate to within 2 metres.

PART B Foundation Data

Planted base Planting depth

(metres)

Standard Soil Type Factor G

630	390	230

Diameter of concrete surround (if any)

	Bolt hole centres	Bolt Hole diameter	Design load/bolt
Flange plate	(MM)	(mm)	(N)

Relevant forces and moments at ground level

--

Line of action of max moment relating to door opening

--

NOTE For flange plates with slotted holes a diagram shall be included with the data sheet

APPENDIX 13/2 CONTINUED – TYPICAL LIGHTING COLUMN AND BRACKET DATASHEET 2

LUMINAIRE MAXIMUM CHARACTERISTICS

PART C

Acceptable Luminaires

Terrain Categories as defined in BS EN 40-3-1:2000				
I	II	III	IV	

Post Top Column

Luminaire Maximum Weight (kg)	Maximum Windage Area (m ²) for terrain categories as defined in BS EN 40-3-1:2000
-------------------------------	---

Luminaire Connection							
Diameter	Length						

Single Arm Bracket

Luminaire lever arm (mm)	
Due to weight of luminaire	Due to Windage on luminaire

Column

Bracket projection (metre)	Reference Number	Drawing Number	Material		Luminaire Fixing Angle	Luminaire Connection		Luminaire Maximum Wt (kg)	Maximum Windage Area (m ²) for terrain categories as defined in BS EN 40-3-1:2000				
			Grade	Design Strength (N/mm ²)		Diameter (mm)	Length (mm)						

Double Arm Bracket

Luminaire lever arm (mm)	
Due to weight of luminaire	Due to Windage on luminaire

Column

Bracket projection (metre)	Reference Number	Drawing Number	Material		Luminaire Fixing Angle	Luminaire Connection		Luminaire Maximum Weight (kg)	Maximum Windage Area (m ²) for terrain categories as defined in BS EN 40-3-1					
			Grade	Design Strength (N/mm ²)		Diameter (mm)	Length (mm)							

PART D CERTIFICATION

It is certified that the information given in this data sheet has been obtained in accordance with Departmental Standard BD 94/07 (Design Manual for Road and Bridges 2.2.1) and the Specifications.

Signed on Behalf of the Operating Company _____

Date_____

Name (in Block Capitals): _____

APPENDIX 13/3 – INSTRUCTIONS FOR COMPLETION OF LIGHTING COLUMN AND BRACKET DATASHEETS

- 1 When information is not required a dash shall be inserted in the appropriate boxes.
- 2 Where a Data Sheet is amended it shall be given a new revision number with a date.
- 3 The revision number shall be consecutive letters of the alphabet commencing with 'A'.
- 4 The date of the revision shall agree with the date of the Operating Company's signature.
- 5 The column may be aluminium, fibre glass or galvanised steel.
- 6 The material design strength shall be the minimum specified in the Design.
Where more than one material is used values for all materials shall be given.
- 7 All relevant entries shall be made on the Data Sheet before the document is certified by the Operating Company.
- 8 The column nominal height shall be selected from clauses 2 or 3 of BS EN 40-2 as appropriate.
The height shall also be dependent upon local factors, for example overhead power lines, in accordance with the requirements of BS7671:2008.
- 9 The number of door openings shall agree with the manufacturer's drawing.
- 10 The cross-section of the base compartment shall be indicated by a dimensioned diagram/sketch.
- 11 The acceptable positions of bracket arms relative to the door position shall be indicated on the diagram.
Where all positions are acceptable the box noted 'ANY' shall be ticked.
- 12 Where concrete is necessary around the planted base in accordance with clauses 1305.3 and 1305.4 the minimum diameter shall be entered.
- 13 For flange bases all forces and moments necessary for the Design of the foundations shall be obtained in writing from the manufacturer.
- 14 The corrosion protection system used on the column when new shall be recorded.
Where additional steel is provided for sacrificial purposes the amount shall also be recorded.
- 15 The signs and attachments surface area, eccentricity from the centre line of the column to the centre of area of the sign and height above ground level to the centre of area of the sign shall be stated.
- 16 The Luminaire lever arm's weight and maximum windage area quoted shall be based on the most adverse loading on the bracket when it is attached to any of the columns quoted in the compatible column sections.

Note: The luminaire lever arms shall be the horizontal distances from the centre of gravity of the luminaire and if applicable, the centroid of the windage surface area to the end of the bracket joint.

APPENDIX 17/1 – SCHEDULE FOR THE SPECIFICATION OF DESIGNED CONCRETE

SHEET 1 – Structural concrete above ground

Requirement	Schedule		
	STR1	STR2	
Designed Concrete Reference	STR1	STR2	
Intended Working Life of Structure	120	120	
Nominal Cover to Reinforcement	#	#	
Applicable Exposure Classes (Excluding DC-class)	#	#	
DC-class (where appropriate)	N/A	N/A	
Compressive Strength Class of Concrete	C32/40	C40/50	
Minimum Cement Content (kg/m ³)	360	380	
Maximum Free Water/Cement Ratio	0.4	0.4	
Required Group or Type and Class of Cement or Combination (where a DC-class has not been specified)	Group 5 IIB-V IIIA	Group 4 IIA-V IIB-S	
Maximum Aggregate Size, mm	20	20	
Chloride Content Class	CI0,30 ^b	CI0,10 ^a CI0,30 ^b	
For Lightweight Concrete, the Density Class or Target Density			
For Heavyweight Concrete, the Target Density			
Consistence Class	#	#	
Special Type or Class of Cement or Combination			
Required Source/Special Type of Aggregate	Freeze/thaw resisting aggregates	Freeze/thaw resisting aggregates	
Maximum Cement Content (kg/m ³) [See NG 1704.7]	380	400	
Required Admixture	#	#	
Air Entrainment Required [YES/NO]	3.5% min	No	
Minimum or Maximum Temperature of Fresh Concrete °C	5/30	5/30	

Requirement	Schedule		
Sampling and Testing Identity testing Type of test Testing rate	##	##	
Other Requirements UKAS or equivalent third party product conformity certification [YES/NO]	Yes	Yes	

The Operating Company shall determine this detail when selecting from the above table and inform the Overseeing Organisation.

Cross-reference shall be made to Appendix 1/5 and 1/6 as appropriate

a Prestressed or heat cured concrete

b Concrete with reinforcement or embedded metal

Note Designed concrete reference STR 1 shall be used for all reinforced concrete above foundation level

Designed concrete reference STR 2 may be used for reinforced concrete above ground level only with the prior approval of the Overseeing Organisation.

Designed concrete reference STR 2 may be used for prestressed or heat cured concrete.

In line with Appendix 17/70, the Operating Company may develop an alternative designed concrete in accordance with BS 8500-1 and 2 and this Specification and submit to the Overseeing Organisation for written consent.

SHEET 2 – Structural concrete in foundations

Requirement	Schedule				
Concrete Reference	FOU 1	FOU 2	FOU 3	FOU 4	FOU 5
Intended Working Life of Structure	120	120	120	120	120
Structural Performance Level	High	High	High	High	High
Nominal Cover to Reinforcement	#	#	#	#	#
DC-class (where appropriate)	DC-1	DC-2 DC-2z DC-3 ^b DC-3-z	DC-3 ^{*b} DC-3 ^{**b} DC-4 ^b DC4z	DC-3 ^a DC-4 ^a DC4 ^{*b} DC-4 ^{**b} DC4-m ^a	DC-4m ^b DC-4m ^{*b} DC-4m ^{**b}
Compressive Strength Class of Concrete	C32/40	C32/40	C32/40	C32/40	C32/40
Minimum Cement or Combination Content (kg/m ³)	360	380	360	380	360
Maximum Free Water/Cement Ratio	0.4	0.4	0.4	0.4	0.4
Required Group or Type and Class of Cement or Combination	IIB-V+SR IIIA+SR	IIB-V+SR IIIA+SR	IVB-V	IVB-V	IIIB+SR
Maximum Aggregate Size	20 mm	20 mm	20 mm	20 mm	20 mm
Chloride Content Class	Cl 0,30	Cl 0,30	Cl 0,30	Cl 0,30	Cl 0,20
For Lightweight Concrete, the Density Class or Target Density					
For Heavyweight Concrete, the Target Density					
Consistence Class	#	#	#	#	#
Special Type or Class of Cement or Combination	#	#	#	#	#

Requirement	Schedule				
Required Source/Special Type of Aggregate	#	#	#	#	#
Maximum Cement Content (kg/m ³) [See NG 1704.7]	380	380	400	420	420
Required Admixture					
Air Entrainment Required [YES/NO]	No	No	No	No	No
Minimum or Maximum Temperature of Fresh Concrete °C	5/30	5/30	5/30	5/30	5/30
Requirement	Schedule				
Sampling and Testing	##	##	##	##	##
Identity testing					
Type of test					
Testing rate					
Other Requirements	Yes	Yes	Yes	Yes	Yes
UKAS or equivalent third party product conformity certification [YES/NO]					
#	The Operating Company shall determine this detail when selecting from the above table and inform the Overseeing Organisation.				
##	Cross-reference shall be made to Appendix 1/5 and 1/6 as appropriate.				
a	Aggregate carbonate range A, DC-3, DC-4 and DC-4m to use only Combination CIIIB+SR				

b	Aggregate carbonate range B, C only
Note	Designed concretes included in this Appendix are for use at the discretion of the Operating Company. In line with Appendix 17/70, the Operating Company may develop an alternative designed concrete in accordance with BS 8500-1 and 2 and this Specification and submit to the Overseeing Organisation for written consent.

APPENDIX 17/2 – CONCRETE – IMPREGNATION SCHEDULE

Impregnation Treatment

Structure Reference	Drawing Reference	Area Definition Impregnation Treatment (Note 1)
To be completed by the Operating Company	To be completed by the Operating Company	Piers, columns, crossheads and abutments
		Bearing shelves, ballast walls and deck ends
		Structures in marine environments and columns and soffits over brackish water
		Concrete parapets and parapet plinths
		Deck beams and soffits
		Wing walls
		Retaining walls
		'M' beams

Notes

- 1 This list shall be a guide for selection by the Operating Company but shall not be construed as exhaustive.
Other area definitions shall be inserted by the Operating Company.
2. Surface treatments shall be applied in accordance with BD 43 of the Design Manual for Roads and Bridges.
3. Where an alternative to silane impregnation shall be available the Operating Company may submit proposals for its use to the Overseeing Organisation. Any alternative shall not be used until prior written consent has been obtained.
4. The Overseeing Organisation shall wherever possible not later than 4 Working Days after receipt of the Operating Company's submission:
 - (i) accept the submission in writing,
 - (ii) reject the submission in writing with reasons, and
 - (iii) request the Operating Company to supply further information.
 If action (ii) is taken by the Overseeing Organisation, the period of approval of 4 Working Days shall recommence on receipt of a redrafted submission. If action (iii) is taken by the Overseeing Organisation, a minimum period of approval of 4 Working Days shall commence on receipt of the additional information.

APPENDIX 17/4 – CONCRETE – GENERAL

- 1 Conformity and Accreditation
 - 1.1 The Operating Company shall provide evidence if so required that the concrete supplier is certified by UKAS and conforms to QSRMC Quality and Product Conformity Regulations BS EN ISO 9001:2000.
 - 1.2 The Operating Company shall provide evidence if so required that all material test laboratories to be used are UKAS certified.
 - 1.3 When the mix proportions have been accepted by the Overseeing Organisation, no variations shall be made in the manufacture, supply, mix proportions or method of mixing of the material without prior written consent.
 - 1.4 In-situ testing shall be carried out in the presence of and to the satisfaction of the who shall receive certified copies of the results no later than 1 day after the data was recorded.
 - 1.5 The Operating Company shall obtain laboratory tests results, no later than 3 days after the due test date.
 - 1.6 The mixer and method of mixing the samples shall be the same as that to be used throughout the works.
- 2 Materials
 - 2.1 The content of equivalent sodium oxide in the mix shall be restricted or non-reactive aggregates shall be used, as defined in the relevant clauses of Series 1700.
 - 2.2 The total chloride ion content of the materials shall not exceed 0.3 per cent of the mass of cement. Any chloride or admixtures containing chlorides shall not be used.
 - 2.3 The aggregates shall be well graded with the maximum size not exceeding that specified in Appendix 17/1, and complying with clause 1702.2 and 1705.
 - 2.4 Elongated aggregates of a fraction greater than the maximum aggregate size shall not be used.
- 3 Delivery of Materials
 - 3.1 The Operating Company shall obtain with each batch or part of a batch of the material used in relation to the concreting works, certificates furnished by the formulator or his agent stating:
 - (i) Formulator's name and address.
 - (ii) Formulator's agent's name and address where applicable.
 - (iii) Material identification.
 - (iv) Batch reference number, size of batch and number of containers in the delivery order.
 - (v) Date of manufacture.

(vi) Evidence that the chloride contents are less than specified in clause 2(d).

4 Sampling

4.1 Each batch of material delivered to site shall be tested at random from one or more containers of the same batch in accordance with BS EN 12350-1:2009.

5 Placing and Curing

5.1 The standing time between placements shall not be greater than 30 minutes unless a construction joint is formed in accordance with clause 1710.

5.2 In addition to the requirements of clause 1710 the joint surface shall be saturated for a minimum of 2 hours before concrete is placed against it. When concrete has been in place for 4 hours, or less, no further concrete shall be placed against it for a further 20 hours.

5.3 Where concrete is placed in layers, compaction shall extend below the top layer and into the one underneath by at least 100 mm. External compaction may also be adopted.

5.4 Immediately after placing and for 14 days thereafter, concrete shall be protected against harmful effects of weather including rapid temperature changes, frost and from drying out. The methods of protection used must in all cases be subject to the approval of the Overseeing Organisation. Proprietary curing membranes shall not be used.

APPENDIX 17/5 – CONCRETE – BURIED CONCRETE

The following information shall be completed by the Operating Company for each Structure, or group of Structures, and applies only for buried concrete or partially buried concrete, i.e. with one or more faces in contact with natural or disturbed ground or imported backfill.

<p>Structure Name or Location</p> <p>(A separate appendix should be provided for each Structure or location with varying conditions or Design constraints – identical conditions and constraints may be grouped together in one appendix)</p>	
<p>Aggressive Chemical Environment for Concrete Class for Site</p> <p>(derived from Table A.2 of BS 8500-1)</p>	
<p>Structural Performance Level</p> <p>(High, normal or low)</p> <p>(derived from Table 3 of BS 8500-1)</p>	
<p>Design Chemical Class</p> <p>(derived from the Aggressive Chemical Environment for Concrete class determined by assessment of ground conditions together with the Structural Performance Level and the concrete section thickness and adjusted as necessary by reference to the footnotes to Table A.4 of BS 8500-1 and NG 1704.11(i) for increase in concrete quality when used as an Additional Protective Measure, specification of 'starred' or 'double' starred' DC classes)</p>	
<p>Other Requirements and Design Constraints</p> <p>(eg Limitations on drainage or Additional Protective Measures required)</p>	

APPENDIX 17/70 – SCHEDULE FOR THE SPECIFICATION OF AN ALTERNATIVE DESIGNED CONCRETE

	Schedule		
Reference	RC30(B) Below Ground	RC30(A) Above Ground	
Intended Working Life of Structure (years)	120	120	
Nominal Cover to Reinforcement (mm)	#	#	
Applicable Exposure Classes		#	
DC-class	DC-1 ^{\$}		
Compressive Strength Class of Concrete	C25/30	C25/30	
Minimum Cement Content (kg/m ³)	280	280	
Maximum Free Water/Cement Ratio	0.6	0.6	
Required Group or Type and Class of Cement or Combination (where a DC-class has not been specified)	#	Group 4, 5, 6	
Maximum Aggregate Size, (mm)	20	20	
Chloride Content Class	Cl 0,30	Cl 0,30	
For Lightweight Concrete, the Density Class or Target Density			
For Heavyweight Concrete, the Target Density			
Consistence Class	#	#	
Special Type or Class of Cement or Combination			
Required Source/Special Type of Aggregate			
Maximum Cement Content (kg/m ³) [See NG 1704.7]	300	300	
Required Admixture			
Air Entrainment Required [YES/NO]	NO	NO	
Minimum / Maximum Temperature of Fresh Concrete (°C)	5/30	5/30	
Sampling and Testing	##	##	
Other Requirements	#	#	
#	The Operating Company shall determine this detail when selecting from the above table and inform the Overseeing Organisation.		
##	Cross-reference shall be made to Appendix 1/5 and 1/6 as appropriate.		
Notes	<p>1 Structural performance level shall be 'High'.</p> <p>2 \$ see tables A2, A4 and A5 of BS 8500-1 and BRE Special Digest 1.</p> <p>3 RC30 above ground shall comply with Table A6 of BS 8500-1</p>		

APPENDIX 19/1 – (SPECIFICATION FOR HIGHWAY WORKS) FORM HAP/1 (NEW WORKS) PAINT SYSTEM SHEET

1. CONTRACT TITLE: STRUCTURE NO: GRID REF:				
2. DATE OF ISSUE OF DOCUMENTS TO TENDERERS				
3. ENVIRONMENT AND ACCESSIBILITY:				
4. REQUIRED DURABILITY OF SYSTEM: NO MAINTENANCE: up to YEARS MINOR MAINTENANCE: from YEARS MAJOR MAINTENANCE: after YEARS (Ref: NG CI 1911.14(iii))	5. COLOUR OF FINISH:			
6. PAINT SYSTEM TO BE APPLIED OVER: AREA REF: AREA DESCRIPTION: PROTECTIVE SYSTEM TYPE: (i.e. I, II etc):.....				
7. DETAILS	1 st Coat	2 nd Coat	3 rd Coat	4 th Coat
Registered Description Item No. and Colour Date Registered BBA HAPAS Roads and Bridges Certificate Reference Brand Name and Manufacturer's Ref. No. Manufacturer's Data Sheet No. Where Applied How applied Minimum dry film thickness (mdft) (µm) Maximum local dft (See Cl. 1914.7) (µm) Estimated total volume of paint likely to be used. (litres) 'A' type testing required? (YES/NO) (See Cl 1912.3) 'B' type testing required? (YES/NO) (See Cl 1912.10)				

8. STRIPE COAT DESCRIPTION (Including Item No. and colour) Workshop: Site:	9. PAINT MANUFACTURER'S OFFICIAL STAMP:
10. Mdft (μm) NOTE. The minimum total dry film thickness of the paint system, neglecting primers and sealers under 30 microns, shall be 15% greater (to the nearest 25 microns) than the sum of the mdfts of the individual paint coats.	11. APPROVED BY: DATE

Note: The Operating Company shall complete the paint system sheet HA/P1 for protection of steelwork against corrosion for new works.

A separate form shall be provided for each Structure, including CCTV masts, cantilever masts, street lighting columns and bracket arms as appropriate.

APPENDIX 19/3 – (SPECIFICATION FOR HIGHWAY WORKS) FORM HA/P2 PAINT DATA SHEET

BBA HAPAS Road and Bridges Certificate Reference and Date:

Manufacturer:

Item No:

Registered Description:

Brand Name and Reference No:

Consistency and Method of Application:

Weight per 5 Litres (kg):

Specific gravity:

Colour:

For two-pack paints :

Base:

Activator:

Mixed Components:

Volume Solids %:

For two pack paints volume solids % for mixed paint:

VOC content g/l (mixed):

Manufacturer's Minimum Dry Film Thickness Range

Recommended lower mdft:

Recommended upper mdft:

Full Application Instructions:

Mix ratio:

Flash Point:

		5°C	10°C	20°C	30°C
Drying Times (hours)	Surface Dry				
	Hard Dry				
Overcoating Times (hours)	Minimum				
	Maximum				
Pot Life (hours)					

Cleaning Solvent:

State effects on Drying Times of Temperatures below 20°C:

Manufacturer's Application Restrictions:

e.g. for Temperatures or Humidity:

Manufacturer's General Recommendations:

Note: The Operating Company shall complete the paint system sheet HA/P2 for protection of steelwork against corrosion for new works.

APPENDIX 19/4SE – (SPECIFICATION FOR HIGHWAY WORKS) FORM SEDD/P3

PAINT SAMPLE DESPATCH LIST: SHEET 1

Contract Title:

Structure Name :

Structure No:

Client Name:

Supervising Firm:

Fax No:

Supervising Firm's Representative Name:

Tel No:

Address:

Painting Inspection Firm:

Samples Despatched From:

(Note 1) Date Despatched:

Inspector's Name:

Tel No:

Inspector's Signature:

SAMPLES: (Numbered A1, A2 etc. or B1, B2 etc.) (Note 2)					
Sample No.	Item No.	Manufacturer's Reference No.	Batch No	Colour BS 4800 reference (Note 3)	Sp.G. (note 4 & 5)

Paint Manufacturer:

(SPECIFICATION FOR HIGHWAY WORKS) FORM SEDD/P3

PAINT SAMPLE DESPATCH LIST: SHEET 2

1 Procedures

1.1 To be followed closely before despatch of paints to Scientifics Ltd or an approved local paint testing firm:

Check the specific gravity of each batch of paint,

Check the matching of finish colours to BS 4800,

Select the required sample, i.e.:

(i) 'A' sample – unopened tin.

(ii) 'B' sample – 500 ml sample from painter's kettle or from nozzle of airless spray gun in the case of single component coatings or if the check is to be done in situ. Otherwise, for two pack coatings, separate samples of the base and the activator must be dispatched to the testing laboratory.

List contract details in Section 1 of Form SEDD/P3,

List details of each set of samples in Section 1 of Form SEDD/P3 including the specific gravity of each sample,

Send Form HA/P1 Paint System Sheet with Form SEDD/P3 to the following:

(i) Scientifics Ltd, 500 London Road, Derby, DE24 8BQ or an approved local paint testing firm

(ii) The Director, Buchanan House, 58 Port Dundas Road, Glasgow G4 0HF

The Operating Company shall despatch samples to (i) above.

The Operating Company shall label samples correctly, clip lids of tins down securely and send the samples promptly.

Samples shall be labelled with this Contract title, structure name, sample number, and additionally in the case of 'B' samples, item number, manufacturer's reference number, batch number and colour.

Results will be notified by the Director, as soon as they become available.

Notes:

1 State whether from workshop or site (give name and address).

2. Batch samples comprising unopened tins to be marked A1, A2, etc. Control samples in 0.5 litre tins to be marked B1, B2, etc. Samples No. to run consecutively, i.e. A1 and B1 onwards.

3. Colour reference to BS 4800 to be given, as stated on Form HA/P1 (Maintenance) Paint System Sheet, e.g. 18 B 25.
4. For 'A' samples specific gravity (Sp.G.) to be measured by Inspector from separate tins of the same batch. For 'B' samples Sp.G. to be measured by Inspector when taking samples. Samples will be rejected unless Sp.G. is filled in above by Inspector.
5. If Sp.G. differs appreciably from data sheet do not dispatch 'A' or 'B' samples.
6. The Operating Company shall complete the paint system sheet SEDD/P3 for protection of steelwork against corrosion for new works.

APPENDIX 20/1 – WATERPROOFING FOR CONCRETE STRUCTURES

1 Repair and Replacement of Bridge Deck Waterproofing

1.1 Repair and Replacement of Bridge Deck Waterproofing shall be in accordance with clause 2008.

Where details of existing waterproofing systems to bridge decks are unknown the Operating Company shall carry out investigations to determine the system employed. The integrity of the waterproofing membrane and bond to substrate shall be included in the investigation.

2 Bridge decks without waterproofing

2.1 Some existing bridge decks may not have received waterproofing. In such cases the deck shall be prepared to a U4 finish and receive waterproofing in accordance with Series 2000.

3 Typical Existing Waterproofing Systems

3.1 Typical Waterproofing systems that may be found on the Trunk Road Network include:

- (i) Mastic Asphalt System.
- (ii) Proprietary membrane and sheet system.
- (iii) Proprietary sprayed waterproofing system.

4 Design

4.1 Non-destructive integrity tests compatible with the waterproofing system shall be carried out.

4.2 Where the concrete deck deviates from a U4 finish further preparation shall be carried out to bring the surface finish up to a suitable standard for the application of waterproofing.

4.3 The application of an additional thin screed coating on the existing concrete deck shall only be used for localised repairs.

5 Waterproofing with bituminous paint to buried faces of concrete structures

This shall be applied as follows:

Material	Method of Application	Rate of Application	Number of coats
Bituminous paint	Brush or spray applied	0.55 litres / m ² (first coat) 0.45 litres/m ² (second coat)	2

APPENDIX 24/1 – BRICKWORK, BLOCKWORK AND STONEMASONRY

1 Selection of Mortar Type

- 1.1 The Operating Company shall select lime or cement mortars on the basis of the points listed below and in conjunction with clause 2470AR.

For repointing of natural stone masonry, lime mortars should generally be used, and particularly for weaker/more porous masonry. Cement mortars will normally only be permitted in natural stone structures where stonework consists of hard, non-porous masonry and subject to harsh environmental exposure conditions or below open water level.

The mortar mix will vary for each scheme depending on the exposure of the work, the stone in question and the time of year that the work is carried out. Specialist advice shall be sought for the appropriate mortar mix, from organisations such as the Scottish Lime Centre.

2 Cement Mortars

- 2.1 The mortar designation shall be selected by the Operating Company from Table 24/5 of the Specification (as amended by the Contract Specific Minor Alterations).

Sulphate resisting Portland cement shall be used in all mortar designations where located below non tidal open water.

The Operating Company shall determine other locations where it shall be appropriate for Sulphate Resisting Portland cement to be employed.

3 Lime Mortars

- 3.1 Lime mortar shall be mixed using gauging boxes.

The durability designation shall comply with clause 2476AR and shall be selected by the Operating Company from Table 24/7, 24/8 and 24/9 of this Specification.

The Operating Company shall ensure that personnel responsible for the supervision of the production of mortars and the like shall be suitably experienced in the techniques of preparing and using traditional lime mortars.

Where ready made mortars are purchased the Operating Company shall obtain evidence that the supplier shall be suitably experienced in the techniques of production of traditional lime mortars.

4 Selection of masonry

- 4.1 Natural building stone in repair work shall be of the same quality colour and type as adjacent sound stone and bedded jointed dressed and tooled to match.

Before building into the Site activities the Operating Company shall compare and match samples of natural building stone with the existing sound stone.

Reconstructed stone shall be of the same quality colour and type as adjacent sound existing reconstructed stone.

Before building into the Site activities the Operating Company shall compare and match samples of reconstructed stone with the existing sound reconstructed stone.

5 Repointing

5.1 Pointing to repair work shall be finished to match the existing pointing of adjacent sound areas of pointing to brickwork, blockwork, reconstructed stonework and stonework.

In new work:

Finished pointing shall generally be:

- (i) bucket handle in brickwork, block-work and reconstructed stone,
- (ii) flush with the exposed face in natural ashlar stonework and stonework in arch rings and faces, and
- (iii) finished 5 mm from the exposed face of squared or un-squared coursed or un-coursed random rubble stonework.

The proposed specification and details of brickwork, stonework, blockwork and reconstructed stonework and other relevant details for new build shall be submitted for the written consent of the Overseeing Organisation.

6 Other

The variation in depth, front to back, of stones for natural stone face-work to cast concrete shall not exceed 25 mm.

The variation in depth, front to back of adjacent stones for natural stonework in composite walls shall not exceed 50 mm.

In coursed work the courses shall generally be horizontal.

For all works, bricks, stone blocks, reconstructed stone and mortar materials shall be stored on pallets and kept dry.

Bonding for brickwork and blockwork in repairs shall match existing and for new works shall be submitted for the written consent of the Overseeing Organisation.

The Operating Company shall comply with BS8000-3 'Code of Practice for Masonry' in terms of standards of workmanship and Site practice.

The type of permitted fill between the crown of the arch and the underside of the pavement as described in clause 2417.25 shall be selected by the Operating Company based on the fill thickness and site specific criteria.

Unreinforced masonry arch bridges shall be waterproofed with a permitted sheet system conforming to clauses 2003 and 2005 of the Specification.

APPENDIX 26/1 – ANCILLARY CONCRETE

SRPC (sulphate-resisting Portland cement) shall be used when required.

APPENDIX 30/1 – GENERAL

1 The Operating Company shall give at least 48 hours' notice to the Overseeing Organisation of the intention to commence any of the Operations listed in Sub-clause 3001.2 and listed below:

- (i) Sites of Special Scientific Interest.
- (ii) Special Areas of Conservation including candidate sites.
- (iii) Special Protection Areas including candidate sites.
- (iv) Ramsar sites.
- (v) Sites of Interest for Nature Conservation.
- (vi) Any site of Archaeological interest which may be affected by the Operations.

The Operating Company shall also ensure that the appropriate advisory body (for example Scottish Natural Heritage, Scottish Environmental Protection Agency and Historic Scotland) shall also be advised of the intended Operations prior to the Operations commencing on Site.

2 Pesticide record forms as detailed below shall be submitted to the Overseeing Organisation on an annual basis as part of the annual report to be submitted in accordance with Part 4 of Schedule 7.

LANDSCAPE WORKS PESTICIDE RECORD

Contract Reference number:

Date of visit .../.../...

(minimum one record per day)

Contract Name: Name of Operating Company:

Operating Company's telephone number:.....

Operations carried out	Pesticide used	Location of operation
Total weed control		
Selective herbicide		
Weed control in vicinity of any burn, ditch, or open water		
Weed control around planting		
Weed control to cultivated beds		
Other		

Names and qualifications of operatives on Site:

Supervisor

Operatives.....

Storeman

Application by

Signed for Operating Company:.....

Operating Company's observations on damage or any other incidents:

.....

- 4 The bird nesting season shall be generally accepted as being from the end of March to the end of July but shall be confirmed by the Operating Company after consultation with Scottish Natural Heritage.

Evidence of this consultation shall be provided by the Operating Company to the Overseeing Organisation prior to any Operations commencing on Site.

- 5 Inspection Reports are required for the activities carried out under clauses 3007, 3009 and 3010 on the form below.

Inspection Reports shall be submitted at the following intervals:

- (i) In the case of activities carried out under clause 3009:
 - (a) six times per year in the first relevant 52 week period of the period of establishment maintenance,
 - (b) four times per year in the second relevant 52 week period of the period of establishment maintenance,
 - (c) three times per year in the third relevant 52 week period of the period of establishment maintenance, and for any remaining years as appropriate.
- (ii) In the case of activities carried out under clauses 3007 and 3010 at the frequencies stated in Schedule 7 Part 1 for Detailed Inspections.

LANDSCAPE WORKS – INSPECTION REPORT

Contract reference Number:

Date of visit .../.../...

Contract Name:

Name of Operating Company:

Operating Company's telephone number:

Operations carried out	Location of Operations

Names of operatives on Site:

.....

Operating Company's observations on damage by others additional work required or general condition of the Operations and/or Works:

.....

This maintenance visit has been satisfactorily completed.

SIGNED (for Operating Company).....

NAME IN CAPITALS..... DATE.././..

SIGNED (For Engineer).....

NAME IN CAPITALS:.....

APPENDIX 30/2 – WEED CONTROL

- 1 The Operating Company shall control all injurious weed species which shall be defined for this Appendix as being those listed in sub-clause 3002.1 with the addition of Oil Seed Rape, Rosebay Willowherb and Rhododendron Ponticum within or associated with the Unit and throughout all Annual Periods at sufficient frequency to restrict their growth and prevent their spread.

The Operating Company's programme of weed control shall ensure there shall be a significant reduction in the occurrences and extent of these species each successive year for the duration of this Contract wherever they occur.

In locations where effective weed control shall be possible and practicable by other means allowed within this Contract there shall be a presumption against the use of chemical herbicides.

- 2 The Operating Company shall apply contact, translocated or residual herbicide for total weed control **at the following locations:**

- (i) All Structures, paved areas, kerbs, hardstandings, filter drains and gravel areas (including gravelled central reserves).

The Operating Company shall apply herbicides at sufficient frequency to eliminate weed growth in these areas throughout the duration of this Contract.

- 3 The Operating Company shall apply non-residual translocated herbicide for the total elimination of vegetation during site preparation at the following locations:

- (i) all areas prior to seeding or planting,

- (ii) all stockpiles of topsoil.

- 4 The Operating Company shall use a translocated herbicide approved by the Scottish Environmental Protection Agency in or near water for the total control of vegetation in all filter drains and any other areas adjacent to water and requiring weed control.

The application shall be at sufficient frequency to eliminate weed growth throughout the duration of this Contract.

- 5 The Operating Company shall apply herbicide for the selective control of all weeds listed in paragraph 1 above in all non-hardened verges and central reserves, planted areas and other grassed areas throughout the Site including embankments and cuttings.

The application shall be at sufficient frequency to restrict their growth and prevent their spread.

- 6 The Operating Company's programme of weed control shall ensure there shall be a significant reduction in the occurrences of these species each successive year for the duration of this Contract wherever they occur.

- 7 Where any of the weeds listed in paragraph 1 of this Appendix are controlled using herbicide, the application shall be by spot treatment in accordance with the

manufacturer's written instructions unless otherwise consented to in writing by the Overseeing Organisation.

Spot treatment shall be via controlled droplet application of a type appropriate to the herbicide being used and the location, at the season and frequency appropriate to the species being treated.

- 8 Handweeding shall be undertaken at appropriate locations.
- 9 Within wildflower areas or areas of nature conservation value the Operating Company shall eliminate any injurious weeds that cannot be effectively controlled by chemical means without causing damage to other vegetation by hand pulling in accordance with sub-clauses 3002.8 and 3002.10 and at the frequency stated in paragraph 1 of this Appendix.
- 10 The Operating Company shall hand weed as necessary and at sufficient frequency to eliminate weed growth throughout the duration of this Contract in the following locations:
- (i) ornamental shrub beds where the application of herbicide may cause damage,
 - (ii) hedgerow planting where herbicide application may cause damage,
 - (iii) around planting stations in existing woodland,
 - (iv) within plant protectors and tree/shrub shelters,
 - (v) where necessary throughout or associated with the Unit for the control of Ragwort and Oil Seed Rape, and
 - (vi) in areas densely populated with desirable broadleaved species or areas of wildflowers where the application of herbicide may cause damage.
- 11 The Operating Company shall cut weeds listed in paragraph 1 of this Appendix throughout or associated with the Unit that have become unsightly or a nuisance or to prevent such weeds becoming unsightly or a nuisance or to facilitate effective control by herbicide.
- 12 Any arisings from weed control operations shall be removed from Site and disposed of to a licensed disposal facility.

Where weed control operations result in the production of controlled waste products typically from Ragwort and Japanese Knotweed the arisings shall be placed in waterproof bags sealed and removed from the Site to a licensed disposal facility.

The Operating Company shall remove the remnants of any dead or dying weeds at the appropriate time following herbicide application.

APPENDIX 30/3 – CONTROL OF RABBITS AND DEER

- 1 The Operating Company shall carry out rabbit, hare and deer control in all areas of new planting or seeding undertaken under this Contract for the duration of the period of establishment maintenance.

For all other areas within or associated with the Unit the Operating Company shall undertake rabbit, hare and deer control when instructed by the Overseeing Organisation.

No guns or snares shall be used for the control of rabbit, hare and deer without the written consent of the Overseeing Organisation.

The Operating Company shall be responsible for contacting adjacent landowners regarding their obligation to control infestations on their own land and thereafter to liaise as necessary to control co-ordination and report any further complaints in writing to the Overseeing Organisation.

Areas of brambles and herbage that interfere with the control of rabbit or deer shall be cut.

The arisings shall either be used to form habitat piles or chipped and spread around the Site in locations within the Site where the habitat piles and/or the chippings shall not be likely to become visually intrusive or interfere with access or maintenance.

No clearance of brambles or herbage shall be undertaken during the bird nesting season without the completion of a comprehensive bird survey by appropriately qualified ecologists and the submission of a corresponding report for the written consent of the Overseeing Organisation.

For all areas of new planting or seeding Operations and/or Works the Operating Company shall maintain the planting enclosures free of rabbits, rabbit burrows including exit/entry holes and deer for the duration of the period of establishment maintenance.

For all areas of new planting or seeding Operations and/or Works the Operating Company shall replace all plants damaged by rabbits, hares and/or deer and maintain them for the entire duration of the period of establishment maintenance.

APPENDIX 30/4 – GROUND PREPARATION

- 1 Prior to treatment with an appropriate herbicide, the Operating Company shall cut all areas to be planted or seeded to a height of between 50 – 75 mm, and remove the arisings from the Unit to a licensed disposal facility.
2. The Operating Company shall apply herbicide to all areas to be planted or seeded with the exception of areas in existing woodland and on rock faces.
3. Prior to spreading topsoil the Operating Company shall rip the sub-soil in all areas to be planted other than on rock faces.

The minimum depth of ripping shall be 450 mm unless otherwise consented to by the Overseeing Organisation.

The spacing between tine furrows used for ripping shall be 500 mm.

The requirements of sub-clauses 3004.8 to 3004.11 shall apply to subsoil to be seeded or topsoil spread.

Stones brought to the surface during final preparation of soils shall be retained on the Unit and used to form habitat piles in locations where the habitat piles are not likely to become visually intrusive or interfere with the Operations.

All inorganic foreign matter shall be removed off the Unit.

APPENDIX 30/5 – GRASS SEEDING, WILDFLOWER SEEDING AND TURFING

- 1 Wildflower seeding shall be undertaken typically in early Spring or early Autumn and following best horticultural practice appropriate to the species involved.
2. Immediately prior to any sowing grass and wildflower seed, hydraulic seeding or laying turf, with the exception of rock faces and inaccessible areas, the Operating Company shall reduce the upper 50 mm of soil to a fine tilth by use of a chain harrow, rotovator or other suitable construction plant.
3. Fertilisers and organic soil improvers may be used with the written consent of the Overseeing Organisation to aid initial grass establishment in areas where this may be difficult to achieve.

The use of such additives is not permissible in areas of proposed wildflower seeding.

- 4 Grass and wildflower/grass seed mixtures shall be selected by the Operating Company and submitted to the Overseeing Organisation for written consent prior to ordering.

The selection shall take account of the following criteria:

- (i) Intended works location – the choice of grass and/or wildflower species may vary depending on the relative location of the proposed work.
- (ii) Proximity to any areas of nature conservation interests – the Operating Company shall consult with Scottish Natural Heritage if the intended Site for seeding lies in or adjacent to an area of conservation interest.
- (iii) Biodiversity interests – including the specification of wildflower species native to Scotland or the UK and of local provenance.
- (iv) Deer interests – deer can often be attracted to the road side by the presence of new grass seeding and some areas may be more likely to have regular deer activity near to the road. The Operating Company shall consider a choice of grass and wildflower seed that is less palatable to deer.
- (v) Future maintenance requirements – the choice of seed type shall balance the need for good establishment with reduced long term maintenance, particularly in less accessible areas such as central reserves. For wildflower/grass mixtures the ratio of grass seed to wildflowers shall be 80% to 20% respectively. No single species of wildflower shall be less than 10% of the wildflower component with the exception of Ox Eye Daisy (*Leucanthemum vulgare*) that, if specified, shall be limited to 3% of the wildflower component.

All seed shall be delivered to the Unit in bags sealed by the supplier.

A label shall be attached to each bag giving details of species and percentage breakdown.

The same details shall also be enclosed within the bag.

Each bag shall be numbered differently and relate to the label and documents within the bag.

The documents within the bag shall be retained by the Operating Company for inspection by the Overseeing Organisation.

The wild flower seeds shall be of UK native origin selected and procured in accordance with Appendix 1 of 'Cost Effective Landscape: Learning from Nature' published by the Scottish Office in 1998 and any subsequent editions.

The Operating Company shall complete and submit to the Overseeing Organisation the appropriate Wildflower Seed Provenance Certificates in the format shown in this Appendix.

- 5 The grass seed mixture shall be sown at a rate of not less than 20g/m² for side slopes of cuttings and embankments and 15g/m² elsewhere.

Wildflower/grass mix shall be sown at a rate of not less than 10 g/m².

- 6 Hydraulic seeding shall be undertaken only with the prior written consent of the Overseeing Organisation.

It shall typically be undertaken on areas such as rock and scree slopes but may be utilised elsewhere as appropriate.

Seeding rate of application for grass seed mix and wildflower/grass mix shall be the same as for conventional sowing.

- 7 The number of establishment cuts for all newly-established/sown grass shall be 4 for high amenity areas and 2 for all other grass areas.

WILDFLOWER SEED PROVENANCE CERTIFICATE

CERTIFICATE A – Seed Harvested from the Nursery

Certificate No:.....

Species	Name of seed supplier	Name and location of the nursery from which the seed was harvested	Locations and dates of seed collection	Name of person(s) and company(s) responsible for collecting the seed	Any other relevant details or comments

We hereby certify that the wildflower seed incorporated into Operations is as identified in the Specification Appendix 30/5, and the details provided with each individual bag of seed delivered to the Site.

Part (i). (in the event of the operations being sub-contracted by the Operating Company to be completed by the sub-contractor responsible for undertaking the planting operations).

<p>SUB-CONTRACTOR</p> <p>Firm:.....</p> <p>Name:.....</p> <p>Position:.....</p> <p>Signed:.....</p> <p>Date: ../../..</p>

Part (ii). (to be completed by the Operating Company, regardless of whether or not the planting Operations have been sub-contracted).

<p>OPERATING COMPANY</p> <p>Firm:.....</p> <p>Name:.....</p> <p>Position:.....</p> <p>Signed:.....</p> <p>Date: ../../..</p>
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WILDFLOWER SEED PROVENANCE CERTIFICATE

CERTIFICATE B – Seed Collected Directly from the Wild

Certificate No:.....

Species	Name of seed supplier	Name and location of the nursery from which the seed was harvested	Locations and dates of seed collection	Name of person(s) and company(s) responsible for collecting the seed	Any other relevant details or comments

We hereby certify that the wildflower seed incorporated in to Operations is as identified in the Specification Appendix 30/5, and the details provided with each individual bag of seed delivered to the Site.

Part (i). (in the event of the operations being sub-contracted by the Operating Company to be completed by the sub-contractor responsible for undertaking the planting operations).

<p>SUB-CONTRACTOR</p> <p>Firm:.....</p> <p>Name:.....</p> <p>Position:.....</p> <p>Signed:.....</p> <p>Date: ../../..</p>
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Part (ii). (to be completed by the Operating Company, regardless of whether or not the planting Operations have been sub-contracted).

<p>OPERATING COMPANY</p> <p>Firm:.....</p> <p>Name:.....</p> <p>Position:.....</p> <p>Signed:.....</p> <p>Date: ../../..</p>

APPENDIX 30/6 – PLANTING

- 1 All new plant stock to be used within the Unit shall conform to BS3936: Nursery Stock and BS4043: Recommendations for transplanting rootballed trees, with the exception that Holly (*Ilex aquifolium*) which shall be container grown to a minimum height of 500 mm and then cut back to 200 mm in height before delivery to the Unit.

Plant stock types, planting densities and sizes shall be as Tables 30/2, 30/3 and 30/4.

TABLE 30/2 – Extra Heavy Standard, Heavy Standard, Standard, Rootballed Conifers and Feathered Trees

Type	Girth at 1m Above Ground Level (centimetres (cm))	Clear Stem from Ground Level (metres (m))	Minimum Height from Ground Level (metres (m))	Maximum Height from Ground Level (metres)
Extra heavy standard	14 to 20	1.8	4.25	6.0
Heavy standard	12 to 14	1.8	3.5	4.25
Standard	8 to 10	1.8	2.5	3.0
Large rootballed conifers	–	–	1.5	1.75
Feathered Tree	–	–	1.2	1.8

TABLE 30/3 – Whip transplants, Container Grown and Cell Grown Stock

Type	Minimum Age (years)	Minimum Height Above Ground Level (millimetres)	Minimum Container Size
Cell grown stock: Broadleaves Conifers	1.5	250 180	175 cc
Whip transplants	3.0	450	–
Container grown evergreens	3.0	200	2 litres or 1.5 litre rigid cell with internal grooves or ridges

TABLE 30/4 – Shrubs, Conifers, Hedge Plants, Climbers and Ground Cover Plants

Type	Minimum Density (plants/per square metre or as shown)	Minimum Age (years)	Column A Acceptable Height (millimetres)	Column B Minimum Height for Small/Slow Growing Plants not Readily Available to Sizes Shown in Column A (millimetres)	Minimum Volume (litres (l))
Hedge plants, Bare root Beech, Hawthorn	6 per linear metre double staggered row	3.0	400-600	–	–
Cell grown		1.5	200-400		
Other species as detailed on the drawings and Schedule of rates		Other as above			
Bare-root shrubs	As Ordered	3.0	300 to 600		–
Container grown shrubs and conifers	As Ordered	3.0	450 to 600	300 to 450	2 or 1.5 rigid cell with internal grooves or ridges
Container grown climbers	As Ordered	3.0	600 – 900	400 to 600	2
Ground cover plants	As Ordered	3.0	300 – 450	150 to 200	2
Marginal and aquatic plants	As Ordered	2.0	150 – 300	100 to 150	2

Any planting design shall be accompanied by written confirmation from the Operating Company that, in respect of the planting proposed, the United Kingdom native plant species of trees, shrubs climbers and wildflower (seeds and plants) will be sourced from the highest available preference for selecting native seed sources contained within Appendix 1, Figure 5 of *Cost Effective Landscape: Learning from Nature*, first published by the Scottish Office in 1998.

This confirmation shall be provided prior to the commencement of the landscape planting operations and shall consist of the completed Provenance Certificates in the format shown in this Appendix.

Where there is a choice of form of plant, preference shall be given to the most local provenance.

PROVENANCE CERTIFICATE

Certificate Number.....

- 1 We hereby certify that the provenance of the United Kingdom native plant stock incorporated in the Operations shall be as identified in the Plant Schedule contained in Annex 1 of this Certificate.
2. The words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in *Cost Effective Landscape: Learning from Nature (Scottish Office publication, February 1998)*.

PART A. (in the event of the Operations being sub-contracted by the Operating Company to be completed by the sub-contractor responsible for undertaking the planting operations).

<p>SUB-CONTRACTOR</p> <p>Firm:.....</p> <p>Name:.....</p> <p>Position:.....</p> <p>Signed:.....</p> <p>Date: .././..</p>

PART B. (to be completed by the Operating Company, regardless of whether or not the planting operations have been sub-contracted).

<p>OPERATING COMPANY</p> <p>Name:.....</p> <p>Position:.....</p> <p>Signed:.....</p> <p>Date: .././..</p>
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The Operating Company shall make special arrangements for the Overseeing Organisation to inspect planting stock at the nursery if requested by the Overseeing Organisation.

Tree pits shall be back-filled with Class 5A or Class 5B topsoil.

Planting compost may be used for the cultivation of intended planting areas where the soil structure is poor or nutrient deficient and will be detrimental to the successful establishment of the planting.

Areas intended for the use of compost shall have the written consent of the Overseeing Organisation prior to the incorporation of the compost.

Slow/Controlled Release Fertiliser with a Nitrogen: Phosphorus: Potassium: Magnesium ratio of 14:8:13:2 shall be incorporated into backfill of pits for Standard trees, Heavy Standard trees and Extra Heavy Standard trees at the following rates respectively - 20 grams, 40 grams and 100 grams and into the top 75 mm of planting bed soil in ornamental planting areas at the rate of 100 grams per square metre.

Scattering fertiliser of any description on the surface of the ground around the plants is not permitted.

Root dips shall be applied to all bare root plants and shall be applied to all evergreen species in accordance with the manufacturer's written instructions.

Root dips shall be applied at the following times:

- (i) immediately after the plants have been dug-up in the nursery,
- (ii) on arrival at site, and
- (iii) immediately prior to planting if more than 3 days delay after arrival on the site.

Anti-desiccant sprays shall be applied on arrival of the plants at site and immediately prior to planting if more than 3 days delay after arrival on site.

Planting of bare-rooted root-balled and cell grown trees shrubs non-aquatic perennials and wildflower plants shall take place during favourable weather and soil conditions, between the beginning of November and the end of March unless otherwise consented to in writing by the Overseeing Organisation.

Bare-rooted or root-balled conifers and all evergreens shall be planted either during November or March.

Notch planting shall be into a T-shaped opening of sufficient size for the roots of bare-rooted plants to be fully spread out or to accommodate a cell-grown plant without breaking the root plug.

The T-shaped opening shall be through an upturned turf which shall have been dug from the planting location or upturned ground where there shall be no turf.

For individual plants, turfs or upturned ground shall be 300 mm square and 200 mm deep, for single row hedges strip of turf or upturned ground shall be 300 mm wide and 200 mm deep and for a double-row hedge, the strip shall be 600 mm wide and 200 mm deep.

Surrounding ground shall be firmed back after planting.

Planting pits and trenches shall be in accordance with Table 30/1 below. Unwanted sub-soil arising from planting pits and trenches shall be retained on Site, wherever practicable, and deposited in new mounding.

TABLE 30/1 – Planting Pits and Trenches

TYPE	DIMENSION OF EXCAVATION WxWxD mm	DEPTH OF CULTIVATION AT THE BASE OF PITS OR TRENCHES mm
Semi-mature trees	Measurement of root-ball plus 400 in each direction.	200
Extra heavy and Heavy standard trees	1800 x 1800 x750	200
Standard trees	1000 x 1000 x 500	200
Feathered trees	600 x 600 x 400	200
Whip trees, shrubs and climbers where pit planting shall be specified	300 x 300 x 350	150
Hedges	* x 600 x 350	150
Cell-grown plants where pit planting shall be specified and container grown plants.	100 greater than W and D of root-plug.	

* length of hedge

Where planting is undertaken in land without a topsoil depth of 350 mm or greater trenches excavated in accordance with Table 30/1 shall be backfilled with Class 5A or Class 5B as required to make up the required volume.

Where planting is in undisturbed land and where the existing topsoil is 300 mm deep or deeper, the ground shall be cultivated to a minimum depth of 300 mm and all live injurious weed roots and growth and all stones and other such arisings above 75 mm in any one dimension, shall be removed to a licensed disposal facility.

Areas where topsoil has been spread to a depth of 300 mm or greater shall be cultivated in accordance with sub-clause 3006.29 prior to planting.

Where a hedge is planted in undisturbed land and where the existing topsoil is 300 mm deep or deeper, a 600 mm wide strip along the proposed hedgerows shall be cultivated in accordance with sub-clause 3006.29.

Pits and trenches for Transplants, Feathered Trees, Whip Trees, Shrubs, Climbers and Container-grown plants shall be back-filled with Class 5A topsoil and lightly firmed prior to planting.

Root barriers shall only be required where the clearances required for underground services and drainage infrastructure affects the requirement of the planting.

The Operating Company is responsible for determining the location of any underground services in the vicinity of the proposed planting area and shall secure agreement with the relevant Statutory Undertaker(s) before employing root barriers to reduce standard clearances from their services.

Semi-mature trees shall be planted as shown on HCD Drawing No. K5.

Backfill to tree pits shall comprise any Class 5A or Class 5B topsoil as required.

Controlled Release Fertiliser in accordance with sub-clause 3006.15 shall be thoroughly mixed into the topsoil.

All newly planted standard heavy standard extra heavy standard and semi-mature trees shall be fully watered-in to field capacity on the same day as planting.

All container grown cell grown and root-balled plants shall be watered to field capacity immediately before planting.

A 75 mm diameter perforated flexible, plastic irrigation pipe shall be inserted around the root-balls of Extra Heavy Standards trees at a depth of 150 mm below the ground surface.

The pipe shall be of sufficient length to coil horizontally completely around the root system or root-ball and shall be provided with two 'T'-piece connections with aeration caps, which shall be located opposite each other. The leg of the T-piece shall extend vertically from the buried coil to a minimum of 5 mm above ground level in unpaved areas or flush with the paved surface.

Individual plant protectors a minimum of 750 mm in height and 80-100 mm diameter shall be used to protect all cell grown stock whip trees, feathered trees of under 4 years in age and holly plants within hedgerows except for hedge plants.

Individual plant protectors a minimum of 750 mm in height and 150 mm diameter shall be used to protect all shrubs, climbers, container grown evergreens and container grown conifers.

Fagus species shall be protected by plant protectors with base ventilation.

Shelters shall be supported by timber stakes attached by releasable ratchet ties.

Stakes shall be circular section "Pencilled," and a minimum of 35 mm diameter in cross section or 35 x 35 mm square section, sharpened at one end.

Stakes shall be of sufficient length to adequately support the plant protector and remain stable in the ground for the full duration required.

Previously used tree and shrub shelters in sound condition may be used.

Timber mulch shall be composted wood chips or bark free of fungi and diseases, methyl bromide contamination and foreign material.

It shall be matured for a minimum of 16 weeks naturally heated by the process of decomposition to temperatures exceeding 50 degrees centigrade for a minimum period of 14 days followed by a period of not less than 1 week of stabilisation.

Individual mulch mats shall be square or round and not less than 800 mm x 800 mm (or 800 mm diameter) or greater than 1000 mm x 1000 mm (or 1000 mm diameter), and not less than 7 mm thick and biodegradable.

Sheet mulch shall be biodegradable and shall have a minimum thickness of 7 mm.

It may be used in areas of amenity planting except for planting areas in rock cutting.

Edges of sheet mulch mats shall be secured by burying a strip 100 mm wide around the edge of the mat vertically into the ground.

Sheet mulch used for hedges shall be laid in either of the methods specified in sub-clause 3006.62.

The number of bulbs to be planted per m2 per species shall be as follows:

Bluebell	150	
Crocus	100	
Tulips	50	
Narcissus (large)	40	
Narcissus (medium)	60	
Narcissus (small)	100	for example Lent lily (Pseudonarcissus)

The depth of planting shall be in accordance with good horticultural practice.

The Operating Company shall insert marker posts to identify the boundary of each planting or wildflower seeding area which are not otherwise to be protected by fencing or other structures.

The Operating Company shall replace all plants which are missing, have died or which in the opinion of the Overseeing Organisation are failing to make satisfactory growth for the duration of the period of establishment maintenance.

All replacement Extra Heavy Standard, Heavy Standard and Standard trees and any Root-balled conifer stock shall be watered to field capacity following planting.

All areas of new planting undertaken by the Operating Company shall be subject to a period of establishment maintenance for a minimum duration of three years.

APPENDIX 30/7 – GRASS, BULBS AND WILDFLOWER MAINTENANCE

- 1 The Operating Company shall maintain all the grass and wildflower grass areas within the Unit in accordance with the Landscape Inventory categories.

In the case of any areas not recorded in the Landscape Inventory, the Operating Company shall agree the categories of these areas with the Overseeing Organisation.

- 2 No grass cutting shall be carried out within 250 mm of unprotected trees and shrubs. Strimmers shall not be used for cutting grass within unprotected planted areas without the written consent of the Overseeing Organisation.

- 3 All areas indicated within the Landscape Inventory as high amenity grass shall be subject to high frequency cutting in accordance with sub-clauses 3007.9 – 3007.12 excepting that the number of subsequent cuts shall be increased to 13 during the growing season.

- 4 All areas indicated within the Landscape Inventory as amenity grass shall be subject to medium frequency cutting in accordance with sub-clauses 3007.13 – 3007.16.

Unless otherwise stated in the Landscape Inventory, this regime shall also apply to the following typical areas where they are not already subject to the high frequency regime:

- (i) The full boundary width of all Trunk Roads subject to a 30 mph or 40 mph speed restriction including a 100 metres stretch before and after the speed restriction.
- (ii) Grassed areas on roundabouts within or associated with urban areas and settlements.
- (iii) Adjacent to all lay-bys and bus-stops to a maximum width of 5 metres from the back edge of the lay-by and including 25 metres from the end of the merge and diverge sections, tapering from the maximum 5 metres width behind the lay-by to tie-in with the 1.2 metres swathe cut at the edge of the carriageway, unless otherwise instructed by the Overseeing Organisation.

- 5 All areas indicated within the Landscape Inventory as general grass shall be subject to low frequency cutting in accordance with sub-clause 3007.17 except that:

- (i) First cut after Winter/Spring. The areas shall be cut when the grass reaches a height of 300mm to a height between 80 – 100 mm and the cuttings removed off site.
- (ii) Subsequent cuts. The areas shall be cut to a height of between 80 – 100 mm, at least twice per year during the growing season, and the cuttings evenly dispersed. The height of the grass in these areas shall at no time exceed 300mm.

Unless otherwise stated in the Landscape Inventory the general grass regime above shall also apply to the following typical areas not already subject to the high amenity or amenity regimes:

- (a) A 1.2 metre swathe width measured from the back edge of the carriageway.

This width shall be increased (to encompass the whole verge area) where the remaining grass between the 1.2 metre area and any adjacent boundary (for example a wall, fence, remote footpath or area of planting) is less than 2 metres.
- (b) Grassed central reservations – cuttings from these areas shall be removed from Site.
- (c) Grassed areas within visibility splays.
- (d) Any areas where a varying width swathe cut may be desirable, such as large grassed cutting slopes or the inside of bends.
- (e) A 1.0 metre swathe width shall be cut to both sides of any footpaths remote from the carriageway edge but within the Trunk Road boundary.
- (f) Any grassed area not allocated a specific regime in the Landscape Inventory.

6 All grassed areas indicated within the Landscape Inventory not covered by any of the high, medium or low frequency regimes shall be subject to minimal frequency cutting in accordance with clause 3007.18 except that the cut shall be undertaken in the late autumn and shall be to a height not exceeding 150 mm and such areas shall be cut once during the Second Annual Period and once per two years thereafter.

7 Visibility splays in front of road signs shall be cut in accordance with the requirements for general grass areas. At no point shall any part of the sign board be obscured by grass or any other vegetation.

The extent of cutting shall be in accordance with sub-clause 3007.20.

8 In the locations stated in the Landscape Inventory, grassed banks and ditches shall be cut to a height of between 60 and 80mm, at a frequency of once per year. The arisings shall be dispersed evenly over the sward avoiding blockage of drains and ditches.

APPENDIX 30/8 – WATERING

- 1 The Operating Company shall water all new planting undertaken under this Contract in accordance with clause 3008 at the frequency necessary to ensure satisfactory establishment and healthy growth for the duration of the period of establishment maintenance.

2. Additional watering for trees, shrubs and or grassed areas shall be undertaken by the Operating Company only when the subject of an order from the Overseeing Organisation.

APPENDIX 30/9 – ESTABLISHMENT MAINTENANCE FOR PLANTING

- 1 All planting and planting areas shall be maintained by the Operating Company for the duration of the period of establishment maintenance in accordance with sub-clauses 3009.2 to 3009.25.

The period of establishment maintenance shall be three years minimum or otherwise as consented to in writing by the Overseeing Organisation.

- 2 Stakes, tubes, guards and their ties shall be removed from plants when they are no longer required and before the end of the period of establishment maintenance. Stakes, tubes and guards which are in good enough condition shall be re-used by the Operating Company.

- 3 Where new planting has been undertaken, and where no mulch mats have been used the Operating Company shall apply a translocated herbicide to plant circles of all individual trees and shrubs, and clumps of planting where applicable in accordance with clause 3001 and sub-clause 3002.2 whilst protecting the trees and shrubs from the herbicide.

- 4 The Operation shall include the clearance of vegetation by hand from within the shelters and guards.

This part of the Operation shall be carried out twice (in early Spring and in October) during the first year of the three year period of establishment maintenance and once (in early Spring) during the second year of the period of establishment maintenance.

- 5 Where mulch has been used in individual plant circles or overall planting beds it shall be inspected by the Operating Company once per year in March for the duration of the period of establishment maintenance.

- 6 If the mulch depth shall be less than an even 75 mm, new mulch to sub-clause 3006.55 shall be laid to restore the 75 mm depth.

- 7 Mulch mats and sheet mulch shall be inspected three times per year and re-secured or replaced in accordance with sub-clause 3009.13.

- 8 All new beds of ornamental planting shall be inspected monthly during the growing season with the required maintenance Operations undertaken in accordance with sub-clause 3009.16.

- 9 The soil in ornamental planting beds where the beds are not mulched shall be cultivated in accordance with sub-clause 3009.19.

- 10 The base of all new hedge planting and an area of 300 mm width on each side shall be kept weed free for the first two years of the period of establishing maintenance in accordance with sub-clause 3009.20. During the same period the hedge shall be pruned once each year, between 1 September and 31 January, to encourage the formation of a vigorous, compact and uniform hedge. The current year's growth of prominent new shoots shall be reduced in length by 1/3.

- 11 All new planting of individual trees as defined in sub-clause 3009.24, shall be maintained for the three year period of establishment maintenance in accordance with sub-clause 3009.25.

APPENDIX 30/10 – MAINTENANCE OF ESTABLISHED TREES AND SHRUBS

1. Trees and shrubs shall receive weed control treatment by the Operating Company in accordance with clause 3002 at the frequencies stated in clause 3010.
2. Grass and weed growth within ornamental shrub beds shall be removed by hand or by chemical means.
3. Healthy arisings from pruning, cutting or felling of woody plants shall be treated in accordance with sub-clause 3010.4 paragraphs (ii), (iv), (vi), (vii) and (viii).
4. Treatment in accordance with sub-clause 3010.4 paragraph (ii) shall take place only where there shall be sufficient area within the Trunk Road to spread the chippings out of sight from the road and to a maximum depth of 25 mm.
5. This treatment is not permitted where it is likely that the chippings will affect the growth of desired grass and/or plant species.
6. Chippings shall not be spread on sloping ground where they may inhibit vegetation growth which would otherwise help stabilise the slope.
7. Where arisings are treated in accordance with sub-clause 3010.4 paragraph (viii) the locations selected within the Site area shall not be visible from the road.
8. If it is not possible to deposit the arisings in the general locality of the operations, the arisings shall be removed to a licensed disposal facility.
9. Species grown for coloured stems shall be cut in accordance with sub-clause 3010.8 paragraph (i). The cutting frequency shall be every two years.
10. Overgrown shrubs within all Ornamental Shrub areas shall be treated in accordance with sub-clause 3010.8 paragraph (vii).
11. Tree size shall be categorised using the following method:
 - (i) Key factors relating to tree size/habit:
 - (a) Height of tree – measured in metres from ground level to the apex of the crown.
 - (b) Mean Crown Spread – calculated by adding the measurements in metres of the spread of the tree's crown along the north-south and east-west axes and dividing by two.
 - (c) The measurements referred to in paragraphs (a) and (b) of this sub-clause shall be taken to the nearest whole metre.
 - (d) Branch Density Factor shall be taken as follows: 1.00 for Normal Branch Density 1.25 for Heavy Branch Density.
 - (e) Individual tree species shall be classified as having Normal or Heavy Branch Density in accordance with the following table:

Branch Density Classification of Individual Tree Species	
Normal Branch Density	Heavy Branch Density
Acer species	Carpinus betulus and cultivars
Aesculus species	Crataegus species
Alnus species	Chamaecyparis species
Betula species	Malus species
Castanea species	Populus alba 'Fastigiata'
Fagus species	Populus nigra 'Italica'
Fraxinus species	Prunus 'Amanagowa'
Juglans species	Prunus cerasifera 'Nigra'
Pinus species	Prunus padus and cultivars
Platanus species	Quercus ilex
Populus alba	Quercus robur 'Fastigiata'
Populus nigra	Sorbus species
Populus tremula	Tilia species
Populus balsamifera	Taxus baccata
Prunus avium and cultivars	
Prunus 'Kanzan'	
Pyrus species	
Quercus robur	
Quercus cerris	
Quercus rubra	
Robinia pseudoacacia	
Salix species	
Larix species	

Tree Size Factor = Height x Mean Crown Spread x Branch Density Factor.

Trees shall be categorised in accordance with the table below:

Tree Size Category	Tree Size Factor
A	3 to 34
B	35-70
C	71-125
D	126-200

Tree Size Category	Tree Size Factor
E	201-340
F	341-450
G	451-650

- (ii) To be classed as a tree, vegetation must have a stem diameter of more than 100 mm.
12. Stumps shall be cut as close to the ground as possible or where the tree is growing in a hedge or fence line the stump shall be left level with the top of the hedge or fence.
13. Thinning and coppicing shall be carried out in areas of establishing and maturing woodland where identified as being required through the Operating Company's Inspections and when ordered.
14. Scrub control shall be undertaken where identified as being required through the Operating Company's Inspections and when ordered. Tree and shrub species to be controlled as scrub shall have a stem diameter of less than 75 mm and a height of between 0.75 – 2.5 metres. The specified species shall be cut down to 50 mm above ground level and the plants allowed to re-grow. A translocated herbicide shall be applied during the period of active growth in accordance with clause 3001 Scrub control is required on rock ledges and scree where appropriate.

APPENDIX 30/11 – MANAGEMENT OF WATERBODIES

- 1 The Operating Company shall maintain all water bodies within the Unit in accordance with clause 3011.
- 2 The Operating Company shall inspect all water bodies and associated inlets and outlets within and associated with the Unit in accordance with the requirements of Schedule 7 Part 1.
- 3 The Operating Company shall eliminate injurious weeds as listed in clause 3002 growing within or immediately adjacent to water bodies.
- 4 Where silt is affecting the intended operation of a water body or is likely to have the potential to affect the intended operation of a water body the silt shall be removed in accordance with sub-clause 3011.8.
- 5 The Operating Company shall consult with the Scottish Environmental Protection Agency and any other relevant body prior to undertaking any Operations affecting a water body.
- 6 All reed beds and marginal plants planted as part of the Operations shall be maintained by the Operating Company for the duration of the period of establishment maintenance with any failed or defective plants replaced in accordance with sub-clause 3006.6 -90 inclusive.

All existing reed beds and marginal vegetation shall be inspected twice annually in accordance with sub-clause 3011.9.

APPENDIX 30/12 – SPECIAL ECOLOGICAL MEASURES

1. In February and October each year for the duration of this Contract the Operating Company shall inspect all fencing, tunnels, underpasses, wildlife reflectors and all other provisions for wildlife contained within the Trunk Road network or as listed in the Inventory of Wildlife Mitigation Measures in accordance with sub-clause 3012.5.
2. The Operating Company shall consult and comply with Scottish Natural Heritage in respect of any Operations likely to affect any protected species or area.
3. The Operating Company shall obtain all necessary wildlife licences required for the effective maintenance and management of the Unit including any new Operations to be undertaken through this Contract.

APPENDIX 32/1 - INCIDENT RESPONSE

1 INCIDENT RESPONSE TIME

1.1.1 The response time for attendance at an Incident shall be defined as the time taken from receipt of notification of the Incident by the Operating Company to commencement of appropriate action at the site of the Incident.

1.1.2 Response times shall always be as short as practicable but in any event shall not exceed the maximum times stated in Tables 1.1 and 1.2 of this Appendix.

TABLE 1.1 - RESPONSE TIMES FOR TRUNK ROAD INCIDENT SUPPORT SERVICES

Road Type	Operational Hours	Maximum initial response time	Maximum secondary response time
Designated Strategic Trunk Road Routes	07.00 to 19.00	20 mins	20 mins

TABLE 1.2 - RESPONSE TIMES FOR INCIDENT SUPPORT UNITS

Road Type	Operational Hours	Maximum initial response time	Maximum secondary response time	Maximum Back-Up response time
Motorways and Dual Carriageways	07.00 to 19.00	1 hour	1 hours	24 hours
	19.00 to 07.00	1½ hours	2 hours	24 hours
Other Trunk Roads	07.00 to 19.00	1 hours	1 hours	24 hours
	19.00 to 07.00	1½ hours	2 hours	24 hours

2 INCIDENT SUPPORT VEHICLES

2.1 Vehicle Types

2.1.1 The primary vehicles that are used by the Operating Company for all initial Incident response operations by the Trunk Road Incident Support Service and Incident Support Units shall be as described in Table 2.1 of this Appendix for Type 1 vehicles.

2.1.2 Type 2 vehicles described in table 2.1 may be specified by the Overseeing Organisation for specific routes or response operations.

2.1.3 The general vehicle liveries shall be as given in Appendix 1/75.

2.1.4 The TRISS vehicles shall, in addition, have:

- Class 1 Red Microprismatic diagonal markings alternating with yellow reflective diamond grade stripes on the rear of the vehicle,
- 600mm long 300mm wide alternating Yellow and Black Rectangular 'Battenburg' Pattern in retro-reflective material on the sides of the vehicle, and
- 'TRUNK ROADS INCIDENT SUPPORT' in black capital letters on the rear of the vehicle with the mirror image on the front of the vehicle

TABLE 2.1 – VEHICLE TYPES FOR TRUNK ROAD INCIDENT SUPPORT SERVICE AND INCIDENT SUPPORT UNITS

Vehicle Type	Description	Minimum Equipment Requirements for each vehicle
Type 1	<p>2 wheel drive high roof van powered by a Euro 5 compliant engine with a minimum power of 129PS with automatic transmission and ABS. Gross vehicle weight 3500kg, capable of carrying the equipment detailed in Table 3.1 and performing the duties set out in the Contract.</p> <p>Unglazed rear and nearside loading door, shelving and full height steel bulkhead.</p> <p>Dual passenger seat with three point inertia seat belts.</p> <p>Driver and passengers' air</p>	<p>1 No. mobile CCTV Camera system of a type compliant with the specification contained within Appendix 1/77 (TRISS only).</p> <p>Mobile VMS of a type compliant with the specification contained within Appendix 1/78 (TRISS only).</p> <p>Appropriate type of built-in hands-free kit.</p> <p>Fire extinguisher and first aid kit.</p> <p>Global positioning tracking system (The Operating Company shall supply map based software to monitor vehicle locations, and record dates and times and movements of vehicles. The Operating Company shall supply the relevant Network</p>

Vehicle Type	Description	Minimum Equipment Requirements for each vehicle
	<p>bags.</p> <p>Air conditioning.</p> <p>Drop pin/50mm ball towing equipment.</p> <p>Access steps and grab handles.</p> <p>Reversing bleeper.</p> <p>Handwash station.</p>	<p>Operations provider with a live feed to this data).</p> <p>Two light bars with corner lights, 8 rear lights and eight front lights and twin grill mounted yellow strobes connected into the vehicle electrics to remain functional when the vehicle ignition is off with an internal warning light fitted to indicate when the light bar is operational.</p>
Type 2	<p>4 wheel drive double cab pick-up powered by a Euro 5 compliant engine with a minimum power of 100PS, capable of carrying the equipment detailed in Table 3.1 and performing the duties set out in the Contract.</p> <p>Passenger seat with three point inertia seat belt.</p> <p>Driver and passenger's air bags.</p> <p>Air conditioning.</p> <p>Drop pin/50mm ball towing equipment.</p> <p>Reversing bleeper.</p>	<p>Appropriate type of built-in hands-free kit.</p> <p>Fire extinguisher, first aid kit and a load restraint.</p> <p>Global positioning tracking system (The Operating Company shall supply map based software to monitor vehicle locations, and record dates and times and movements of vehicles. The Operating Company shall supply the relevant Network Operations provider with a live feed to this data).</p> <p>A light bar with twin yellow strobes connected into the vehicle electrics to remain functional when the vehicle ignition is off with an internal warning light fitted to indicate when the light bar is operational.</p>

3 INCIDENT RESPONSE RESOURCES

3.1 General

3.1.1 The Operating Company shall provide the Incident Response Resource specified in Table 3.1 of this Appendix.

TABLE 3.1 EQUIPMENT TO BE CARRIED IN TRUNK ROAD INCIDENT SUPPORT SERVICE AND INCIDENT SUPPORT UNIT VEHICLES

Equipment	Minimum Quantity	
	Vehicle Type 1	Vehicle Type 2
Electronic language translator	1 no.	1 no.
Tow rope	1 no.	1 no.
2 Stroke oil	2 x 1 litre bottles	2 x 1 litre bottles
Rigger Gloves	5 pairs	5 pairs
Lube oil spray	1 no. 400 ml tin	1 no. 400 ml tin
Hard hat	2 no.	2 no.
Diesel Fuel	5 litres in container	5 litres in container
Petrol	5 litres in container	5 litres in container
Fence Nails & Staples	Sufficient	Sufficient
Face Dust Masks	12 no.	12 no.
Paper Towels	Sufficient	Sufficient
De-icer	2 x 500ml	2 x 500ml
Animal Carcass Bags	10 no.	3 no.
Handwipes	Sufficient	Sufficient
Absorbent Granules	6 no. x 2kg bags	2 no. x 2kg bags
Powered debris blower	1 no.	1 no.
Digital Camera	1 no.	1 no.
Reflective waterproof jackets for use by stranded motorists	2 no.	2 no.
Reflective long sleeved vests for use by stranded motorists	-	-
Drain Rods	1 set	1 set
Claw hammer	1 no.	1 no.
Pointing Trowel	1 no.	1 no.
Manhole Lifting Keys	1 set	1 set
Handsaw	1 no.	1 no.
Wire Brush	1 no.	1 no.
Floating Trowel	1 no.	1 no.
Power Saw	1 no.	-
Stone Cutting Discs	6 no.	-
Metal Cutting Discs	6 no.	-
Shovels	2 no.	2 no.
Stiff Brush	1 no.	1 no.
Soft Brush	1 no.	1 no.
Spirit Level	1 no.	1 no.
Chainsaw with PPE	1 no.	-
Punner	1 no.	1 no.
Pickaxe	1 no.	1 no.
Bow Saw	1 no.	1 no.
Foam Ear Plugs	5 sets	5 sets
Safety Goggles	2 pairs	2

Equipment	Minimum Quantity	
	Vehicle Type 1	Vehicle Type 2
Paper Coveralls	4 pairs	4 pairs
Large torch	2 no.	2 no.
Spare batteries for torches	24 no.	24 no.
14lb Sledge hammer	1 no.	1 no.
Stilson wrench	1 no.	1 no.
Galvanised fence wire	1 roll	1 roll
Temporary fence with support	1 roll	-
Sequential road studs with charger and case	2 no. x set of 6	2 no. x set of 6
750 mm traffic cones	30 no.	10 no.
Cone lights	16 no.	6 no.
Spare batteries for cone light	16 no.	6 no.
Men at Work Signs	2 no.	2 no.
Road Narrows Signs	2 no.	2 no.
610 Arrows Signs	2 no.	2 no.
Road Closed Signs	4 no.	2 no.
Flooding Signs	4 no.	2 no.
Diverted Traffic Signs	5 no.	5 no.
Traffic Lights Inoperable Signs	4 no.	4 no.
Pedestrian Demand Unit Covers	8 no.	8 no.

APPENDIX 33/1 – STRUCTURAL INVESTIGATIONS TEST REQUIREMENTS

1 The following types of test may be required:

1.1 Site Surveys/Tests

- (i) half cell potential survey,
- (ii) cover survey,
- (iii) delamination /soundness survey,
- (iv) exposing reinforcement,
- (v) depth of carbonation,
- (vi) resistivity measurement,
- (vii) initial surface absorption,
- (viii) ultrasonic pulse velocity survey, and
- (ix) borescope or endoscope survey.

1.2 Chemical Tests

- (i) acid soluble chloride content,
- (ii) water soluble chloride content,
- (iii) cement content/sulphate content/mix proportion,
- (iv) water/cement ratio,
- (v) alkali content, and
- (vi) alkali silica reaction samples.

1.3 Physical Tests

- (i) visual examination of cores,
- (ii) density and compressive strength,
- (iii) permeability,
- (iv) aggregate grading,
- (v) petrographic examination,
- (vi) micro cracking assessment, and
- (vii) electron microscope examination.

2 **Details of Site Tests**

2.1 **Potential Measurements**

Potential measurements shall be carried out and recorded in the following manner:

- (i) Half cell measurements shall be taken at 500 mm x 500 mm grid centres in areas proposed by the Operating Company and consented to in writing by the Overseeing Organisation.
- (ii) The equipment shall be saturated copper sulphate half cell placed on the concrete surface and connected via a high-impedance voltmeter to the reinforcement.
- (iii) The tests shall be carried out in accordance with the American Society for Testing and Materials C876-09. Two readings shall be taken at each node of the grid and the mean value used. Where the readings differ by more than 20 mV a third reading shall be taken and the mean of the two closest readings used.
- (iv) Ambient conditions and concrete surface temperature shall be recorded together with details of the type of half cell and its most recent calibration check.
- (v) Excavation to expose reinforcement for electrical connections shall be made good in accordance with the requirements of Series 1700.
- (vi) Where appropriate permanent connections shall be made to the reinforcement to facilitate future monitoring of changes in potential.
- (vii) The results shall be presented as a grid of values marked on projected plans or elevations of the areas measured at a scale of 1:50.
- (viii) Potential contours shall also be plotted with colour coding at a scale of 150 with a contour interval of 50 mV.
- (ix) Colour block diagrams are not an acceptable alternative to colour contours.

2.2 **Cover Survey**

2.2.1 Cover surveys shall be carried out using an instrument complying with the requirements of and in the manner described in BS 1881- 204.

The lowest cover detected in each grid rectangle shall be recorded.

2.3 **Delamination/Soundness Survey**

Delamination/soundness surveys shall be carried out and recorded in the following manner:

- (i) A visual survey shall be carried out and concrete defects such as spalling , cracking, crazing, honeycombing, surface deterioration and staining together with previous patching or remedial work shall be recorded.

- (ii) Parts of the concrete which are suspected of being delaminated shall be tested by sounding with a light hammer.
- (iii) The affected area shall be recorded and the results presented in the report.
- (iv) Photographic records of typical defects shall be taken for the report.

2.4 **Exposing Bars**

Reinforcing bars shall be exposed in areas proposed by the Operating Company and consented to in writing by the Overseeing Organisation when the results of the potential tests are available:

- (i) The cut-out shall not be greater than 100 mm diameter.
- (ii) The cover to the bars and the condition of the reinforcement shall be recorded.
- (iii) A photograph shall be taken of each bar and calliper measurements taken to establish the residual cross sectional area.
- (iv) The removal of concrete shall be carried out carefully so that no damage is caused to the reinforcement and over break shall be minimised.

2.5 **Carbonation Tests**

Tests for depth of carbonation using a phenolphthalein indicator as detailed in *Building Research Establishment Information paper IP/6/81 'Carbonation of concrete made with dense natural aggregates'* shall be carried out on core samples drill holes and where concrete is broken out either to examine the bars or connect the potential measuring apparatus to the reinforcement.

2.6 **Resistivity Survey**

Resistivity measurements shall be taken at locations and orientations where the half cell potential test has indicated that corrosion of reinforcing steel is most likely.

The test procedure shall be similar to that used for measuring soil resistivity using four electrodes temporarily attached to the concrete across which measurements of voltage and current shall be taken.

Details of the proposed testing equipment and method shall be proposed by the Operating Company and consented to in writing by the Overseeing Organisation prior to commencing the tests.

2.7 **Initial Surface Absorption**

Initial surface absorption test shall be carried out in accordance with BS 1881 Part 5.

2.8 **Ultrasonic Pulse Velocity Survey**

Ultrasonic pulse velocity surveys shall be carried out using equipment and procedures complying with BS EN 12504-4.

The purpose of this testing is the detection of defects and estimation of the depth of surface cracks using semi-direct or indirect transmission at grid centres not exceeding 150 mm.

The testing shall be carried out by suitably qualified personnel with previous experience in the interpretation of the survey results.

A water-soluble non-staining couplant shall be used and subsequently removed by power washing.

2.9 **Borescope Survey**

Experienced operatives shall be available to carry out borescope investigations.

The borescope shall also be fitted with a measuring graticule and a camera attachment and photographs shall be taken of typical defects.

2.10 **Endoscope Survey**

Experienced operatives shall be made available to carry out endoscope surveys.

The endoscope shall be fitted with a camera attachment and photographs shall be taken of typical defects.

3 **Chemical Tests**

3.1 Chloride content acid and water soluble tests shall be carried out in the following manner:

(i) Dust samples shall be removed from reinforced concrete members using a 20 to 25 mm diameter drill bit and the dust collected by a method described in *TRRL Technical report 'Guide to Testing and Monitoring the durability of Concrete Structures' (by the Concrete Bridge Development Group – 2002)*.

(ii) Dust samples from the chloride drillings shall be taken at different depths into the concrete and shall be collected and stored in different containers for each depth range clearly labelled with the location depth range date and name of operator.

The depth ranges shall be 0 to 30mm, 30 to 60mm, 60 to 90mm and 90 to 120 mm.

Sufficient dust shall be collected at each depth range to enable both acid soluble and water soluble analysis to be carried out.

(iii) Chloride content shall be determined in accordance with BS 1881-124.

Samples from each depth range from each set of drillings shall be analysed for the "total" chloride content using the acid extraction method.

One sample from the 90 to 120mm depth range for each set of drillings shall be analysed for the "free" chloride content using the water extraction method.

Where the sample from the 90 to 120mm depth range are insufficient or unsuitable the "free" chloride analysis may be carried out on a sample obtained from one of the other depth ranges from the same set.

- (iv) Results shall be given in terms of chloride ion by % cement content.

The average cement and sulphate content shall be measured from the analysis of 10% of the drilling samples.

The location of the drillings shall be determined from the potential measurement plots.

The exact position shall be determined to avoid reinforcing steel by locating the steel with a cover meter.

3.2 Cement Content Sulphate Content Mix Proportions Water/Cement Ratio and Alkali Content testing shall be determined in accordance with BS 1881-124 on samples obtained from cores.

3.2.1 Alkali Silica Reaction Samples shall be carried out in the following manner:

- (i) Cores shall be drilled at locations proposed by the Operating Company and consented to in writing by the Overseeing Organisation.

The cores shall be 75mm diameter drilled to a depth of 400mm.

Intact cores at least 300mm long shall be required.

- (ii) Samples taken from the cores shall be tested for susceptibility of the coarse and fine aggregates to alkali silica reaction.

- (iii) The equivalent sodium oxide content shall also be determined for each core. Petrographic examination shall also be carried out as described in this Appendix.

- (iv) If alkali silica reaction is suspected the Operating Company may propose for the written consent of the Overseeing Organisation that the cores be subject to accelerated expansion tests in accordance with the *Concrete Society Technical Report 'Minimising the risk of damage to concrete' (CS TR 30)*, measurements to be continued up to 1 year with interim reports at 3 monthly intervals.

4 Physical Tests

4.1 Examination of cores density and compressive strength tests shall be carried out in accordance with BS EN 12504-1.

Visual examinations shall be carried out on all core samples before preparing the samples for testing.

Density and compressive strength tests shall be carried out on 100mm diameter cores.

- 4.2 Permeability shall be determined by means of the capillary absorption test in accordance with BS 1881-5 on samples from cores.
- 4.3 Aggregate Grading shall be determined in accordance with BS 1881-124 on samples obtained from cores.
- 4.4 Petrographic Examination shall be carried out in the following manner:
- (i) Petrographic Examination shall be carried out in accordance with American Society for Testing and Materials C856-04 'Standard Practice for Petrographic Examination of Hardened Concrete' on sections obtained from 75mm diameter cores,
 - (ii) The sections shall be obtained from the cores taken for expansion tests for alkali-silica reaction, and
 - (iii) Constituent materials shall be identified and a description of the specimen given together with a photograph typically at a magnification of 50 times
- 4.5 Microcracking Assessment shall be carried out in the following manner:
- (i) Selected core samples shall be cleaned of any extraneous debris and air dried in the laboratory.
 - (ii) They shall then be sprayed with a fluorescent penetrant solution (a dispersion of fluorescent particles in an organic liquid).
 - (iii) When the excess solution has drained from the surface the core samples shall be viewed under ultra-violet light.
- 4.6 Electron Microscope Examination shall be carried out in the following manner:
- (i) Where examination of a sample for microcracking alkali silica reaction susceptibility petrographic analysis or any other purpose indicates that some form of deleterious reaction may be present in the concrete the Overseeing Organisation may instruct examination by electron microscope.
 - (ii) Appropriate pieces of the sample which may take the form of thin sections, finely ground sections, off cuts or freshly broken surfaces shall be explored with the electron microscope to confirm the presence of the constituents or products of deleterious reactions and to identify them wherever possible.
 - (iii) A written report shall be submitted with electron micrographs (typically at a magnification of 3500 to 5000 times) and results of analysis of the matrix with the microprobe.

5 Report Requirements

- 5.1 All reports shall be submitted for the approval of the Overseeing Organisation.

5.2 Interim reports shall comply with the following:

- (i) An interim report shall be submitted for each part of a Structure to be investigated within one week of completion of site testing showing the results of all surveys and tests carried out on site. Copies of field measurements with suitable explanatory notes are adequate.
- (ii) Chloride content analysis shall be presented within fourteen days of sampling.
- (iii) Three copies of each interim report is required.

5.3 Final reports shall comply with the following:

- (i) Irrespective of size which shall dictate the number of volumes, the final report shall be submitted in two sections.
- (ii) Section 1 of the final report shall be submitted within three weeks of completion of Site work and shall contain the following information where applicable:
 - (a) A description of the testing programme and tests carried out a presentation of the results in the form outlined below and a summary of the results.
 - (b) The results shall be presented as follows plotted to a scale of 1:50 unless otherwise instructed.

half cell potential/ cover	(i)	tabular
	(ii)	colour coded contour plans/elevations to indicate chloride content distribution of results with a contour interval of 50 mV
delamination/ soundness	(i)	plan/elevation marked with suspect areas
	(ii)	colour print of major Defects
petrographic	(i)	colour prints of each section
	(ii)	detailed description of section with particular reference to alkali silica reaction
ultrasonic pulse	(i)	typical graphs/computer output to demonstrate velocity and interpretation of results
	(ii)	plans/elevations/cross sections to show Defects detected

- | | | |
|---------------------|------|---|
| electron microscope | (i) | electron micrographs |
| | (ii) | detailed description of section together with results of microprobe analysis |
| borescope | (i) | developed elevations of internal surface of holes examined |
| | (ii) | enlarged colour prints of typical Defects |
| endoscope | (i) | plans/elevations/cross sections to show location of fibroscope and direction of view of photographs |
| | (ii) | enlarged colour prints of typical Defects and other photographs |
- (c) All results shall be presented in tabular form and histograms shall be produced where appropriate.
- (iii) Section 2 of the final report shall contain a written discussion and interpretation of the results of the survey and testing with recommendations in writing to the Overseeing Organisation for remedial work.
- (iv) A draft copy of the report shall be submitted for the written consent of the Overseeing Organisation before production of the final report.

6 Addendum Reports

- 6.1 The results of the alkali silica reaction expansion test shall be reported on a 3 monthly basis.
- 6.2 An Addendum Report shall be produced to cover all the expansion test results.

**APPENDIX 50/1 – (SPECIFICATION FOR HIGHWAY WORKS) FORM HA/P1
(MAINTENANCE) PAINT SYSTEM SHEET**

1. CONTRACT TITLE: STRUCTURE NO: GRID REF:									
2. DATE OF ISSUE OF DOCUMENTS TO TENDERERS:									
3. ENVIRONMENT AND ACCESSIBILITY:									
4. EXISTING PROTECTIVE SYSTEM(S): Metal coatings: Paint coatings: Average total thickness (microns):									
5. REQUIRED DURABILITY OF SYSTEM: NO MAINTENANCE: .....YEARS MINOR MAINTENANCE: .....YEARS MAJOR MAINTENANCE:.....YEARS (Ref: NG.5008.5 sub-para (iii))				6. COLOUR OF FINISH:					
7. BILLED AREA		8. PROTECTIVE SYSTEM TYPE: (eg. I (M), II (M), III (M), etc):							
REF: AREA DESCRIPTION:								SURFACE PREPARATION METHOD	
9. PAINT COAT SUMMARY		CONDITION OF SURFACES OF EXISTING SYSTEM AFTER SURFACE PREPARATION							
		Condition:		Condition:		Condition:		Condition:	
COAT & ITEM NO.		Area Ref.		Area Ref.		Area Ref.		Area Ref.	
		mdft	B or AS	mdft	B or AS	mdft	B or AS	mdft	B or AS
1st Coat: Item									
2nd Coat: Item									
3rd Coat: Item									
4th Coat: Item									
MINIMUM TOTAL DFT TO BE OBTAINED									

10. DETAILS				
	1 st Coat	2 nd Coat	3 rd Coat	4 th Coat
Registered Description				
Item No. and Colour				
BBA HAPAS Roads and Bridges Certificate Reference				
Date Registered				
Brand Name and Manufacturer's ref. No.				
Manufacturer's Data Sheet No.				
Minimum dry film thickness (mdft) (µm)				
Maximum local dft (See sub-clause 5012.6) (µm)				
Estimated total volume of paint likely to be used. (litres)				
'A' type testing required? (YES/NO) (See sub-clause 5009.3)				
'B' type testing required? (YES/NO) (See sub-clause 5009.11)				
11. STRIPE COAT(S) DESCRIPTION (Including Item No. and colour)				
12. PATCH COAT(S) DESCRIPTION (Including Item No. and colour)				
13. ADDITIONAL INFORMATION (By Paint Manufacturer)				
14. PAINT MANUFACTURER'S OFFICIAL STAMP:				
15. Mdft (µm) NOTE. The minimum total dry film thickness (mdft) of the paint system, neglecting primers and sealers under 30 microns, shall be 15% greater (to the nearest 25 microns) than the sum of the mdfts of the individual paint coats. For example, if the sum of the mdfts is 270, 15% (ie 40) is added, which gives a total of 310 microns. The nearest 25 microns is 300, as opposed to 325, so the total is 300 microns.			16. APPROVED BY: DATE	

Note:

- 1 The Operating Company shall complete the paint system sheet HA/P1 for maintenance painting of steelwork.

A separate form should be provided for each structure, including CCTV masts, cantilever masts, street lighting columns and bracket arms if appropriate.

2. The compiler shall refer to the notes under the example Appendix 50/1 in the Notes for Guidance on the Specification of Highway Works and National Alterations of the Overseeing Organisation of Scotland.

APPENDIX 50/3 – (SPECIFICATION FOR HIGHWAY WORKS) FORM HA/P2 PAINT DATA SHEET

BBA HAPAS Road & Bridges Certificate Reference and Date:

Manufacturer :

Item No. :

Registered Description :

Brand Name and Reference No. :

Consistency and Method of Application :

Weight per 5 Litres (kg) :

Specific gravity: Colour :

For two-pack paints :

Base: Activator: Mixed components:

Volume Solids % :

For two-pack paints volume solids % for mixed paint:

VOC content g/l (mixed) :

Manufacturer's Minimum Dry Film Thickness Range

Recommended lower mdft :

Recommended upper mdft :

Full Application Instructions :

Mix ratio :

Flash Point :

Temperature		5°C	10°C	20°C	30°C
Drying Times (hours)	Surface Dry				
	Hard Dry				
Overcoating Times (hours)	Minimum				
	Maximum				
Pot Life (hours)					

Cleaning Solvent/thinner :

State effects on Drying Times of Temperatures below 20°C :

Manufacturer's Application Restrictions,

e.g. for Temperatures or Humidity :

Manufacturer's General Recommendations :

Note:

The Operating Company shall complete the paint system sheet HA/P2 for maintenance painting of steelwork.

SHEET 2

PROCEDURES

To be followed closely before despatch of paints to Scientifics Ltd or an approved local paint testing firm:

- 1 Check the specific gravity of each batch of paint.
2. Check the matching of finish colours to BS 4800.
3. Select the required sample, i.e.:
 - (i) 'A' sample – unopened tin.
 - (ii) 'B' sample – 500 ml sample from painter's kettle or from nozzle of airless spray gun in the case of single component coatings or if the check is to be done in situ otherwise for two pack coatings separate samples of the base and the activator must be dispatched to the testing laboratory.
4. List Contract details and details of each set of samples, including the specific gravity of each sample in Sheet 1 SEDD/P3.
5. Send Form HA/P1 Paint System Sheet with Form SEDD/P3 to the following:
 - (i) Scientifics Ltd, 500 London Road, Derby, DE24 8BQ or an approved local paint testing firm.
 - (ii) The Director, Buchanan House, 58 Port Dundas Road, Glasgow ,G4 0HF
6. The Operating Company shall despatch samples to (i) above.

The Operating Company shall label samples correctly, clip lids of tins down securely and send the samples promptly.

Samples shall be labelled with this Contract title, structure name, sample number, and additionally in the case of 'B' samples, item number, manufacturer's reference number, batch number and colour.

Results will be notified by the Director, as soon as they become available.

Note:

- 1 State whether from workshop or site (give name and address)
2. Batch samples comprising unopened tins to be marked A1, A2, etc. Control samples in 0.5 litre tins to be marked B1, B2, etc. Samples No. to run consecutively, i.e. A1 and B1 onwards.
3. Colour reference to BS 4800 to be given, as stated on Form HA/P1 (Maintenance) Paint System Sheet, e.g. 18 B 25.

4. For 'A' samples specific gravity (Sp.G.) to be measured by Inspector from separate tins of the same batch. For 'B' samples Sp.G. to be measured by Inspector when taking samples. Samples will be rejected unless Sp.G. is filled in above by Inspector.
5. If Sp.G. differs appreciably from data sheet do not dispatch 'A' or 'B' samples.
6. Do not use this form and send samples if the client is not the Scottish Government, e.g. for a local authority contract.
7. The Operating Company shall complete the paint system sheet SEDD/P3 for maintenance painting of steelwork.

APPENDIX 62/1 – REQUIREMENTS FOR PROFESSIONAL SERVICES

Requirements for Professional Services Staff

For roles requiring professional qualifications, a non-UK professional qualification awarded by an appropriate engineering institution which, in the opinion of the UK Engineering Council is Chartered Engineer equivalent, may be acceptable to the Scottish Ministers. For non-engineering professional qualifications, evidence of UK equivalence must be provided.

A non-UK academic qualification in an appropriate discipline, which is acknowledged by UK academic institutions to be of equivalent standing, may also be acceptable to the Scottish Ministers. Where non-UK qualifications are proposed, evidence of UK equivalence must be provided. Where a degree in an appropriate discipline is specified, either Masters, Honours or Ordinary level is acceptable.

1 Scheme Manager

1.1 Role

The role of a Scheme Manager shall be the overall management and direction of the Operating Company's staff with overall responsibility to the Scottish Ministers for their activities and deliverables.

1.2 Qualifications

The Scheme Manager shall be a Chartered Engineer awarded by an appropriate UK engineering institution including the Institution of Civil Engineers, the Institution of Structural Engineers, the Institute of Highway Engineers and the Chartered Institution of Highways and Transportation. A non-UK professional qualification awarded by an appropriate engineering institution which in the opinion of the UK Engineering Council is CEng equivalent may also be acceptable to the Scottish Ministers. It is unlikely that anyone with less than 15 years' experience relevant to the position and performance of the role will meet the requirements for this post.

1.3 Key Tasks

The key tasks of a Scheme Manager shall be to:

- (i) manage the relationship between the Operating Company's staff and the Overseeing Organisation, and to ensure that the Scottish Ministers' requirements are satisfied,
- (ii) ensure that the Operating Company's Key Staff fulfil their responsibilities with the required degree of skill care and diligence and to ensure that the necessary Operating Company's Key Staff and resources are properly deployed to meet the Scottish Ministers' requirements,
- (iii) ensure that the Operating Company's staff seek continuous improvement in their processes and effectiveness,
- (iv) manage this Contract in accordance with the Quality Management System including the Quality Plan,
- (v) certification of design,

- (vi) seek and utilise the Overseeing Organisation's feedback on their assessment of performance of the Operating Company's staff,
- (vii) ensure that liaison is maintained between the respective senior management of the Scottish Ministers, the Operating Company and any sub-consultants,
- (viii) monitor and report to the Overseeing Organisation on the performance of the Operations against the time, budget and quality, targets of this Contract and Orders, and
- (ix) ensure that Operating Company's staff are conversant with and understand the relevant Operations required under the provisions of this Contract.

1.4 **Specific Tasks Knowledge and Experience Required**

The specific tasks, knowledge and experience of a Scheme Manager are:

- (i) to present Scheme proposals at value for money workshops and presentations to senior management of Transport Scotland,
- (ii) Trunk Road promotion and the relevant Legislation in particular the Roads (Scotland) Act 1984,
- (iii) Scottish Government procedures for the preparation and publication of the relevant statutory road and compulsory purchase orders,
- (iv) Public Local Inquiry procedures (the Scheme Manager shall have direct experience in appearing as a witness on behalf of the Promoter at Public Local Inquiries),
- (v) Design and specification of major road Schemes using the Design Manual for Road and Bridges and associated documents and, if the subject of an Order, the Scottish Government's Alternative Tendering Initiative,
- (vi) preparation of contract documents for Schemes using the approved forms of procurement referred to in this Contract,
- (vii) monitoring and control of programming and financial aspects of Schemes,
- (viii) implementation of the relevant environmental Legislation and its requirements for Trunk Road Schemes,
- (ix) to assist the Operating Company Representative in presenting Scheme proposals at value for money workshops and presentations to senior management of Transport Scotland. The Scheme Manager will also be required to take the lead in explaining proposals to the general public and other interested/affected parties at public exhibitions and during the course of public consultations during Scheme preparation, and
- (x) possession of a high standard of presentational and communication skills.

2 **Senior Project Engineer**

2.1 **Role**

The role of a Senior Project Engineer shall be the day to day management and direction of the Operating Company's staff with responsibility to the Scheme Manager for their activities and deliverables.

2.2 **Qualifications**

A Senior Project Engineer shall be a Chartered Engineer awarded by an appropriate UK engineering institution including the Institution of Civil Engineers, the Institution of Structural Engineers, the Institute of Highway Engineers and the Chartered Institution of Highways and Transportation or a corporate member of an appropriate engineering institution/organisation acceptable to the Scottish Ministers. It is unlikely that anyone with less than 10 years' experience relevant to the position and performance of the role will meet the requirements for this post. Experience alone will not be acceptable for this role.

2.3 **Key Tasks**

The key tasks of a Senior Project Engineer are to:

- (i) assist the Scheme Manager in the performance of the Scheme Manager's duties under this Contract,
- (ii) liaise with the Overseeing Organisation and implement the requirements of this Contract as set out in this Contract and as amended from time to time by the Scottish Ministers,
- (iii) manage the Operating Company's staff in order that the requirements of this Contract are achieved on time, within budget and to the quality required by the Quality Management System including the Quality Plan,
- (iv) certification of design,
- (v) ensure that the implications of all current Legislation are incorporated in the deliverables under this Contract,
- (vi) ensure that all Operations are carried out to the relevant standards as specified in this Contract, and
- (vii) supervise the procurement of such Operations which require to be sourced externally.

2.4 **Specific Tasks Knowledge and Experience Required**

The specific tasks knowledge and experience required of a Senior Project Engineer are:

- (i) preparation of Road Orders, Schemes and Compulsory Purchase Orders and associated documents and negotiation with affected parties and objectors,

- (ii) the procedural and legislative background to the promotion of road and compulsory purchase orders and the procedural aspects and requirements of Public Local Inquiries and in particular the effects that this shall have on Scheme programming or preparation of Operations,
- (iii) consulting individuals and organisations affected by Trunk Road Schemes,
- (iv) the design and specification of Trunk Roads including the preparation of contract documents for Schemes,
- (v) traffic modelling (including microscopic modelling),
- (vi) environmental and economic assessment,
- (vii) computer aided roads design,
- (viii) practical working knowledge and experience of the Design Manual for Road and Bridges and associated documents and the Manual of Contract Documents for Highway Works,
- (ix) preparation of documentation for ground investigation including the preparation of orders, briefs, statements of intent, reports, and topographical survey contracts,
- (x) procurement of ground, topographic and other investigation contracts, including tender procedures, tender assessment and reporting,
- (xi) translating design requirements into employer's requirements into contracts,
- (xii) preparation of contract documents,
- (xiii) assisting the Director with tender procedures, assessment and reporting for Works Contracts,
- (ix) knowledge of current advertising procedures of the Official Journal of the European Union (OJEU),
- (x) experience of financial control and programme management of Trunk Road Schemes, and
- (xi) knowledge of the relevant environmental Legislation and the impact that its requirements shall have on the activities or programming of Schemes.

3 **Structural Engineer**

3.1 **Role**

A Structural Engineer shall be responsible to the Senior Project Engineer for the production of all design, procedural or other Operations required to secure the preparation or promotion of Schemes.

3.2 **Qualifications**

A Structural Engineer shall:

- (i) be a Chartered Civil or Structural Engineer It is unlikely that anyone with less than seven years' experience (with at least four of these since becoming chartered) in the design and specification of road structures to the Design Manual for Roads and Bridges will meet the requirements for this post. Experience alone will not be acceptable for this role,
- (ii) have extensive experience in the production of outline preliminary and detailed Designs and of the assessment of contractor's design proposals, and
- (iii) have experience in the drafting of the Structural elements of contract documents for both "employer's design" and "Design and Build" contracts.

3.3 **Key Tasks**

The key tasks of a Structural Engineer shall be to provide expert advice support and recommendations on any Structural matters associated with all Design operation or maintenance relating to the Scottish Trunk Road network from time to time as or when required by the Scheme Manager or the Overseeing Organisation or as required in the provision or performance of this Contract. The Structural Engineer shall provide certification of design.

4. **Roads Engineer**

4.1 **Role**

A Roads Engineer shall:

- (i) be responsible to the Senior Project Engineer for the production of all design, procedural or other Operations required to secure the preparation or promotion of Schemes,
- (ii) prepare or promote Schemes,
- (iii) produce road designs, incorporating environmental mitigation measures, where appropriate,
- (iv) prepare statutory orders,
- (v) procure external surveys and services, and
- (vi) ensure the Trunk Roads Design obligations with respect to this Contract are delivered by the Operating Company.

4.2 **Qualifications**

A Roads Engineer shall:

- (i) be a corporate member of the Institution of Civil Engineers, the Institution of Structural Engineers, the Institute of Highway Engineers or the Chartered

Institution of Highways and Transportation or other engineering institution/organisation acceptable to the Scottish Ministers. It is unlikely that anyone with less than seven years' experience of roads Design and specification to the Design Manual for Roads and Bridges and the Manual of Contract Documents for Highway Works will meet the requirements for this post,

- (ii) have experience in traffic modelling and all aspects of computer aided roads Design,
- (iii) have experience in the preparation and publication of draft road and compulsory purchase orders,
- (iv) have knowledge and experience of Scottish Ministers' procedures, and
- (v) have experience in preparing contract documents for road Schemes including "Employer's Requirements" for "Employer's Design" and "Design and build" contracts for major road Schemes.

4.3 **Key Tasks**

The key tasks of a Roads Engineer are to:

- (i) assist the Senior Project Engineer in the performance of the Senior Project Engineer's duties under this Contract,
- (ii) liaise with the Overseeing Organisation as required,
- (iii) supervise junior staff engaged in Design or preparation activities,
- (iv) provide expert advice support and recommendations on any matters associated with all Operations or maintenance relating to the Scottish Trunk Road network from time to time as or when required by the Scheme Manager or the Scottish Ministers or as required in the provision or performance of this Contract,
- (v) ensure that all Operations are undertaken in accordance with current standards as specified in this Contract,
- (vi) ensure compliance with Scottish Ministers' procedures, and
- (vii) procure services that require to be sourced externally.

4.4 **Specific Tasks Knowledge and Experience Required**

The specific tasks knowledge and experience required of a Roads Engineer shall be:

- (i) to assist in the preparation of draft orders and negotiation with affected parties and objectors,
- (ii) to assist in the procedural and legislative background to the promotion of road and compulsory purchase orders and the procedural aspects and requirements of Public Local Inquiries, in particular the effects that this shall have on Scheme programming and preparation of Operations,

- (iii) to assist in consulting individuals and organisations affected by Trunk Road Schemes,
- (iv) the Design and specification of Trunk Roads including the preparation of contract documents for "Employer's Design" and "Design and build" Schemes,
- (v) the Design and specification of Operations Contracts and works,
- (vi) the Design and specification of Accident Investigation and Prevention Schemes including the preparation of route accident reduction plans,
- (vii) traffic modelling (including microscopic modelling), environmental and economic assessment, and computer aided roads Design,
- (viii) practical working knowledge of the Design Manual for Road and Bridges and associated documents and the Specification for Highway Works,
- (ix) preparation of documentation for ground investigation (including the preparation of orders, briefs, statements of intent and report) and topographical survey contracts,
- (x) procurement of ground, topographic and other investigation contracts including tender procedures, tender assessment and reporting,
- (xi) translating Design requirements into employer's requirements,
- (xii) preparation of contract documents, carrying out of Scottish Ministers' tender procedures (including use of the documentation as referred to in Schedule 6 Part 1 of this Contract and if subject of an Order the use of the Alternative Tendering Initiative) assessment and reporting for both "Employer's Design" and "Design and build" form of contract,
- (xiii) knowledge of advertising procedures of the Official Journal of the European Union (OJEU),
- (xiv) experience of financial control and programme management of Trunk Road Schemes, and
- (xv) knowledge of the relevant environmental Legislation and the impact which its requirements shall have on the activities and programming of Schemes.

5. Graduate Engineer

5.1 Role

The role of a Graduate Engineer shall be to assist and support the Operating Company Engineer(s) in the delivery of their tasks.

5.2 Qualifications

A Graduate Engineer shall possess a degree or post-graduate degree in Civil or Structural Engineering or other discipline appropriate to the individual role and

acceptable to the Scottish Ministers, with experience relevant to the provision and performance of this Contract will meet the requirements for this post.

5.3 Key Tasks

The key tasks of a Graduate Engineer shall be to:

- (i) liaise with the Operating Company's staff to ensure issues arising from Operations are fully understood or implemented in accordance with the requirements of this Contract,
- (ii) develop and carry out Designs and document preparation in accordance with this Contract,
- (iii) develop and manage technical studies and investigations,
- (iv) assist in preparing deliverables from the Operating Company including:
 - (a) reports,
 - (b) Design,
 - (c) tender documents including:
 - (i) drawings,
 - (ii) calculations,
 - (iii) specifications,
 - (iv) bills of quantities, and
 - (v) Hold Points,
 - (d) surveys, and
 - (e) to manage information distribution to and from the Operating Company.

6. Senior Technician

6.1 Role

The role of a Senior Technician shall be to support the Operating Company's technical team.

6.2 Qualifications

A Senior Technician shall be an Incorporated Engineer or possess an academic qualification in an appropriate discipline recognised by the UK Engineering Council as an exemplifying qualification for Incorporated Engineer and acceptable to the Scottish Ministers. It is unlikely that anyone with less than five years' experience relevant to the position and performance of the role will meet the requirements for this post.

6.3 **Key Tasks**

The key tasks of a Senior Technician shall be:

- (i) to liaise with colleagues on technical issues,
- (ii) to liaise with colleagues to ensure issues arising from Operations are fully understood or implemented in accordance with the requirements of this Contract,
- (iii) to develop Designs and document preparation in accordance with this Contract,
- (iv) to assist in preparing deliverables from the Operating Company including:
 - (a) reports,
 - (b) Design,
 - (c) tender documents including:
 - (i) drawings,
 - (ii) calculations,
 - (iii) specifications,
 - (iv) bills of quantities,
 - (v) Hold Points, and
 - (vi) schedules,
 - (d) surveys, and
 - (e) managing information distribution to and from the Operating Company.

7. **Technician**

7.1 **Role**

The role of a Technician shall be to support the Operating Company's technical team.

7.2 **Qualifications**

A Technician shall be an Engineering Technician or possess a post secondary academic qualification in an appropriate discipline acceptable to the Scottish Ministers. It is unlikely that anyone with less than two years' experience relevant to the position and performance of the role will meet the requirements for this post.

7.3 **Key Tasks**

The key tasks of a Technician shall be:

- (i) to liaise with colleagues on technical issues,
- (ii) to liaise with colleagues to ensure issues arising from Operations are fully understood or implemented in accordance with the requirements of this Contract,
- (iii) to develop Designs and document preparation in accordance with this Contract,
- (iv) to assist in preparing deliverables from the Operating Company including:
 - (a) reports,
 - (b) Design,
 - (c) tender documents including:
 - (i) drawings,
 - (ii) calculations,
 - (iii) specifications,
 - (iv) bills of quantities,
 - (v) Hold Points, and
 - (vi) schedules,
 - (d) surveys, and
 - (e) managing information distribution to and from the Operating Company.

8. **Junior Technician**

8.1 **Role**

The role of a Junior Technician shall be to support the Operating Company's technical team.

8.2 **Qualifications**

A Junior Technician shall be an Engineering Technician or Student Engineer, including summer student and undergraduate course student placement, with experience relevant to the position and performance of the role.

8.3 **Key Tasks**

The key tasks of a Junior Technician shall be:

- (i) to liaise with colleagues on technical issues,

- (ii) to liaise with colleagues to ensure issues arising from Operations are fully understood or implemented in accordance with the requirements of this Contract,
- (iii) to develop designs and document preparation in accordance with this Contract,
- (iv) to assist in preparing deliverables from the Operating Company including:
 - (a) reports,
 - (b) designs,
 - (c) tender documents including:
 - (i) drawings,
 - (ii) calculations,
 - (iii) specifications,
 - (iv) bills of quantities,
 - (v) Hold Points, and
 - (vi) schedules,
 - (d) surveys, and
 - (e) managing information distribution to and from the Operating Company.

9. Principal Specialist

9.1 Role

The role of a Principal Specialist shall be to provide expert advice, support and recommendations on any matters associated with traffic measurement, geotechnical surveys, topographical surveys, environmental obligations and legislation or landscaping obligations and legislation in terms of analysis and verification related to this Contract.

9.2 Qualifications

A Principal Specialist shall be a Chartered Engineer or hold a recognised professional qualification or high level corporate membership of a professional organisation appropriate to the specialist role. A Principal Specialist shall hold one or more qualifications from the following non-exhaustive list including Fellow of the Institute of Environmental Management & Assessment, Fellow of the Institution of Water and Environmental Management, Chartered Environmentalist, Chartered Geologist, Fellow of the Landscape Institute, Chartered Member of the Landscape Institute or professional qualifications from other institutions of equal standing relevant to surveyors, architects, builders, foresters and ecologists as appropriate to the specialist role and acceptable to the Scottish Ministers. It is unlikely that anyone

with less than 15 years' experience relevant to the position and performance of the role will meet the requirements for this post.

9.3 Key Tasks

- (a) Key tasks for a Principal Traffic Measurement and Economics Specialist shall be to:
- (i) undertake sufficient checks on the traffic measurement data,
 - (ii) liaise with the Scheme Manager on issues arising from traffic measurement and analysis,
 - (iii) liaise with the Operating Company's staff to ensure issues arising from traffic measurement and analysis are fully understood or implemented in accordance with the requirements of this Contract, and
 - (iv) certification of design.
- (b) Key tasks for a Principal Geotechnical Specialist shall be to:
- (i) undertake sufficient checks on the geotechnical surveys and analysis,
 - (ii) develop and manage geotechnical studies and ground investigations,
 - (iii) prepare geotechnical deliverables,
 - (iv) liaise with the Scheme Manager on issues arising from geotechnical measurement, analysis and reporting,
 - (v) liaise with the Operating Company's staff to ensure issues arising from:
 - (a) topographical surveys,
 - (b) measurement,
 - (c) analysis, and
 - (d) reporting,are fully understood or implemented in accordance with the requirements of this Contract, and
 - (vi) certification of design,
- (c) Key tasks for a Principal Environmental Specialist shall be to:
- (i) provide expert advice, support and recommendations on any matters associated with the Design operation or maintenance of the Scottish Trunk Road network that have environmental impact implications from time to time as or when required by the Scheme

Manager or the Overseeing Organisation or as required in the provision and performance of this contract,

- (ii) develop and manage environmental studies,
 - (iii) undertake sufficient checks on the environmental studies,
 - (iv) prepare environmental study deliverables,
 - (v) liaise with the Scheme Manager on issues arising from:
 - (a) environmental studies,
 - (b) measurement,
 - (c) analysis, and
 - (d) reporting,
 - (vi) liaise with the Operating Company's staff to ensure issues arising from:
 - (a) environmental studies,
 - (b) measurement,
 - (c) analysis, and
 - (d) reporting,
- are fully understood or implemented in accordance with the requirements of this Contract, and

(vii) certification of design,

(d) Key tasks for a Principal Landscaping Specialist (Landscape Architect) shall be to:

- (i) provide expert advice, support and recommendations on any matters associated with the Design operation or maintenance of landscaping on the Scottish Trunk Road network that have environmental impact implications from time to time as or when required by the Operating Company Representative or the Overseeing Organisation or as required in the provision and performance of this contract,
- (ii) develop and manage the:
 - (a) Landscape Action Plan,
 - (b) landscaping studies, and
 - (c) reporting,

- (iii) undertake sufficient checks on the:
 - (a) Landscape Action Plan,
 - (b) landscaping studies, and
 - (c) reporting,
- (iv) Prepare the:
 - (a) Landscape Action Plan,
 - (b) landscaping studies, and
 - (c) reporting deliverables,
- (v) liaise with the Scheme Manager on issues arising from:
 - (a) landscaping studies,
 - (b) measurement
 - (c) analysis, or
 - (d) reporting,
- (vi) liaise with the Operating Company's staff to ensure issues arising from:
 - (a) landscaping studies,
 - (b) measurement,
 - (c) analysis, or
 - (d) reporting,

are fully understood or implemented in accordance with the requirements of this Contract, and
- (vii) certification of design,

10. Senior Specialist

10.1 Role

The role of a Senior Specialist shall be to provide expert advice support and recommendations on any matters associated with traffic measurement, geotechnical surveys, topographical surveys, environmental obligations and legislation or landscaping obligations and legislation in terms of analysis and verification related to this Contract.

10.2 Qualifications

A Senior Specialist shall be a Chartered Engineer or hold a recognised professional qualification or corporate membership of a professional organisation appropriate to the specialist role. A Senior Specialist shall hold one or more qualifications from the following non-exhaustive list including Member of the Institute of Environmental Management & Assessment, Member of the Institution of Water and Environmental Management, Chartered Environmentalist, Chartered Geologist, Chartered Member of the Landscape Institute or professional qualifications from other institutions of equal standing relevant to surveyors, architects, builders, foresters and ecologists as appropriate to the specialist role and acceptable to the Scottish Ministers. It is unlikely that anyone with less than 10 years' experience relevant to the position and performance of the role will meet the requirements for this post.

10.3 Key Tasks

- (i) Key tasks for a Senior Traffic Measurement and Economics Specialist shall be to:
 - (a) undertake sufficient checks on the traffic measurement data,
 - (b) liaise with the Scheme Manager on issues arising from traffic measurement and analysis, and
 - (c) liaise with the Operating Company's staff to ensure issues arising from traffic measurement and analysis are fully understood or implemented in accordance with the requirements of this Contract.

- (ii) Key tasks for a Senior Geotechnical Specialist shall be to:
 - (a) undertake sufficient checks on the geotechnical surveys and analysis,
 - (b) develop and manage geotechnical studies and ground investigations,
 - (c) Liaise with the scheme manager on issues arising from:
 - (i) geotechnical measurement,
 - (ii) analysis, and
 - (iii) reporting,
 - (d) liaise with the Operating Company's staff to ensure issues arising from:
 - (i) geotechnical measurement,
 - (ii) analysis, and
 - (iii) reporting,

are fully understood or implemented in accordance with the requirements of this Contract.

- (iii) Key tasks for a Senior Topographical Specialist shall be to:
 - (a) undertake sufficient checks on the topographical surveys analysis,
 - (b) develop and manage topographical studies,
 - (c) prepare topographical survey deliverables,
 - (d) liaise with the Scheme Manager on issues arising from:
 - (i) topographical surveys,
 - (ii) measurement,
 - (iii) analysis, and
 - (iv) reporting,
 - (e) liaise with the Operating Company's staff to ensure issues arising from:
 - (i) topographical surveys,
 - (ii) measurement,
 - (iii) analysis, and
 - (iv) reporting,

are fully understood or implemented in accordance with the requirements of this Contract.

- (iv) Key tasks for a Senior Environmental Specialist shall be to:
 - (a) provide expert advice, support and recommendations on any matters associated with the Design operation or maintenance of the Scottish Trunk Road network that have environmental impact implications from time to time as or when required by the Scheme Manager or the Overseeing Organisation or as required in the provision and performance of this contract,
 - (b) develop and manage environmental studies,
 - (c) undertake sufficient checks on the environmental studies,
 - (d) prepare environmental study deliverables,
 - (e) liaise with the Scheme Manager on issues arising from:
 - (i) environmental studies,
 - (ii) measurement,

- (iii) analysis, or
 - (iv) reporting,
 - (f) liaise with the Operating Company's staff to ensure issues arising from:
 - (i) environmental studies,
 - (ii) measurement,
 - (iii) analysis, or
 - (iv) reporting,

are fully understood or implemented in accordance with the requirements of this Contract.

- (v) Key tasks for a Senior Landscaping Specialist (Landscape Architect) shall be to:
 - (a) provide expert advice, support and recommendations on any matters associated with the Design operation or maintenance of landscaping on the Scottish Trunk Road network that have environmental impact implications from time to time as or when required by the Operating Company Representative or the Overseeing Organisation or as required in the provision and performance of this contract,
 - (b) develop and manage landscaping studies and reporting,
 - (c) undertake sufficient checks on the landscaping studies and reporting,
 - (d) Prepare landscaping study or reporting deliverables,
 - (e) liaise with the Scheme Manager on issues arising from:
 - (i) landscaping studies,
 - (ii) measurement,
 - (iii) analysis, or
 - (iv) reporting,
 - (f) liaise with the Operating Company's staff to ensure issues arising from:
 - (i) landscaping studies,
 - (ii) measurement,
 - (iii) analysis, or

(iv) reporting,

are fully understood or implemented in accordance with the requirements of this Contract.

11 Specialist

11.1 Role

The role of a Specialist shall be to provide expert advice support and recommendations on any matters associated with traffic measurement, geotechnical surveys, topographical surveys, environmental obligations and legislation or landscaping obligations and legislation in terms of analysis and verification related to this Contract.

11.2 Qualifications

A Specialist shall be a Chartered Engineer or hold a recognised professional qualification or corporate membership of a professional organisation appropriate to the specialist role. A Specialist shall hold one or more qualifications from the following non-exhaustive list including Member of the Institute of Environmental Management & Assessment, Member of the Institution of Water and Environmental Management, Chartered Environmentalist, Chartered Geologist, Member of the Landscape Institute, Chartered Membership of the Landscape Institute or professional qualifications from other institutions of equal standing relevant to surveyors, architects, builders, foresters and ecologists as appropriate to the specialist role and acceptable to the Scottish Ministers. It is unlikely that anyone with less than five years' experience relevant to the position and performance of the role will meet the requirements for this post.

11.3 Key Tasks

- (a) Key tasks for a Traffic Measurement and Economics Specialist shall be to:
- (i) undertake sufficient checks on the traffic measurement data,
 - (ii) liaise with the Scheme Manager on issues arising from traffic measurement and analysis, and
 - (iii) liaise with the Operating Company's staff to ensure issues arising from traffic measurement and analysis are fully understood or implemented in accordance with the requirements of this Contract.
- (b) Key tasks for a Geotechnical Specialist shall be to:
- (i) undertake sufficient checks on the geotechnical surveys and analysis,
 - (ii) develop and manage geotechnical studies and ground investigations,
 - (iii) prepare geotechnical deliverables,

- (iv) Liaise with the scheme manager on issues arising from:
 - (a) geotechnical measurement,
 - (b) analysis, and
 - (c) reporting,
- (v) liaise with the Operating Company's staff to ensure issues arising from:
 - (a) geotechnical measurement,
 - (b) analysis and
 - (c) reporting,

are fully understood or implemented in accordance with the requirements of this Contract.

- (c) Key tasks for a Topographical Specialist shall be to:
 - (i) undertake sufficient checks on the topographical surveys analysis,
 - (ii) develop and manage topographical studies,
 - (iii) prepare topographical survey deliverables,
 - (v) liaise with the Scheme Manager on issues arising from:
 - (a) topographical surveys,
 - (b) measurement,
 - (c) analysis, and
 - (d) reporting,
 - (vi) liaise with the Operating Company's staff to ensure issues arising from:
 - (a) topographical surveys,
 - (b) measurement,
 - (c) analysis, and
 - (d) reporting,

are fully understood or implemented in accordance with the requirements of this Contract.

- (d) Key tasks for an Environmental Specialist shall be to:
- (i) provide expert advice, support and recommendations on any matters associated with the Design operation or maintenance of the Scottish Trunk Road network that have environmental impact implications from time to time as or when required by the Scheme Manager or the Overseeing Organisation or as required in the provision and performance of this contract,
 - (ii) develop and manage environmental studies,
 - (iii) undertake sufficient checks on the environmental studies,
 - (iv) prepare environmental study deliverables,
 - (v) liaise with the Scheme Manager on issues arising from:
 - (a) environmental studies,
 - (b) measurement,
 - (c) analysis, or
 - (d) reporting,
 - (vi) liaise with the Operating Company's staff to ensure issues arising from:
 - (a) environmental studies,
 - (b) measurement,
 - (c) analysis, or
 - (d) reporting,
- are fully understood or implemented in accordance with the requirements of this Contract.
- (e) Key tasks for a Landscaping Specialist (Landscape Architect) shall be to:
- (i) provide expert advice, support and recommendations on any matters associated with the Design operation or maintenance of landscaping on the Scottish Trunk Road network that have environmental impact implications from time to time as or when required by the Operating Company Representative or the Overseeing Organisation or as required in the provision and performance of this contract,
 - (ii) develop and manage landscaping studies and reporting,
 - (iii) undertake sufficient checks on the landscaping studies and reporting,
 - (iv) Prepare landscaping study or reporting deliverables,

- (v) liaise with the Scheme Manager on issues arising from:
 - (a) landscaping studies,
 - (b) measurement,
 - (c) analysis, or
 - (d) reporting,
- (vi) liaise with the Operating Company's staff to ensure issues arising from:
 - (a) landscaping studies,
 - (b) measurement,
 - (c) analysis, or
 - (d) reporting,

are fully understood or implemented in accordance with the requirements of this Contract.

12 Junior Specialist

12.1 Role

The role of a Junior Specialist shall be to provide expert advice support and recommendations on any matters associated with traffic measurement, geotechnical surveys, topographical surveys, environmental obligations and legislation or landscaping obligations and legislation in terms of analysis and verification related to this Contract.

12.2 Qualifications

A Junior Specialist shall be a Graduate in the appropriate discipline or hold a recognised professional qualification or be a member of a professional organisation appropriate to the specialist role and acceptable to the Scottish Ministers. It is unlikely that anyone with less than one years' experience relevant to the position and performance of the role will meet the requirements for this post.

12.3 Key Tasks

- (a) Key tasks for a Junior Traffic Measurement and Economics Specialist shall be to:
 - (i) undertake sufficient checks on the traffic measurement data,
 - (ii) liaise with the Scheme Manager on issues arising from traffic measurement and analysis, and
 - (iii) liaise with the Operating Company's staff to ensure issues arising from traffic measurement and analysis are fully understood or implemented in accordance with the requirements of this Contract.

- (b) Key tasks for a Junior Geotechnical Specialist shall be to:
- (i) undertake sufficient checks on the geotechnical surveys and analysis,
 - (ii) develop and manage geotechnical studies and ground investigations,
 - (iii) prepare geotechnical deliverables,
 - (iv) Liaise with the scheme manager on issues arising from:
 - (a) geotechnical measurement,
 - (b) analysis, and
 - (c) reporting,
 - (v) liaise with the Operating Company's staff to ensure issues arising from:
 - (a) geotechnical measurement,
 - (b) analysis, and
 - (c) reporting,
- are fully understood or implemented in accordance with the requirements of this Contract.
- (c) Key tasks for a Junior Topographical Specialist shall be to:
- (i) undertake sufficient checks on the topographical surveys analysis,
 - (ii) develop and manage topographical studies,
 - (iii) prepare topographical survey deliverables,
 - (v) liaise with the Scheme Manager on issues arising from:
 - (a) topographical surveys,
 - (b) measurement,
 - (c) analysis, and
 - (d) reporting,
 - (vi) liaise with the Operating Company's staff to ensure issues arising from:
 - (a) topographical surveys,
 - (b) measurement,

(c) analysis, and

(d) reporting,

are fully understood or implemented in accordance with the requirements of this Contract.

(d) Key tasks for a Junior Environmental Specialist shall be to:

(i) provide expert advice, support and recommendations on any matters associated with the Design operation or maintenance of the Scottish Trunk Road network that have environmental impact implications from time to time as or when required by the Scheme Manager or the Overseeing Organisation or as required in the provision and performance of this contract,

(ii) develop and manage environmental studies,

(iii) undertake sufficient checks on the environmental studies,

(iv) prepare environmental study deliverables,

(v) liaise with the Scheme Manager on issues arising from:

(a) environmental studies,

(b) measurement,

(c) analysis, or

(d) reporting,

(vi) liaise with the Operating Company's staff to ensure issues arising from:

(a) environmental studies,

(b) measurement,

(c) analysis, or

(d) reporting,

are fully understood or implemented in accordance with the requirements of this Contract.

(e) Key tasks for a Junior Landscaping Specialist shall be to:

(i) provide expert advice, support and recommendations on any matters associated with the Design operation or maintenance of landscaping on the Scottish Trunk Road network that have environmental impact implications from time to time as or when required by the Operating Company Representative or the Overseeing Organisation or as required in the provision and performance of this contract,

- (ii) develop and manage landscaping studies and reporting,
- (iii) undertake sufficient checks on the landscaping studies and reporting,
- (iv) Prepare landscaping study or reporting deliverables,
- (v) liaise with the Scheme Manager on issues arising from:
 - (a) landscaping studies,
 - (b) measurement,
 - (c) analysis, or
 - (d) reporting,
- (vi) liaise with the Operating Company's staff to ensure issues arising from:
 - (a) landscaping studies,
 - (b) measurement,
 - (c) analysis, or
 - (d) reporting,

are fully understood or implemented in accordance with the requirements of this Contract.

13 Lighting/Electrical Engineer

13.1 Role

The role of a Lighting/Electrical Engineer shall be to ensure that road lighting, including traffic signs, traffic signals, traffic management systems, temporary mobile equipment requiring electrical energy and any other electrical equipment and apparatus installed within the Unit (and to such extent electrical circuits that may extend beyond the Unit), are continuously managed and maintained to a high standard.

13.2 Qualifications

A Lighting/Electrical Engineer shall be a corporate member of the Institution of Lighting Engineers or Institution of Engineering and Technology. It is unlikely that anyone with less than seven years' experience in the design, maintenance and operation of lighting systems and other electrical equipment and apparatus relevant to the provision and performance of this Contract will meet the requirements for this post. In addition the Lighting/Electrical Engineer shall have a thorough understanding of health and safety requirements for the relevant subject areas, including Design, and possess at least a basic knowledge of quality assurance. A Lighting/Electrical Engineer shall have such skills to be able to manage the operation of IRIS and associated electrical energy inventory.

13.3 Key Tasks

Key tasks of a Lighting/Electrical Engineer shall be to:

- (i) manage the installation, operation and maintenance of electrical apparatus and associated structural supports, network cabling and wiring for lighting, traffic signs, traffic signals, traffic management systems, traffic safety systems, weather stations, temporary mobile equipment requiring electrical energy and any other electrical equipment and apparatus installed within the Unit (and to such extent electrical circuits extend beyond the Unit),
- (ii) ensure the competence of the personnel to whom the work is issued in accordance with the appropriate Code of Practice,
- (iii) manage the maintenance of all electrical and all associated structural supports data on IRIS and manage the maintenance of the electrical energy inventory and delivery of required reporting and ensure all necessary records are provided and maintained,
- (iv) develop and manage such risk assessment regimes as detailed in document referenced within TD23/99 of the Design Manual for Road and Bridges and appropriate Code of Practice,
- (v) develop and maintain a good working relationship with Lighting/Electrical Engineers of adjoining Units, Traffic Scotland and Local Authorities and other third parties who may have shared lighting operational needs or who share use of electrical installations,
- (vi) provide expert advice support and recommendations on any matters associated with the Design, installation, maintenance and repair of electrical systems in terms of:
 - (a) relevant Health and Safety requirements,
 - (b) diagnosis and correction of faults,
 - (c) technical and functional information,
 - (d) assurance that electrical systems are appropriate for the working conditions,
 - (e) installations and connections for/to electrical systems and components,
 - (f) inspecting and testing,
 - (g) execution of emergency work, and
 - (h) energy saving management.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 9 PART 3

SPECIFICATION FOR OPERATIONS (3)

CONTENTS

Page No.

Standard Drawings supplied to each Tenderer

1

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 9 PART 3

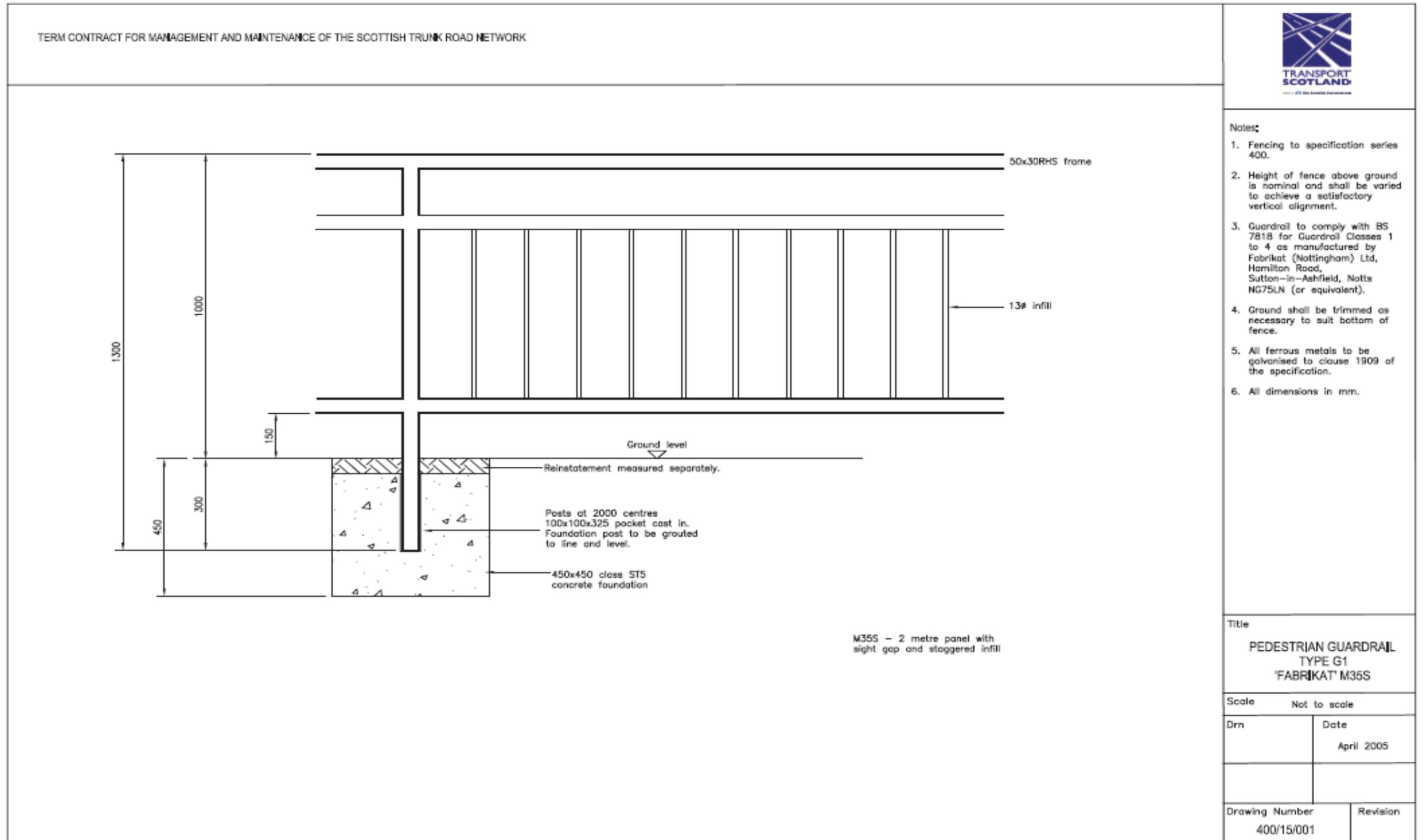
SPECIFICATION FOR OPERATIONS (3)

Standard Drawings supplied to each Tenderer

LIST OF DRAWINGS IN THIS ANNEX	
Drawing No.	Title
400/15/001	Pedestrian Guard Rail Type G1
500/01/337-379	Drainage and Service Ducts – Duct Groups D1 - D4
500/05/160-166	Drainage and Service Ducts – Drawpits DP1- DP2
500/05/169-178	Drainage and Service Ducts – Gully Types G1- G4
500/06/001	Headwall Type 1 – Brickwork
500/06/010	Headwall Type 1 – Mass Concrete
500/06/019	Headwall Type 3 – Reinforced Concrete
500/16/001-012	Protection of Public Utility Apparatus and Drainage – Protection Type P1 – P4
1100/01/001-019	Kerb Types K1 to K4
1100/01/025-037	Kerb Types K5 to K7
1100/01/040	Kerb Types K8 and K9
1100/01/043	Kerb Types K10 and K11
1100/01/046	Kerb Types K12 and K13
1100/01/052	Kerb Types K16 and K17
1100/01/061-082	Kerb Types K20 to K24
1100/01/085-115	Channel Types C1-C6
1100/01/118	Edging Type E1
1100/01/136-139	Kerb Type Quadrants Q1 and Q2
1100/02/124-127	Combined Kerb and Drainage System Types DK1 and DK2
1100/02/130	Combined Kerb and Drainage System Types DK3
1100/02/133	Combined Kerb and Drainage System Outfall Types DK4
1100/05/001-010	Footways, Footpaths, Paved Areas and Cycleways Types F1 to F4
1100/05/013-016	Footways, Footpaths, Paved Areas and Cycleways Types F5 and F6
1100/05/019-028	Footways, Footpaths, Paved Areas and Cycleways Types F7 to F10

LIST OF DRAWINGS IN THIS ANNEX	
Drawing No.	Title
1100/05/031-040	Footways, Footpaths, Paved Areas and Cycleways Types F11 to F14
1100/05/043-052	Footways, Footpaths, Paved Areas and Cycleways Types F15 to F18
1100/05/055-064	Footways, Footpaths, Paved Areas and Cycleways Types F19 to F22
1100/05/067-073	Footways, Footpaths, Paved Areas and Cycleways Types F23 to F25
1100/05/085 & 088	Recessed Gullies GS1 and GS2 with Kerb Surround
1200/07/001	Precast Concrete Bollard Type B1
1200/08/001	Verge hazard marker posts Type VM1
1200/08/002	Verge hazard marker posts Type VM2A and VM2B
1200/09/001	Edge of Carriageway Hazard Markers Type ECB1
1200/10/1	Details for Sign Post Foundation Sheet 1 of 2
1200/10/2	Details for Sign Post Foundation Sheet 2 of 2
MCX 0138 (Modified)	Typical Access Steps

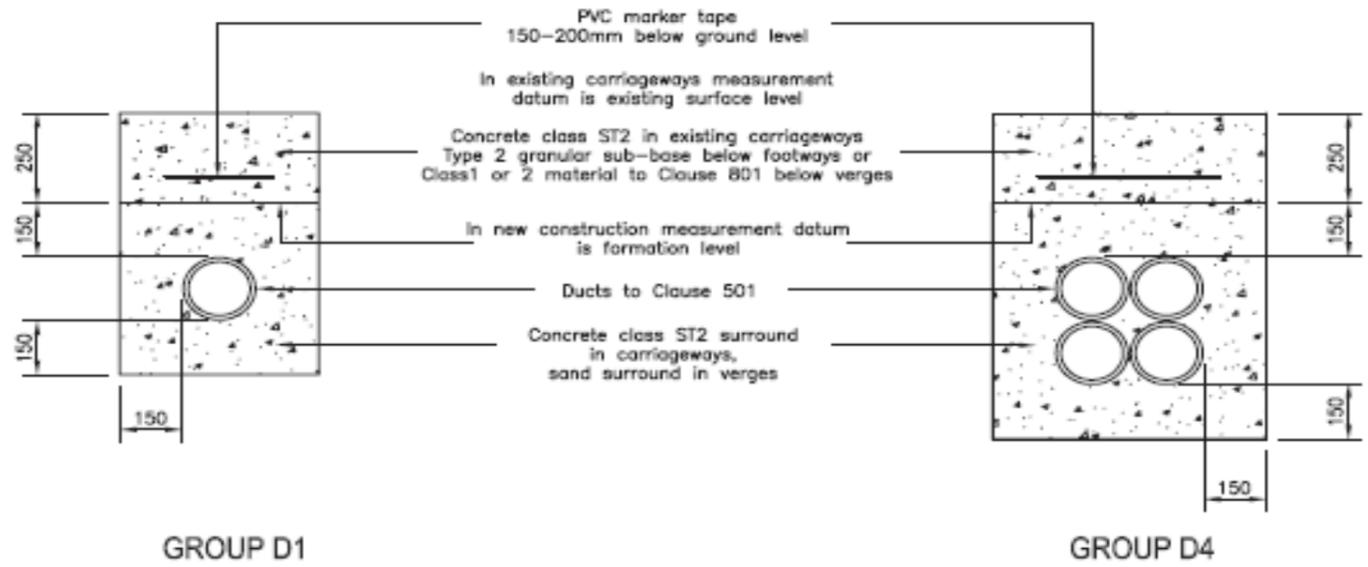
Drawing: 400/15/001 – Pedestrian Guard Rail Type G1



Drawing: 500/01/337-379 – Drainage and Service Ducts – Duct Groups D1 – D4



TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK

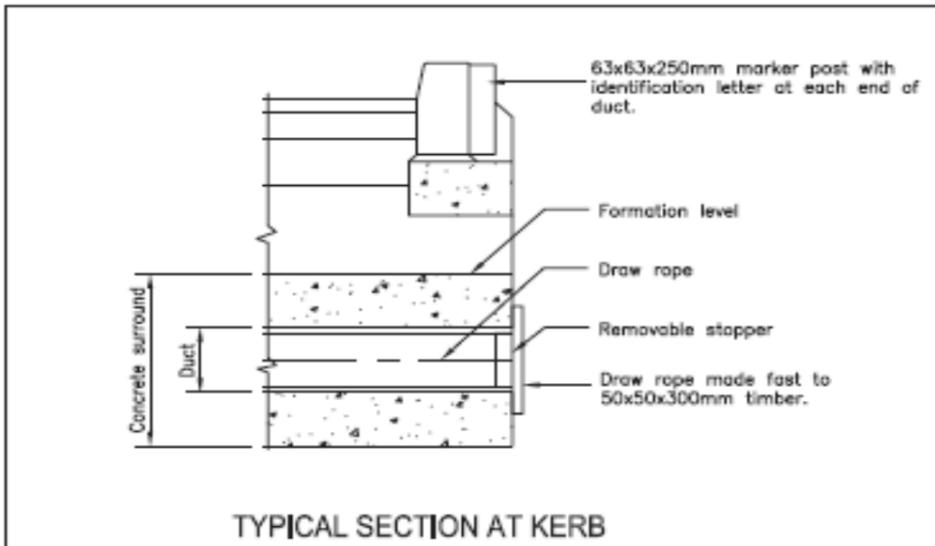


GROUP D1

GROUP D4

DUCT GROUP

D1	1 No.	DUCT
D2	2 No.	– NOT SHOWN
D3	3 No.	– NOT SHOWN
D4	4 No.	DUCTS



TYPICAL SECTION AT KERB

- Notes:
1. Ducts to comply with specification series 500.
 2. Diameter of ducts to be specified in the contract.
 3. Coloured ducts to be used where required.
 4. No bends in 50mm dia ducts. Maximum bend in 100mm dia duct to be 45°.
 5. For street lighting ducts shall be orange polyethylene with the words "STREET LIGHTING" printed uppermost.

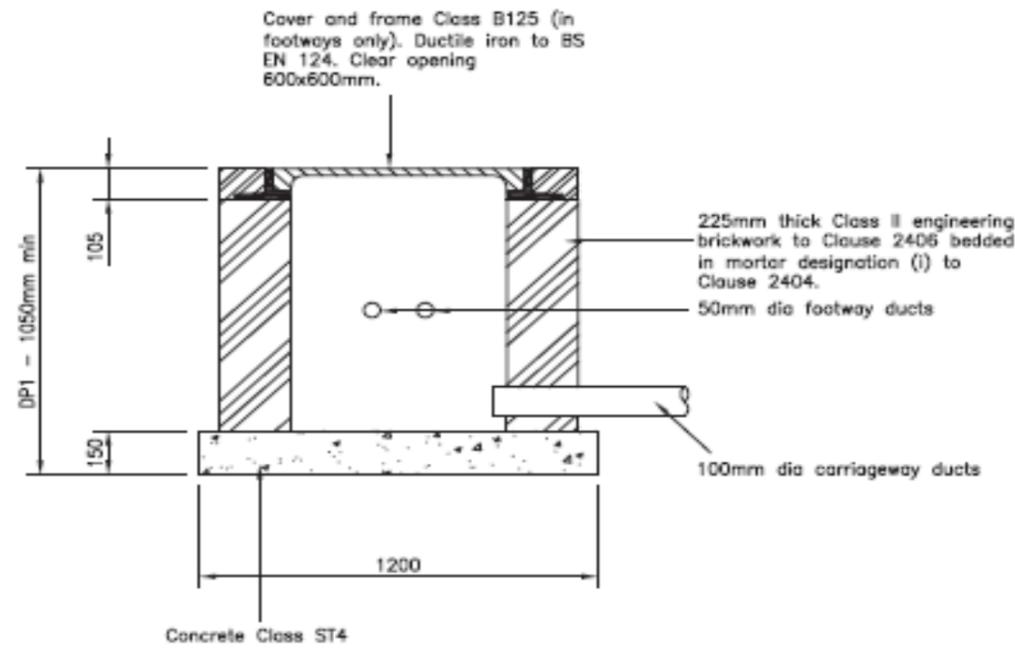
Title	
DRAINAGE AND SERVICE DUCTS DUCT GROUP D1 - D4	
Scale Not to scale	
Drn	Date April 2005
Drawing Number 500/01/337-379	
Revision	

Drawing: 500/05/160-166 – Drainage and Service Ducts – Drawpits DP1 – DP2



TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK

Notes:
 1. Top of drawpit base to be 50mm below invert of lowest duct.



DRAWPIT TYPE

- DP1 DRAWPIT WITH CARRIAGEWAY DUCTS
- DP2 DRAWPIT WITH FOOTWAY DUCTS ONLY

Title	
DRAINAGE AND SERVICE DUCTS DRAWPITS DP1 AND DP2	
Scale Not to scale	
Drn	Date April 2005
Drawing Number 500/05/160-166	
Revision	

Drawing: 500/05/169-178 – Drainage and Service Ducts – Gully Types G1 – G4

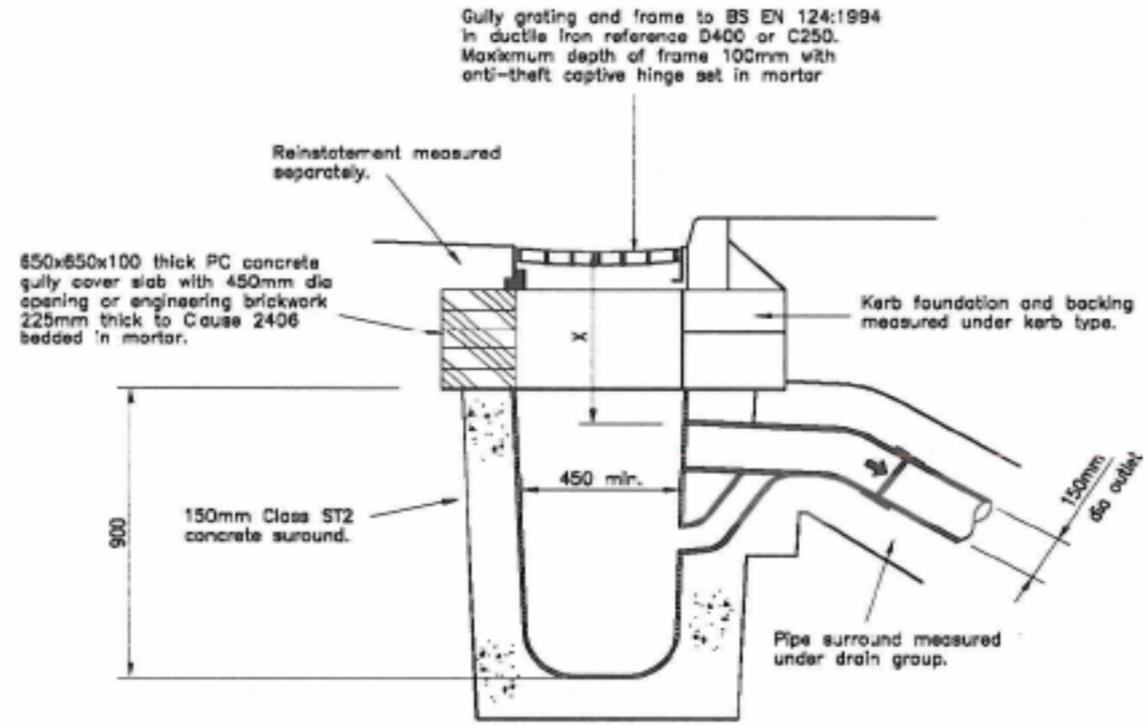
TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK



Notes:

1. All dimensions in mm.
2. Drainage to be specification Series 500.
3. Gullies to be:
 - (a) Precast concrete to BS EN 230.
 - (b) Vitrified clay to BS EN 295.
 - (c) Polypropylene, polyethylene, PVCu or other approved plastic materials and of a type approved by the Engineer with a 150mm minimum Class ST2 concrete surround.
4. Mortar to be Clause 2404 designation (i).

Title	
DRAINAGE AND SERVICE DUCTS GULLY TYPES G1 - G4	
Scale Not to scale	
Drn	Date April 2005
Drawing Number 500/05/169 - 178	
Revision	



TRAPPED GULLY TYPE G1

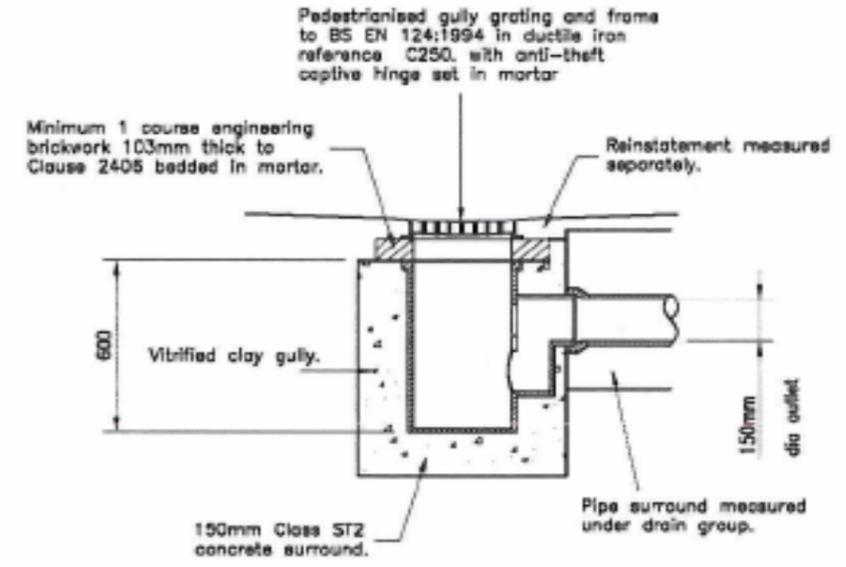
X = 600mm from top of grating to top of carriageway gully outlet when connecting pipe outside.

TRAPPED GULLY TYPE G2

X = 750mm when connecting pipe under carriageway.

TRAPPED GULLY TYPE G4

Used as a replacement for proprietary cast iron street gully



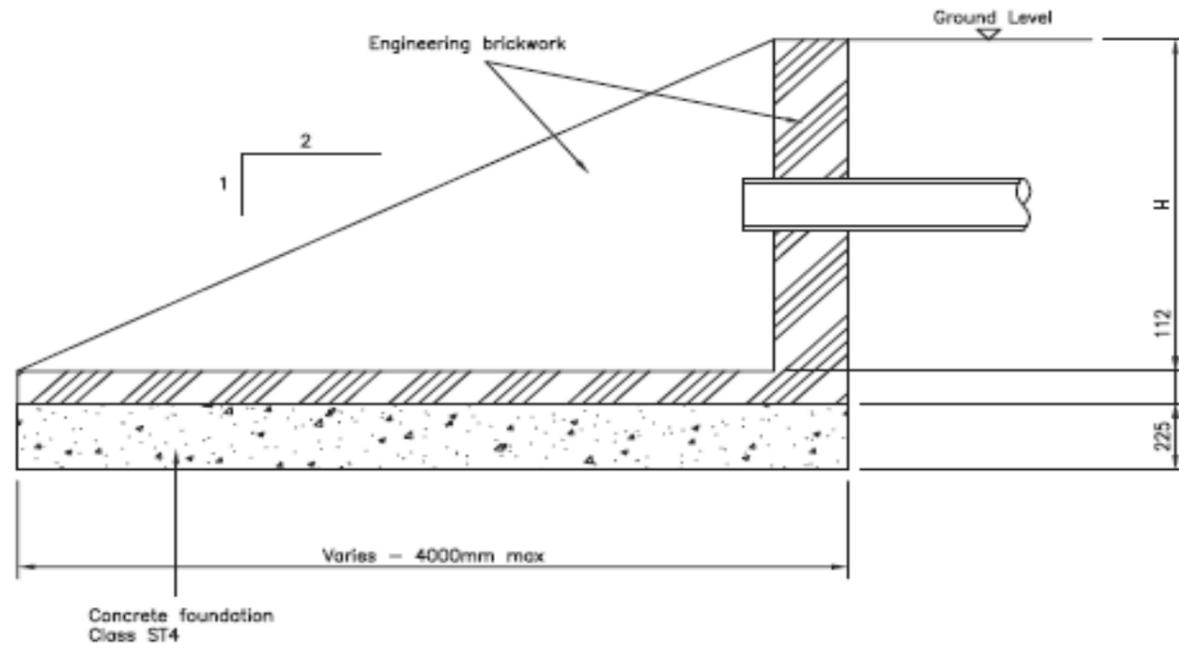
TRAPPED GULLY TYPE G3

Drawing: 500/06/001 – Headwall Type 1 – Brickwork

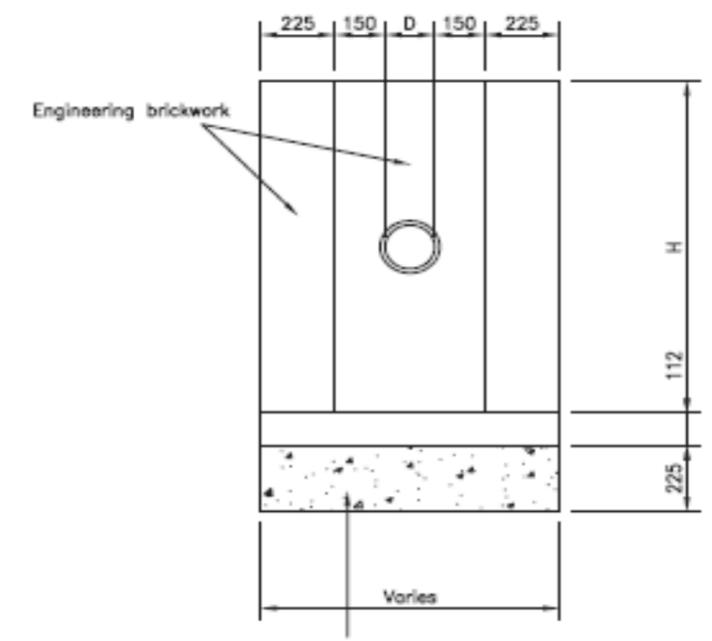
TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK



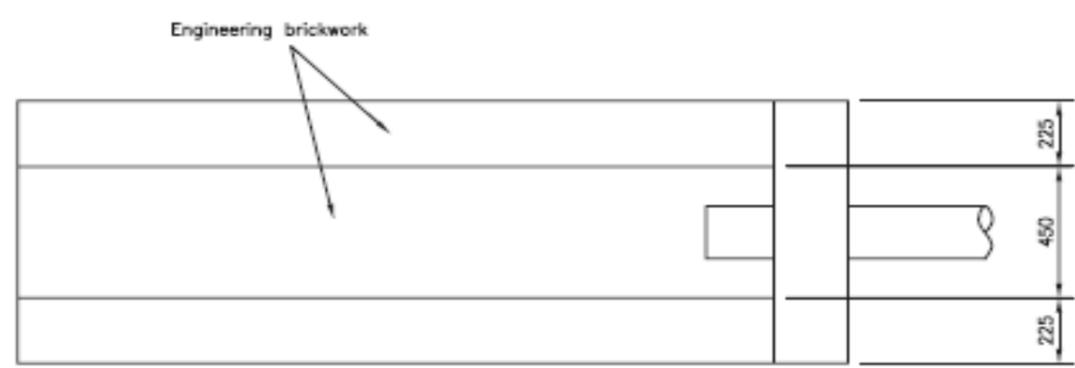
- Notes:
1. All dimensions in mm.
 2. 2:1 batter on side walls.
 3. Dimension H not to exceed 2000mm.
 4. Pipe diameter D not to exceed 225mm.
 5. Engineering brickwork to comply with Clause 2406 with mortar designation (i) to Clause 2404.



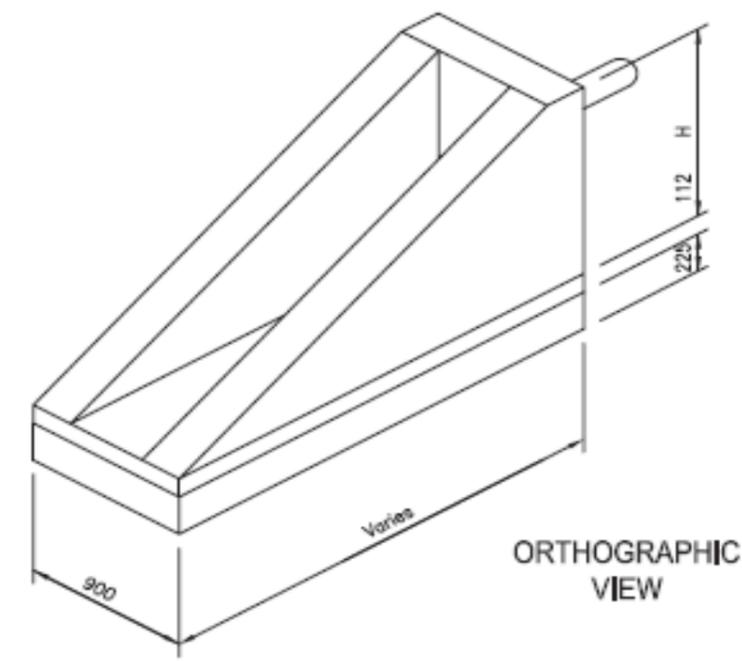
SECTION VIEW



END VIEW



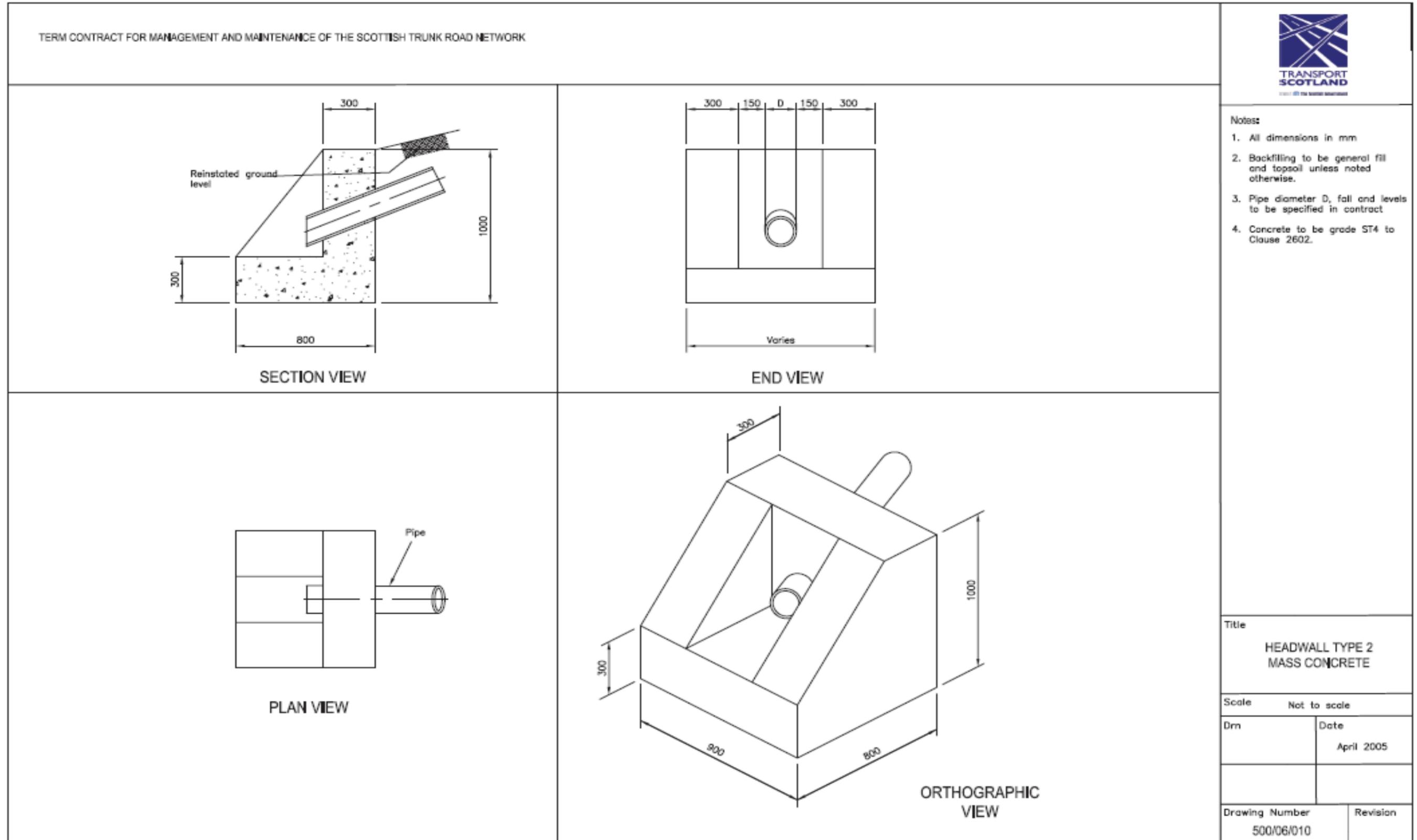
PLAN VIEW



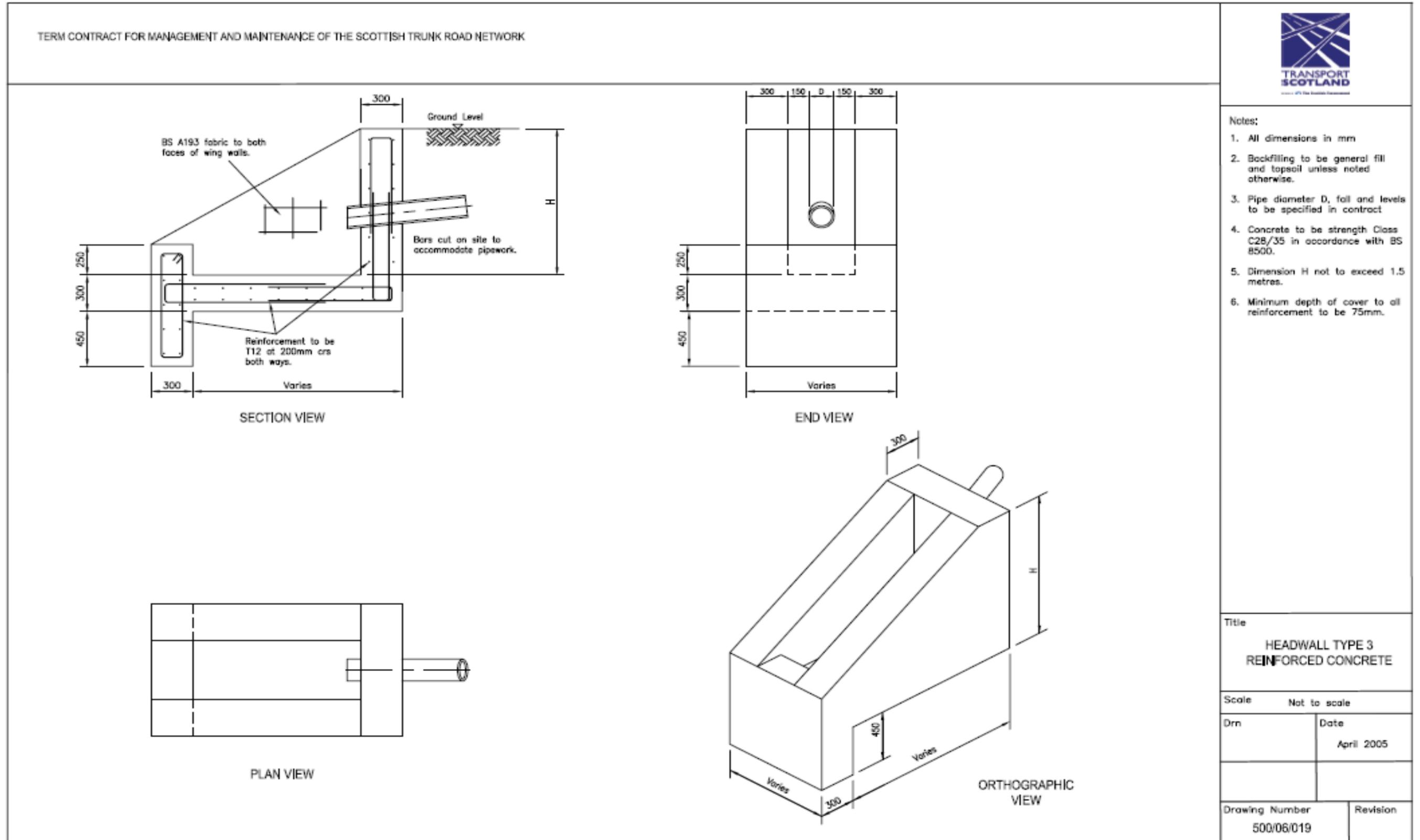
ORTHOGRAPHIC VIEW

Title	
HEADWALL TYPE 1 BRICKWORK	
Scale Not to scale	
Drn	Date April 2005
Drawing Number 500/06/001	
Revision	

Drawing: 500/06/010 – Headwall Type 1 – Mass Concrete



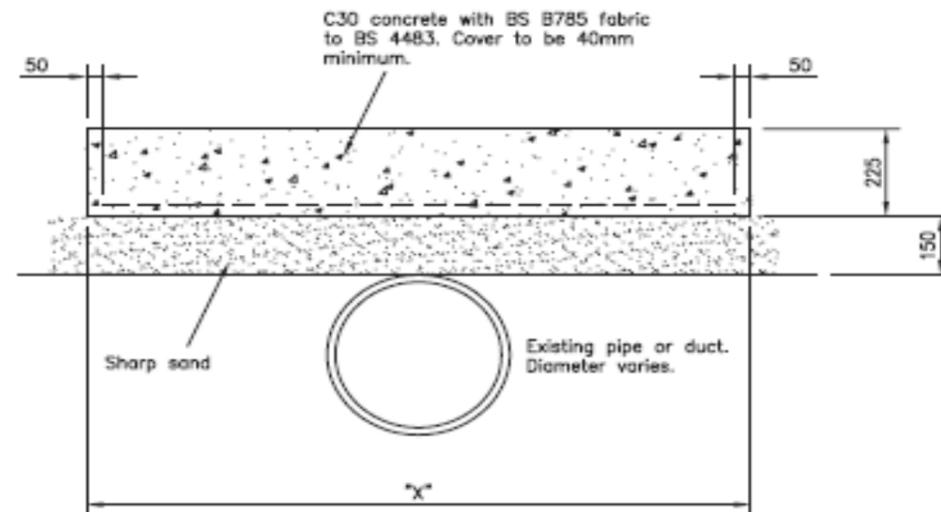
Drawing: 500/06/019 – Headwall Type 3 – Reinforced Concrete



Drawing: 500/16/001-012 – Protection of Public Utility Apparatus and Drainage – Protection Type P1 – P4



Notes:



- PROTECTION TYPE P1 "X"=500mm
- PROTECTION TYPE P2 "X"=1000mm
- PROTECTION TYPE P3 "X"=1500mm
- PROTECTION TYPE P4 "X"=2000mm

Title
**PROTECTION OF PUBLIC UTILITY
 APPARATUS AND DRAINAGE
 PROTECTION TYPE P1-P4**

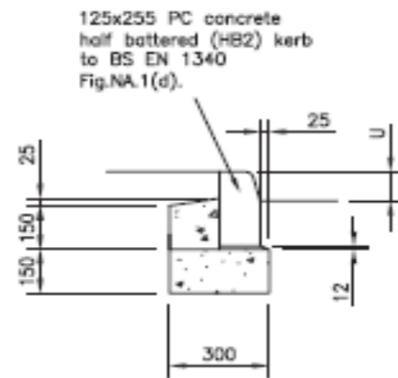
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Drn	Date April 2005
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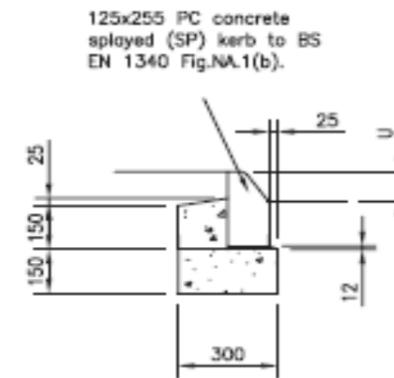
Drawing Number 500/16/001-012	Revision
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Drawing: 1100/01/001-019 – Kerb Types K1 to K4

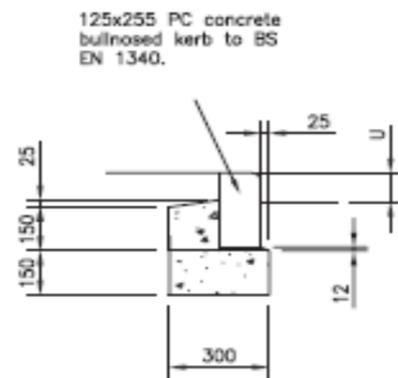
TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK



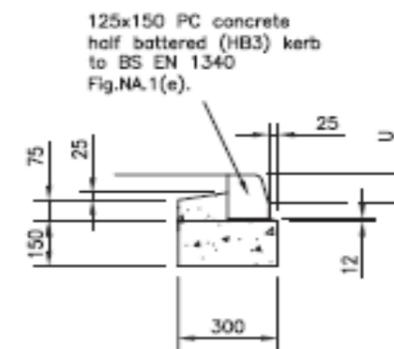
KERB TYPE K1



KERB TYPE K2



KERB TYPE K3



KERB TYPE K4

Notes:

1. All dimensions in mm.
2. Kerbs to be to specification cl. 1101.
3. Upstand U to be 100mm unless stated otherwise in the contract.
4. Mortar bedding to be to Clause 2601.
5. Kerb type K3 is a non-standard dimension.
6. Kerb foundation and backing to be mix ST1 to Clause 2602.

Title
 KERB TYPES
 K1 TO K4

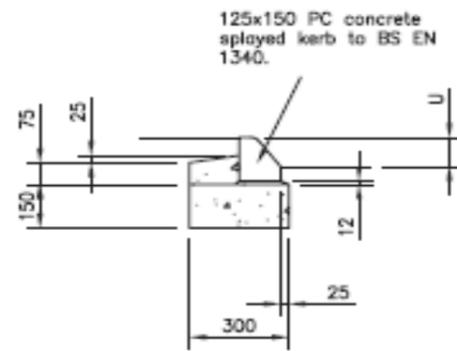
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Drn	Date April 2005
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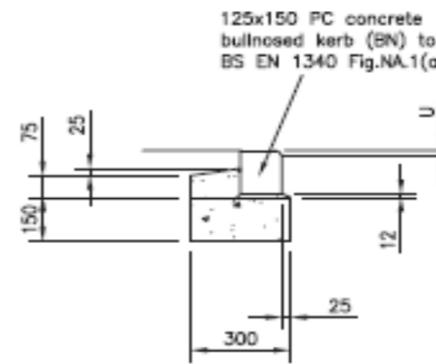
Drawing Number 1100/01/001-019	Revision
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Drawing: 1100/01/025-037 – Kerb Types K5 to K7

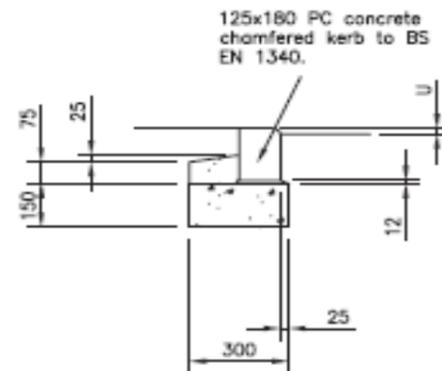
TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK



KERB TYPE K5



KERB TYPE K6



KERB TYPE K7

Notes

1. All dimensions in mm.
2. Kerbs to be to specification Clause 1101
3. For kerb type K5 upstand U to be 100mm unless stated otherwise in the contract
4. Kerb foundation and backing to be mix ST1 to Clause 2602.
5. Mortar bedding to be to Clause 2601
6. For kerb types K6 and K7 the upstand U shall be:
 - (i) for pedestrian crossings – 0.
 - (ii) for vehicular access – 20.
7. Kerb types K5 and K7 are non-standard dimensions.

Title
 KERBS TYPES
 K5 TO K7

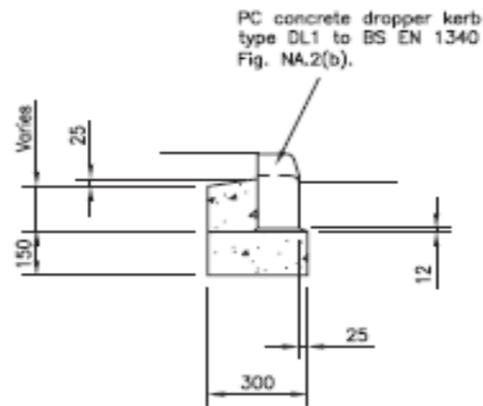
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Drn	Date
	APRIL 2005

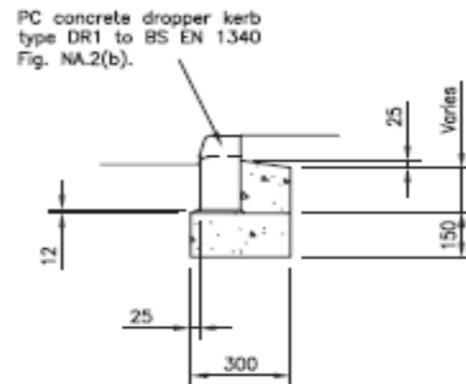
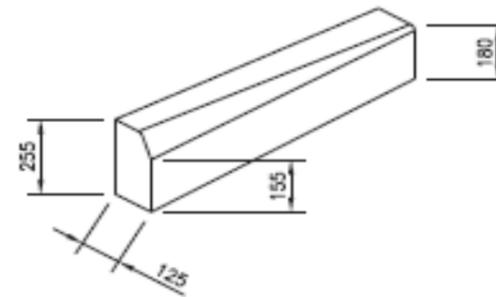
Drawing Number	Revision
1100/01/025-037	

Drawing: 1100/01/040 – Kerb Types K8 and K9

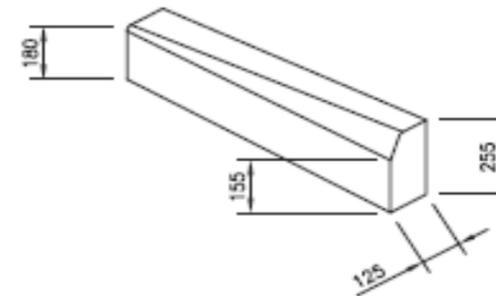
TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK



KERB TYPE K8



KERB TYPE K9



Notes:

1. All dimensions in mm.
2. Kerbs to be to specification Clause 1101
3. Kerb upstand to be 100mm unless stated otherwise in the contract
4. Kerb foundation and backing to be mix ST1 to Clause 2602
5. Mortar bedding to be to Clause 2601

Title
 KERBS TYPES
 K8 AND K9

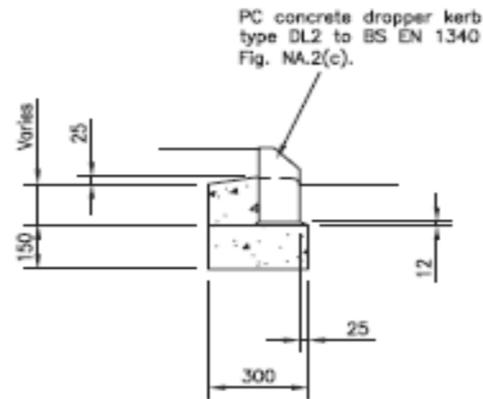
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Drn	Date April 2005
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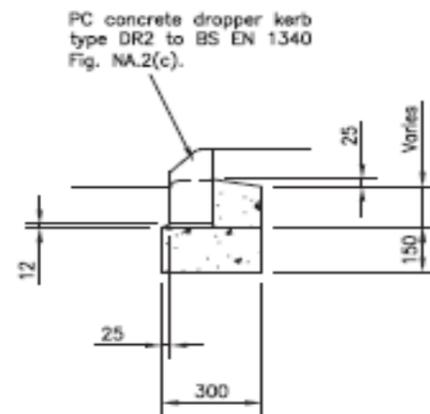
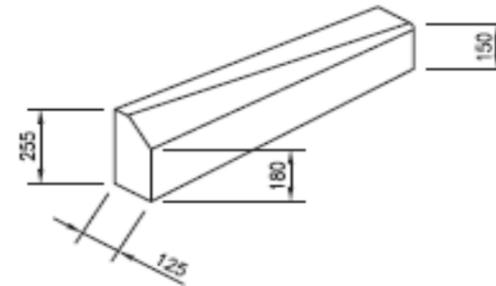
Drawing Number 1100/01/040	Revision
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Drawing: 1100/01/043 – Kerb Types K10 and K11

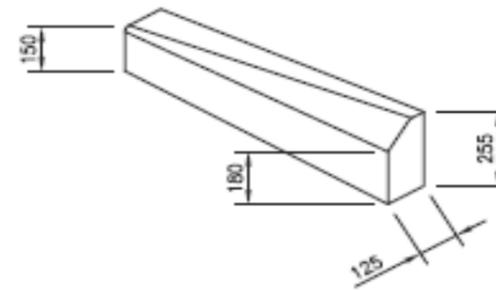
TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK



KERB TYPE K10



KERB TYPE K11



Notes:

1. All dimensions in mm.
2. Kerbs to be to specification Clause 1101
3. Kerb upstand to be 100mm unless stated otherwise in the contract
4. Kerb foundation and backing to be mix ST1 to Clause 2602
5. Mortar bedding to be to Clause 2601

Title

**KERBS TYPES
 K10 AND K11**

Scale Not to scale

Drn

Date

April 2005

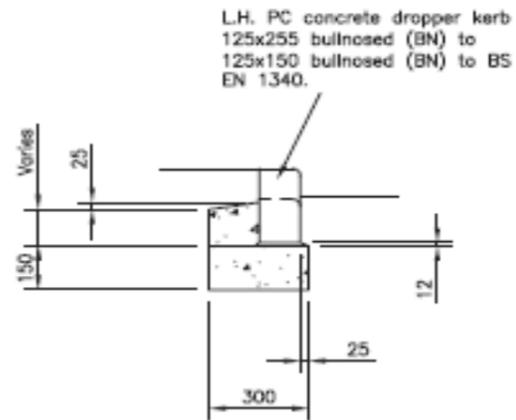
Drawing Number

1100/01/043

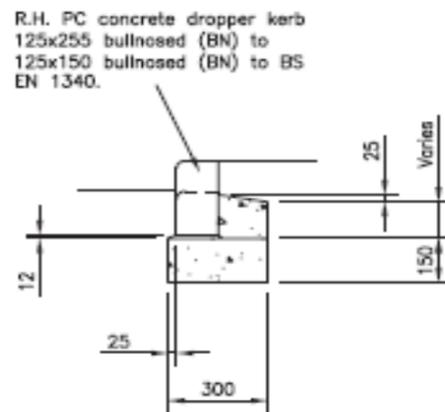
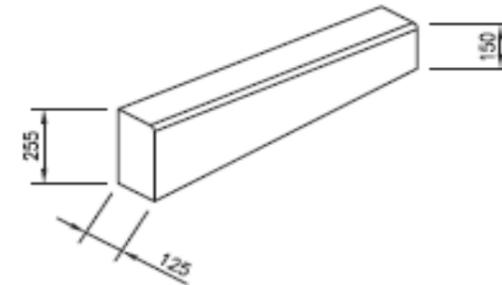
Revision

Drawing: 1100/01/046 – Kerb Types K12 and K13

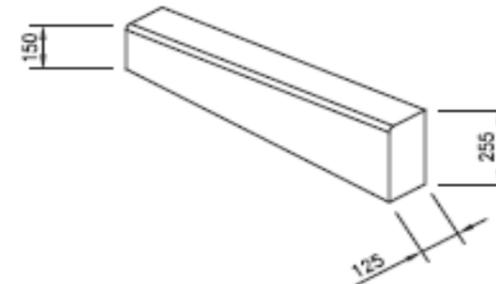
TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK



KERB TYPE K12



KERB TYPE K13



Notes:

1. All dimensions in mm.
2. Kerbs to be to specification Clause 1101.
3. Kerb upstand to be 100mm unless stated otherwise in the contract.
4. Kerb foundation and backing to be mix ST1 to Clause 2602.
5. Mortar bedding to be to Clause 2601.
6. Kerb types K12 and K13 are non-standard dimensions.

Title
**KERBS TYPES
 K12 AND K13**

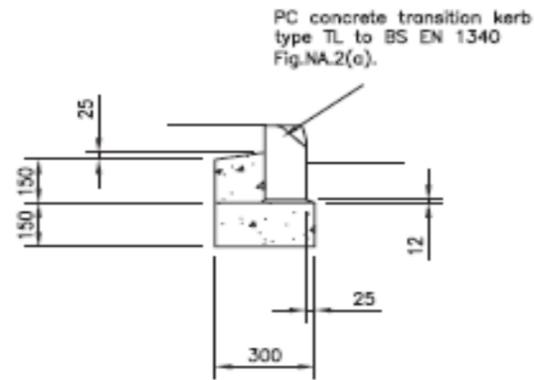
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Drn	Date April 2005
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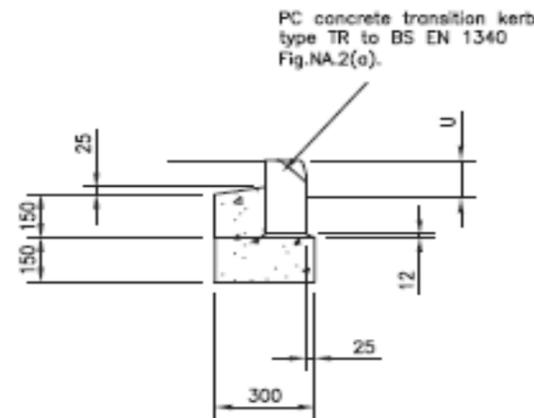
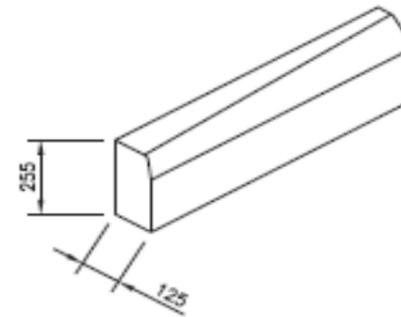
Drawing Number 1100/01/046	Revision
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Drawing: 1100/01/052 Kerb Types K16 and K17

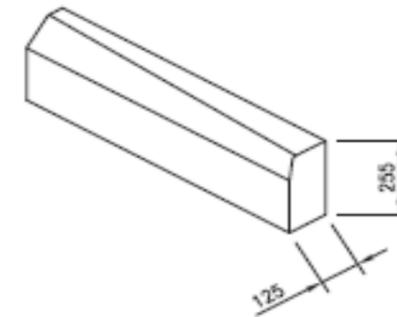
TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK



KERB TYPE K16



KERB TYPE K17



Notes:

1. All dimensions in mm.
2. Kerbs to be to specification Clause 1101
3. Kerb upstand U to be 100mm unless stated otherwise in the contract
4. Kerb foundation and backing to be mix ST1 to Clause 2602
5. Mortar bedding to be to Clause 2601

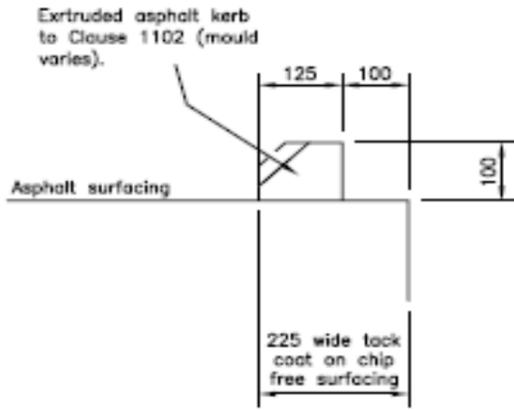
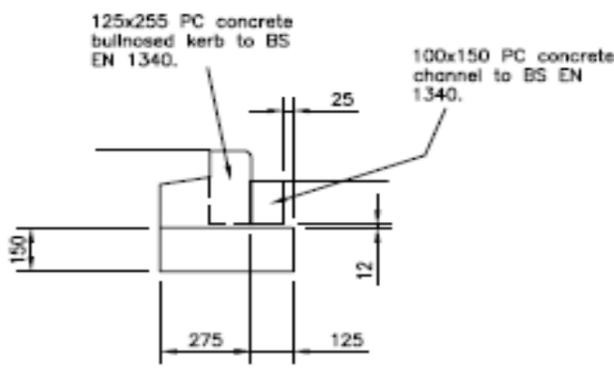
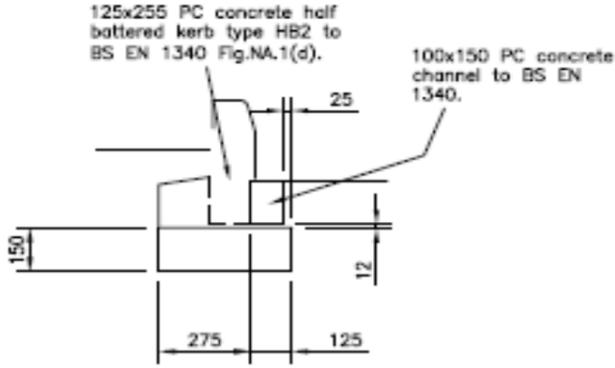
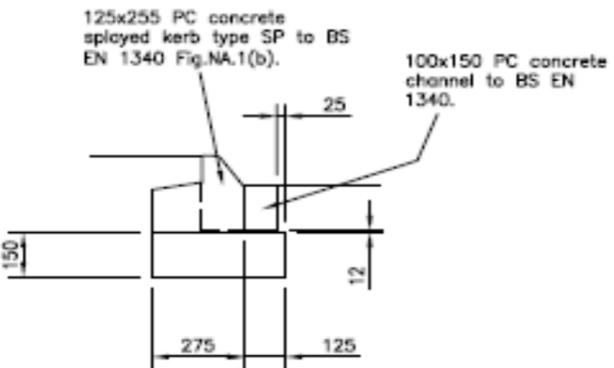
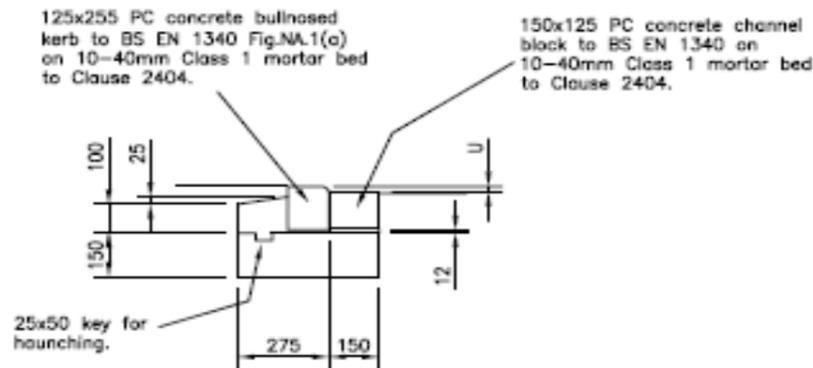
Title
**KERBS TYPES
 K16 AND K17**

Scale Not to scale

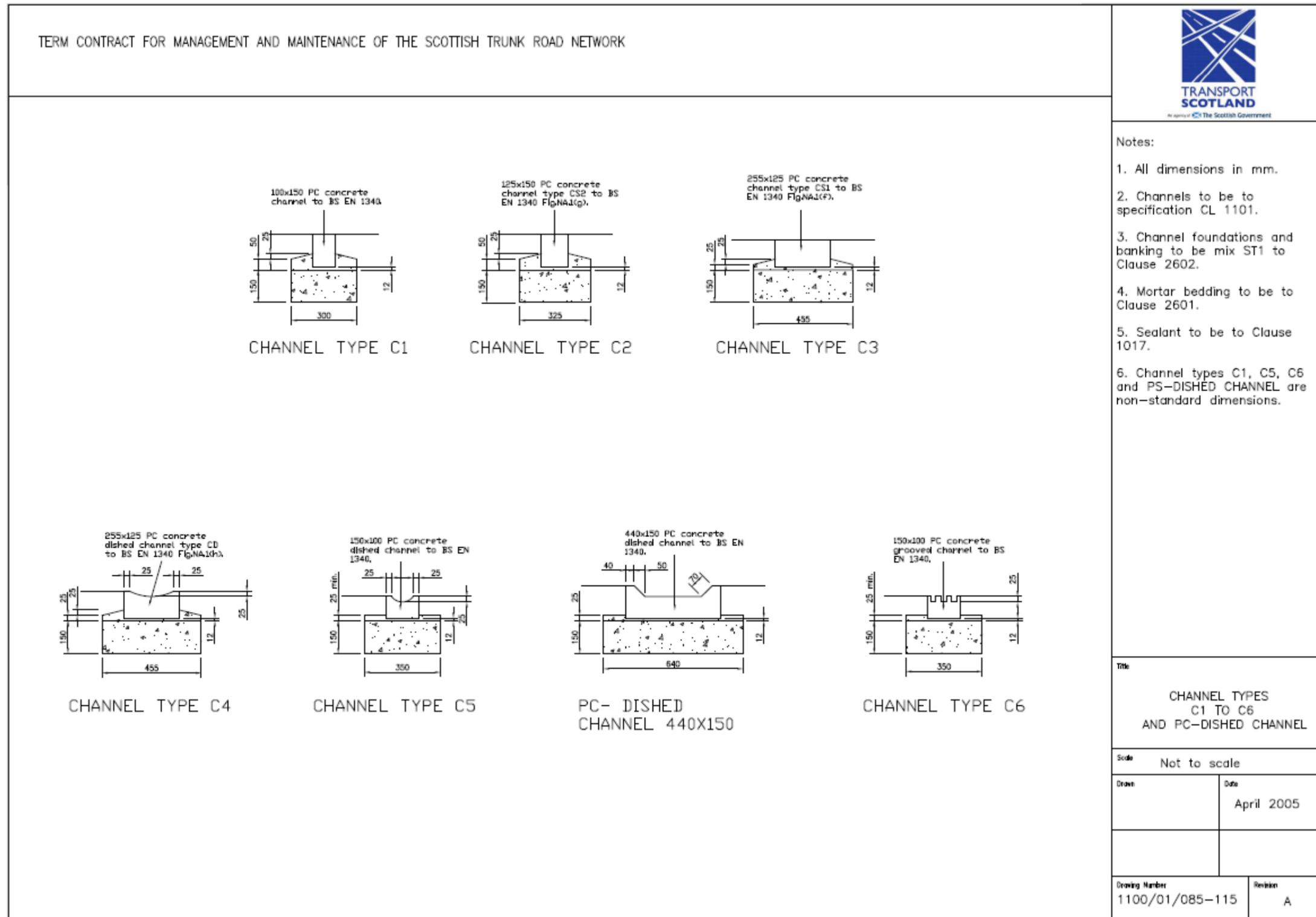
Drn	Date April 2005
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Drawing Number 1100/01/052	Revision
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Drawing: 1100/01/061-082 – Kerb Types K20 to K24

TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK			
 <p>Extruded asphalt kerb to Clause 1102 (mould varies).</p> <p>Asphalt surfacing</p> <p>225 wide lock coat on chip free surfacing</p> <p>125 100</p> <p>100</p>	 <p>125x255 PC concrete bullnosed kerb to BS EN 1340.</p> <p>100x150 PC concrete channel to BS EN 1340.</p> <p>25</p> <p>150</p> <p>12</p> <p>275 125</p>	 <p>125x255 PC concrete half battered kerb type HB2 to BS EN 1340 Fig.NA.1(d).</p> <p>100x150 PC concrete channel to BS EN 1340.</p> <p>25</p> <p>150</p> <p>12</p> <p>275 125</p>	<p>Notes:</p> <ol style="list-style-type: none"> All dimensions in mm. Kerbs to be to specification Clause 1101. For kerb types K20–K23 upstand to be 100mm unless stated otherwise in the contract. Kerb foundation and backing to be mix ST1 to Clause 2602. Mortar bedding to be to Clause 2601. For kerb type K24 upstand U shall be: <ul style="list-style-type: none"> (i) for pedestrian crossings – 0 (ii) for vehicular access – 20.
 <p>125x255 PC concrete splayed kerb type SP to BS EN 1340 Fig.NA.1(b).</p> <p>100x150 PC concrete channel to BS EN 1340.</p> <p>25</p> <p>150</p> <p>12</p> <p>275 125</p>	 <p>125x255 PC concrete bullnosed kerb to BS EN 1340 Fig.NA.1(a) on 10–40mm Class 1 mortar bed to Clause 2404.</p> <p>150x125 PC concrete channel block to BS EN 1340 on 10–40mm Class 1 mortar bed to Clause 2404.</p> <p>25x50 key for haunching.</p> <p>100 25</p> <p>150</p> <p>12</p> <p>275 150</p> <p>U</p>		<p>Title</p> <p style="text-align: center;">KERB TYPES K20 TO K24</p>
<p>KERB TYPE K20</p>	<p>KERB TYPE K21</p>	<p>KERB TYPE K22</p>	<p>Scale Not to scale</p>
			<p>Drm</p>
			<p>Date</p> <p style="text-align: center;">April 2005</p>
			<p>Drawing Number</p> <p style="text-align: center;">1100/01/061-082</p>
			<p>Revision</p>

Drawing: 1100/01/085-115 – Channel Types C1 – C6



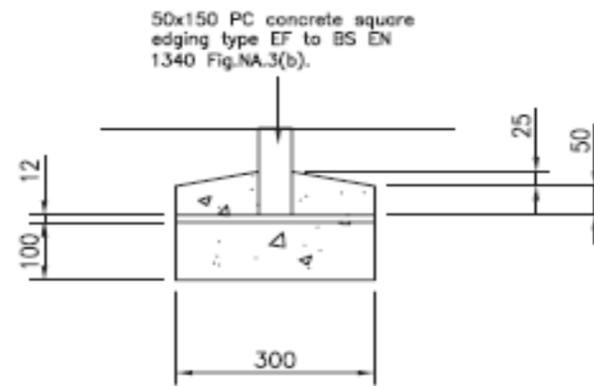
Drawing: 1100/01/118 – Edging Type E1

TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK



Notes:

1. All dimensions in mm.
2. Edging to be to specification Clause 1101.
3. Foundation and backing to be mix ST1 to Clause 2602.
4. Mortar bedding to be to Clause 2601.



EDGING TYPE E1

Title	
EDGING TYPE E1	
Scale Not to scale	
Drn	Date April 2005
Drawing Number 1100/01/118	Revision

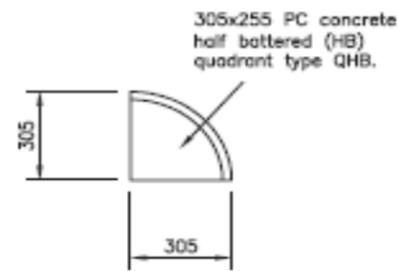
Drawing: 1100/01/136-139 – Kerb Type Quadrants Q1 and Q2

TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK

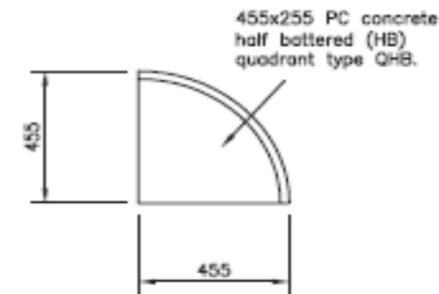


Notes:

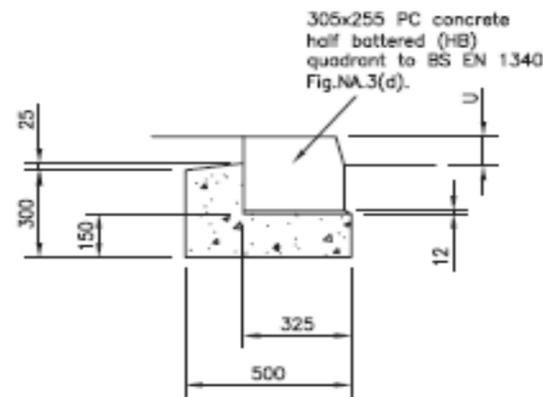
1. All dimensions in mm.
2. Kerbs to be to specification Clause 1101.
3. Kerb upstand to be 100mm unless stated otherwise in the contract.
4. Kerb foundation and backing to be mix ST1 to Clause 2602.
5. mortar bedding to be to Clause 2601.



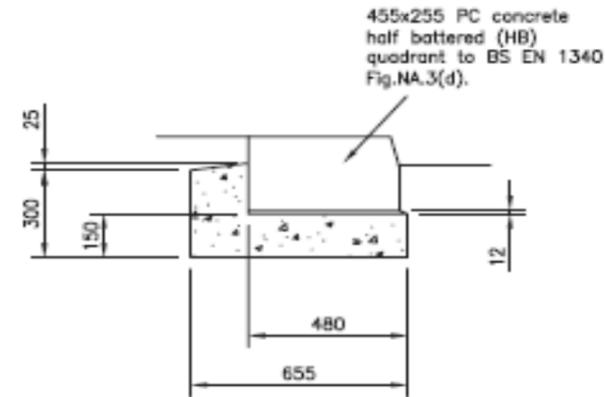
KERB TYPE Q1



KERB TYPE Q2



KERB TYPE Q1



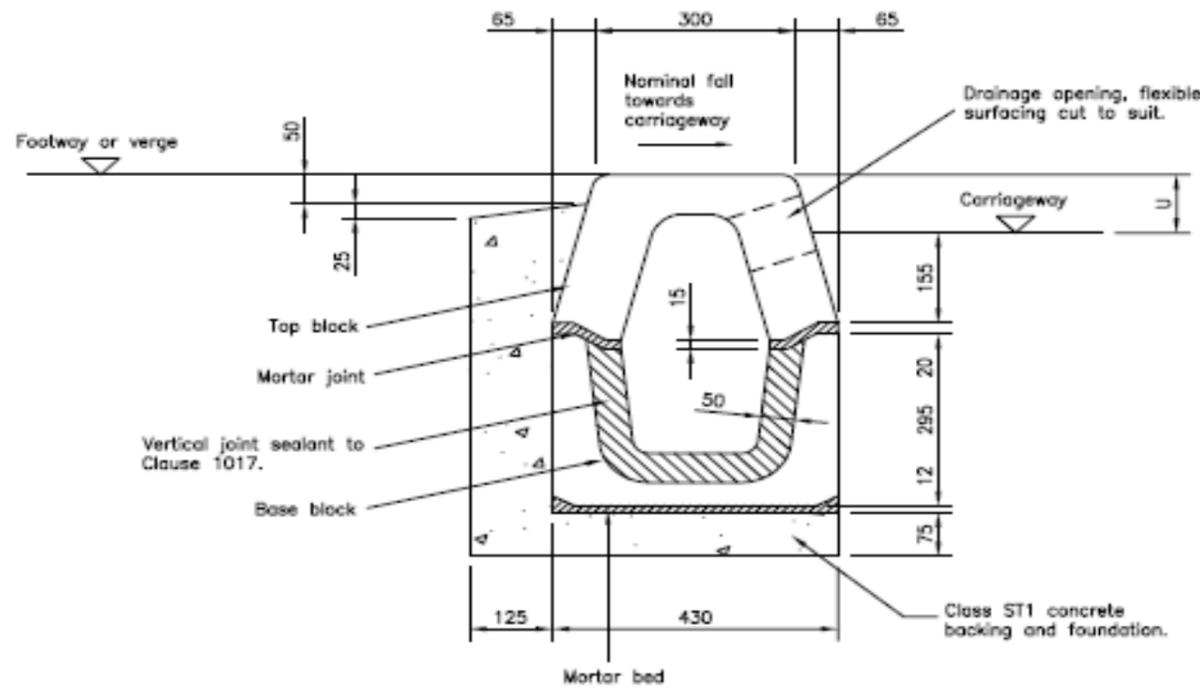
KERB TYPE Q2

Title	
KERB TYPE QUADRANTS Q1 AND Q2	
Scale Not to scale	
Drn	Date April 2005
Drawing Number 1100/01/136-139	
Revision	

Drawing: 1100/02/124-127 – Combined Kerb and Drainage System Types DK1 and DK2

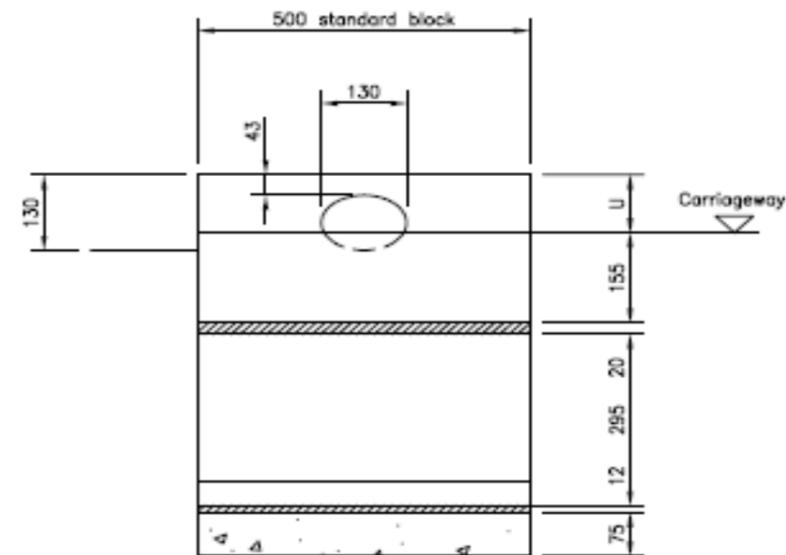


TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK

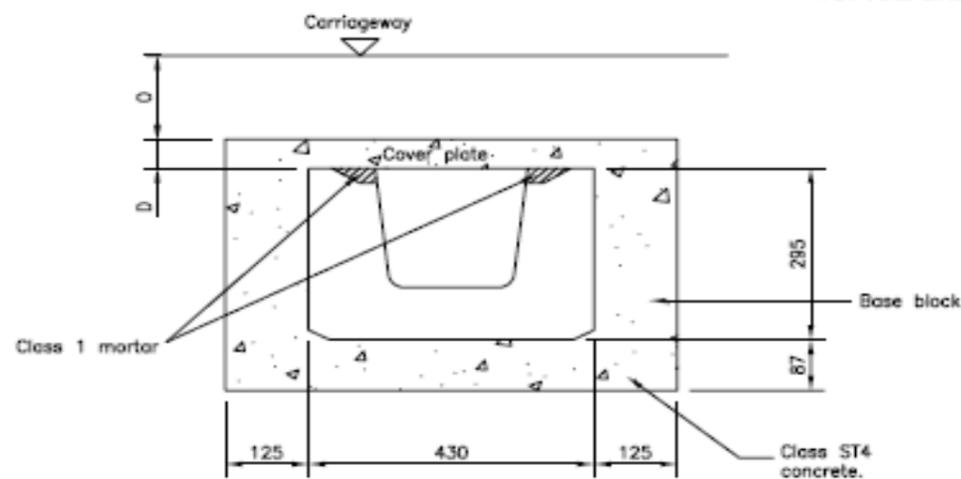


SECTION

TOP AND BASE BLOCK TYPE DK1



LONGITUDINAL ELEVATION



BASE BLOCK AND COVER PLATE TYPE DK2

Notes:

1. All dimensions in mm.
2. Combined kerb and drainage system to comply with specification Clause 516.
3. All blocks to be precast concrete as BEANY BLOCK system or equivalent.
4. To be installed in accordance with the manufacturers recommendations.
5. Foundations and backing to be Class ST1.
6. Cover plates to be 12.5m thick Grade 43A1 mild steel to BS EN 10025.
7. Cover plates to be galvanised.
8. Sealant to be to Clause 1017.
9. Kerb upstand U to be indicated in the contract.

Title
COMBINED KERB AND DRAINAGE SYSTEM TYPES DK1 AND DK2

Scale Not to scale

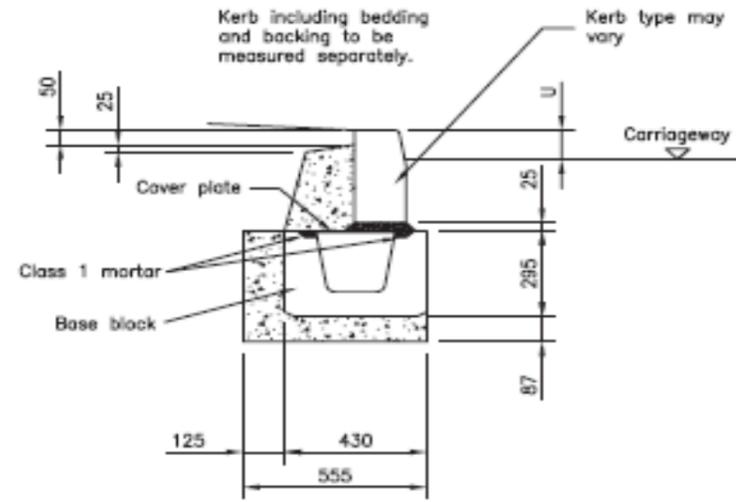
Drn	Date April 2005
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Drawing Number 1100/02/124-127	Revision
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Drawing: 1100/02/130 – Combined Kerb and Drainage System Types DK3



TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK



BASE BLOCK AND COVER PLATE TYPE DK3

Notes:

1. All dimensions in mm.
2. Combined kerb and drainage system to comply with specification Clause 516.
3. All blocks to be precast concrete as BEANY BLOCK system or equivalent.
4. To be installed in accordance with the Manufacturers recommendations.
5. Foundation and backing to be Grade ST1.
6. Cover plates to be 12.5mm thick Grade 43A1 mild steel to BS EN 10025.
7. Cover plates to be galvanised.
8. Sealant to be to Clause 1017.
9. Kerb upstand U to be indicated in the contract.

Title
**COMBINED KERB
 AND DRAINAGE
 SYSTEM TYPE DK3**

Scale **Not to scale**

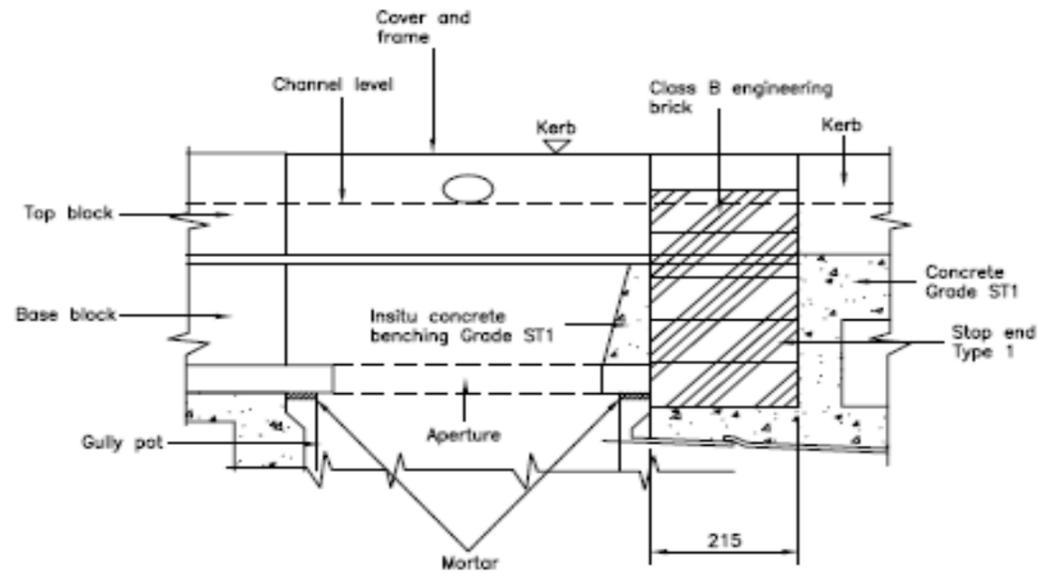
Drn	Date April 2005
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Drawing Number 1100/02/130	Revision
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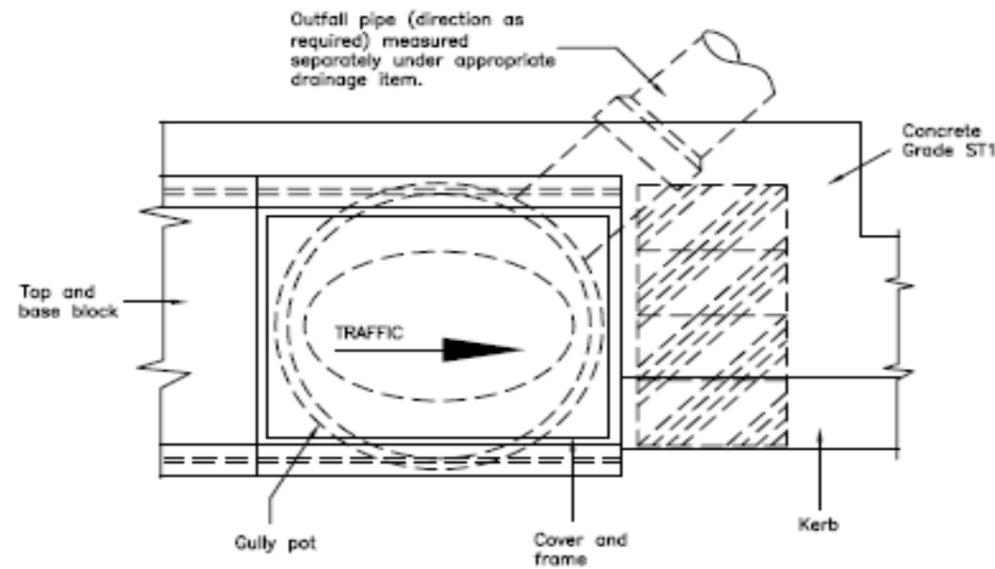
Drawing: 1100/02/133 – Combined Kerb and Drainage System Outfall Types DK4



TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK

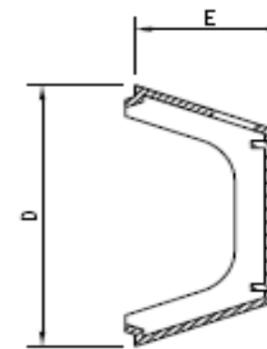
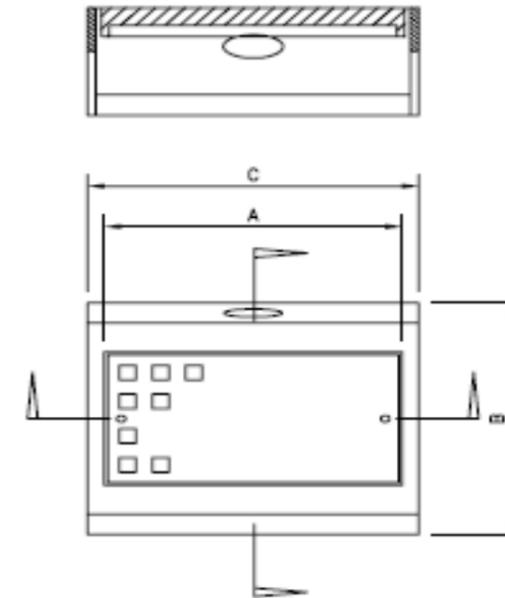


LONGITUDINAL SECTION



PLAN

OUTFALL TYPE DK4
STOP END TYPE 1



BS EN 124 TEST LOADING	Clear opening (AxB mm)	Overall dimensions (Cx D mm)	Depth to seating (E mm)
Clause D	400x250	500x450	255

KERB TYPE COVER AND FRAME (AC1)

Notes:

1. All dimensions in mm.
2. Precast combined drainage and kerb blocks to comply with Clause 516.
3. Outfall Type 1J (of 1J) – as DF1 but with base block. Outfall – junction in lieu of base block outfall.
4. Outfall Type 2J (of 2J) – as DF2 but with base block. Outfall – junction in lieu of base block outfall.
5. Access cover Type 1J (AC1J) – as AC1 but with base block junction in lieu of base block.

Title

COMBINED KERB AND
DRAINAGE SYSTEM
OUTFALL TYPE DK4

Scale

Not to scale

Drn

Date

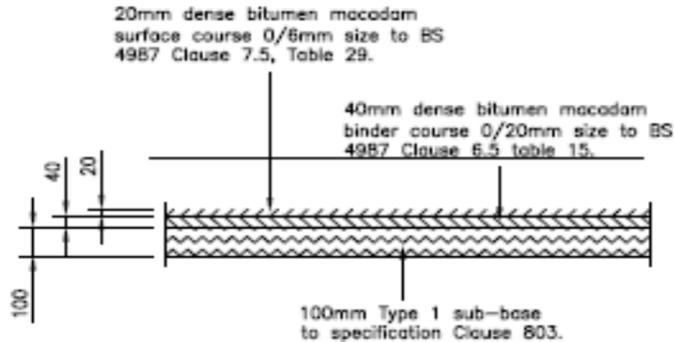
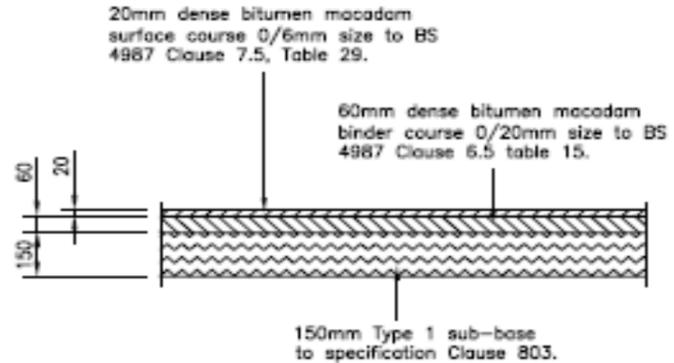
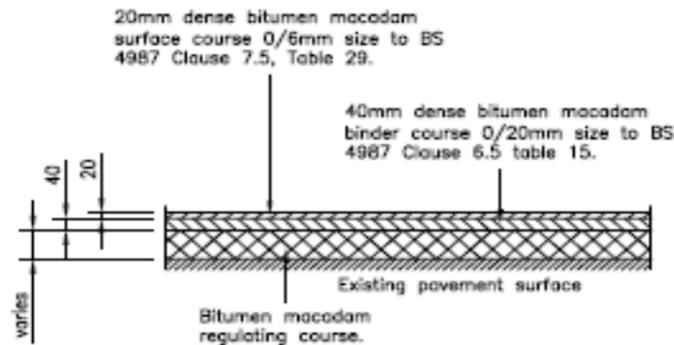
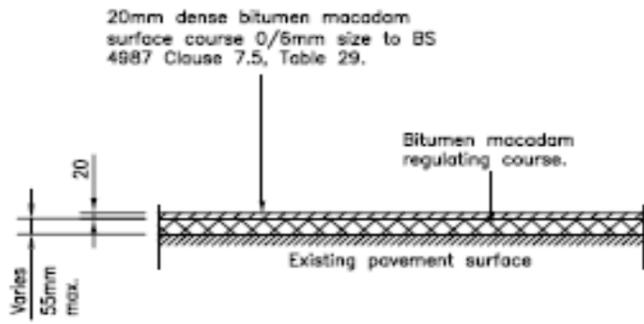
April 2005

Drawing Number

1100/02/133

Revision

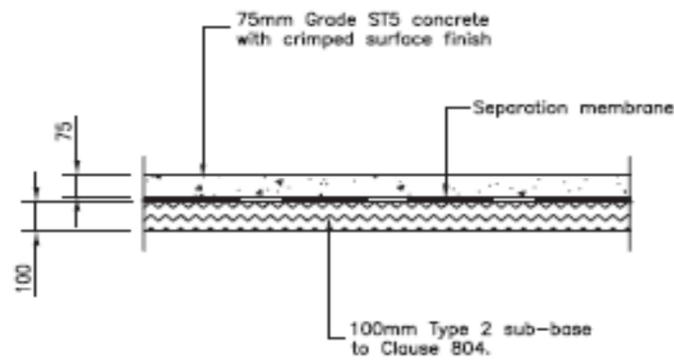
Drawing: 1100/05/001-010 – Footways, Footpaths, Paved Areas and Cycleways Types F1 to F4

TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK						
 <p>FLEXIBLE CONSTRUCTION : TYPE F1</p>	 <p>FLEXIBLE CONSTRUCTION : TYPE F2</p>	<p>Notes:</p> <ol style="list-style-type: none"> All dimensions in mm. Regulating material shall be Type RC1 to RC4 in accordance with Appendix 7/1 schedule 5. 				
 <p>FLEXIBLE CONSTRUCTION : TYPE F3</p>	 <p>FLEXIBLE CONSTRUCTION : TYPE F4</p>	<p>Title FOOTWAYS, FOOTPATHS, PAVED AREAS AND CYCLEWAYS TYPES F1 TO F4</p> <p>Scale Not to scale</p> <table border="1"> <tr> <td>Drn</td> <td>Date April 2005</td> </tr> <tr> <td>Drawing Number 1100/05/001-010</td> <td>Revision</td> </tr> </table>	Drn	Date April 2005	Drawing Number 1100/05/001-010	Revision
Drn	Date April 2005					
Drawing Number 1100/05/001-010	Revision					

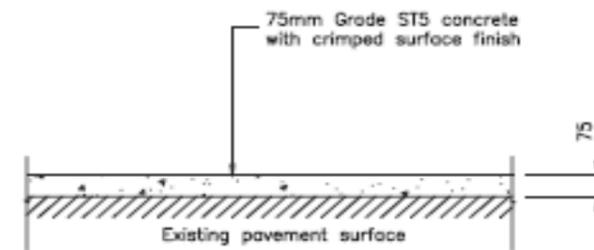
Drawings: 1100/05/013-016 – Footways, Footpaths, Paved Areas and Cycleways Types F5 and F6



Notes:
 1. All dimensions in mm.



CONCRETE CONSTRUCTION : TYPE F5



CONCRETE CONSTRUCTION : TYPE F6

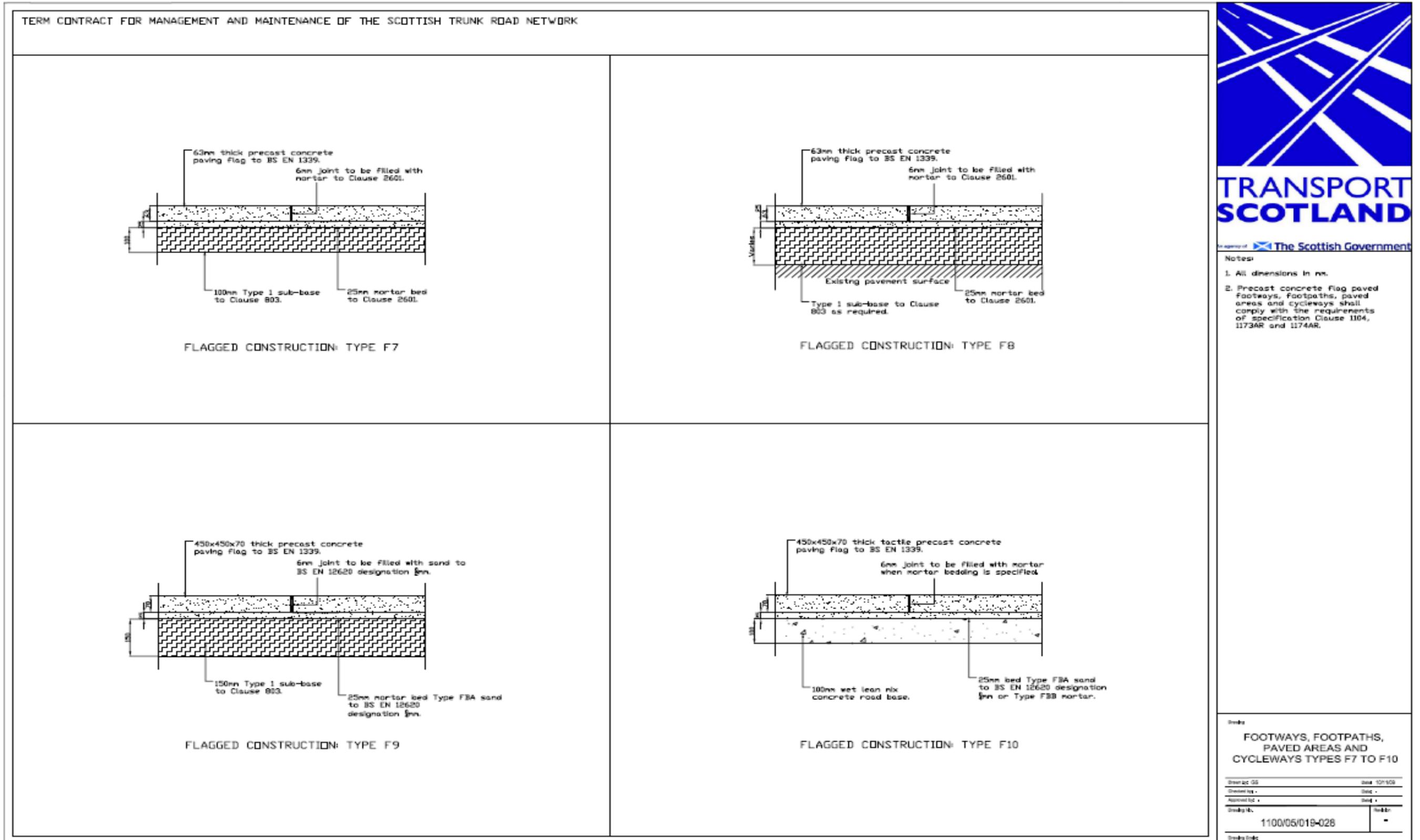
Title
 FOOTWAYS, FOOTPATHS,
 PAVED AREAS AND
 CYCLEWAYS TYPES F5 AND F6

Scale Not to scale

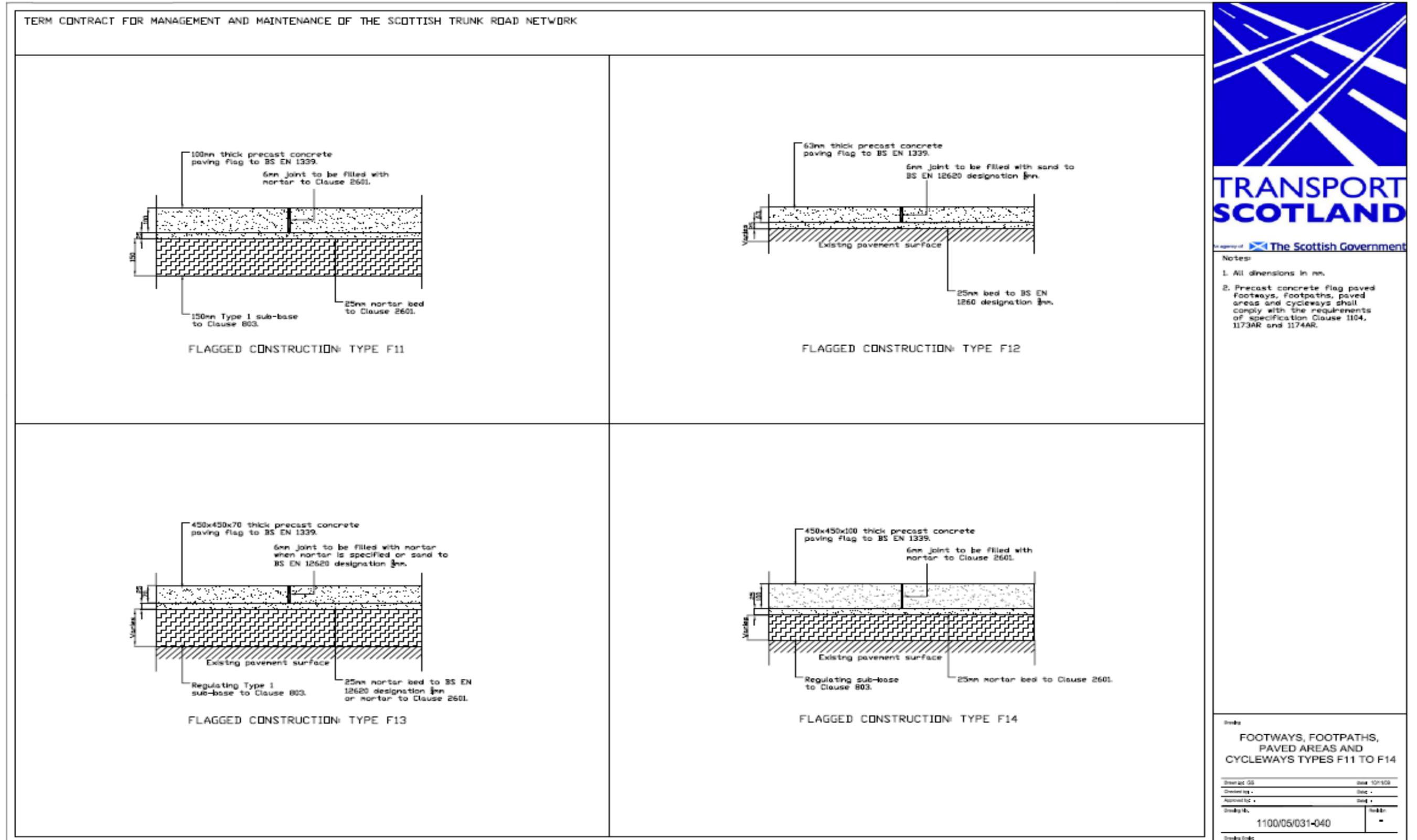
Drn	Date April 2005
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Drawing Number 1100/05/013-016	Revision
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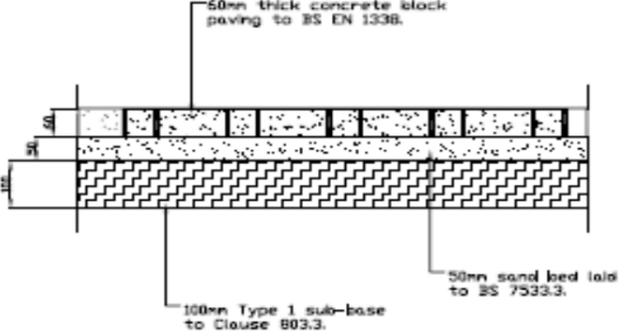
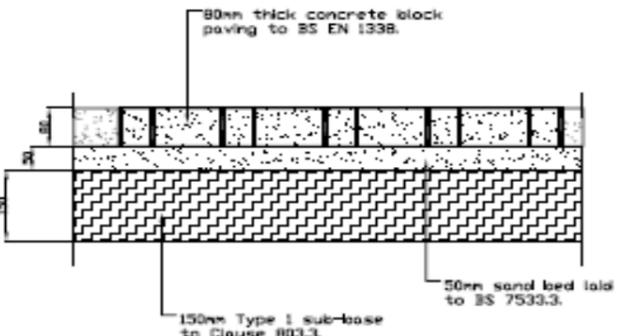
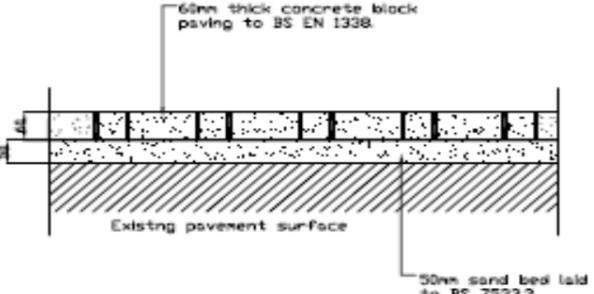
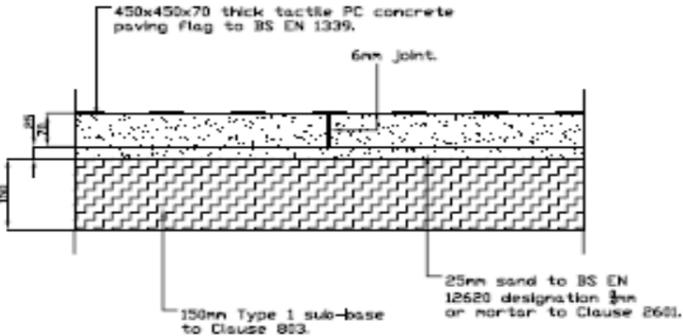
Drawing: 1100/05/019-028 – Footways, Footpaths, Paved Areas and Cycleways Types F7 to F10



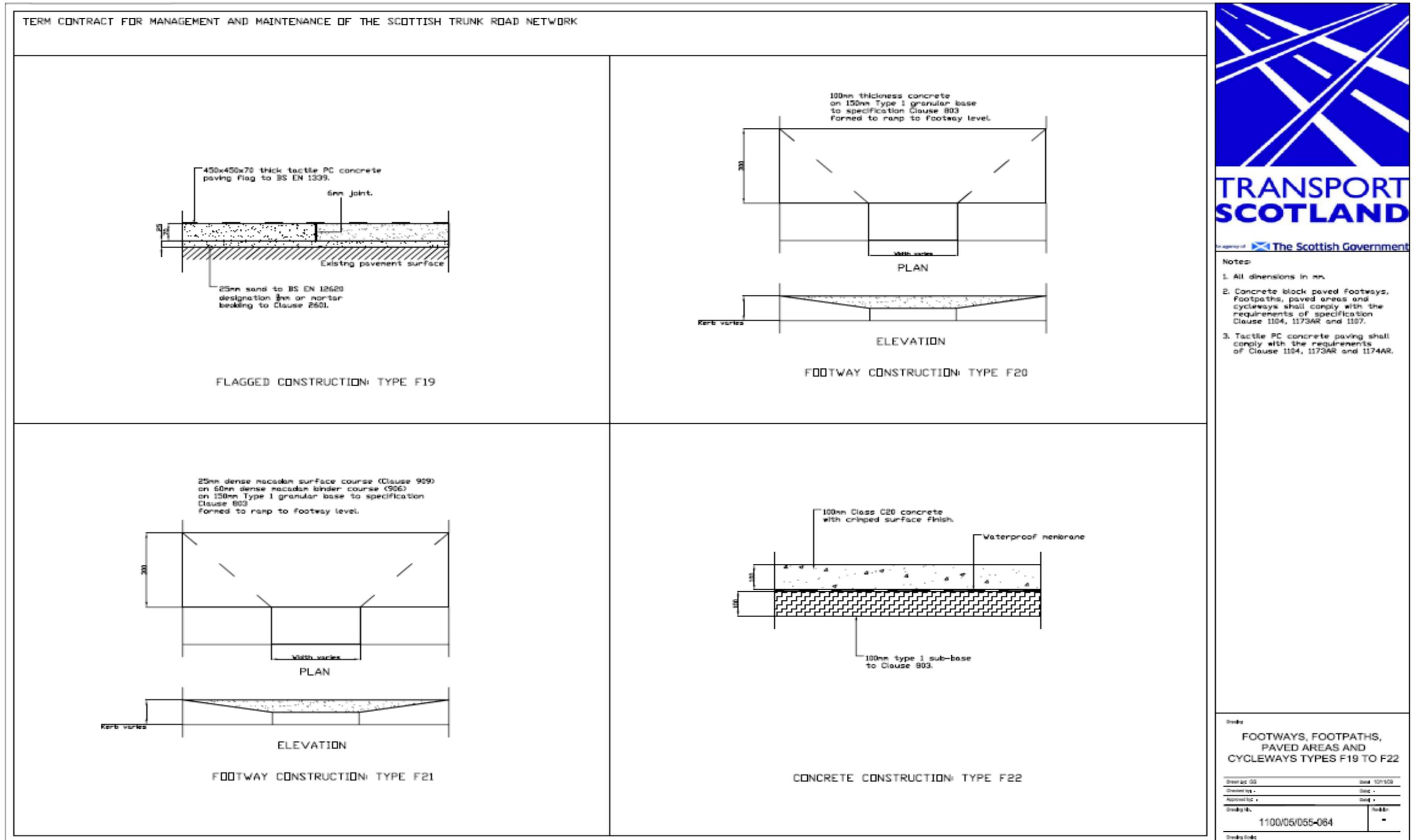
Drawing: 1100/05/031-040 – Footways, Footpaths, Paved Areas and Cycleways Types F11 to F14



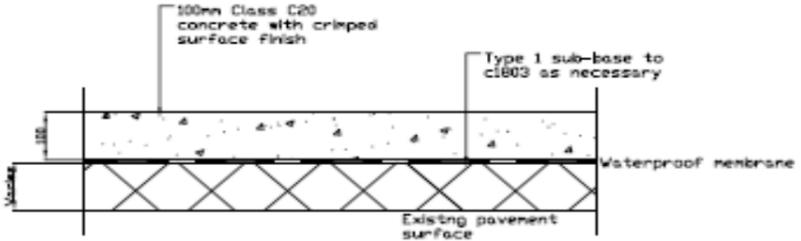
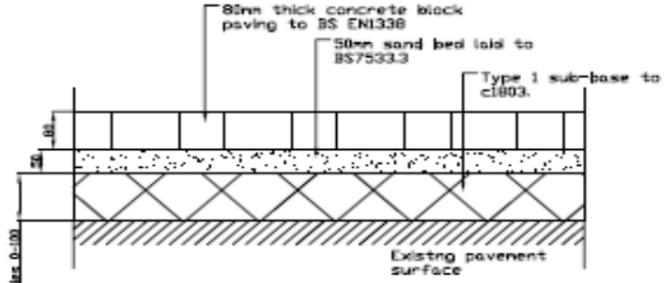
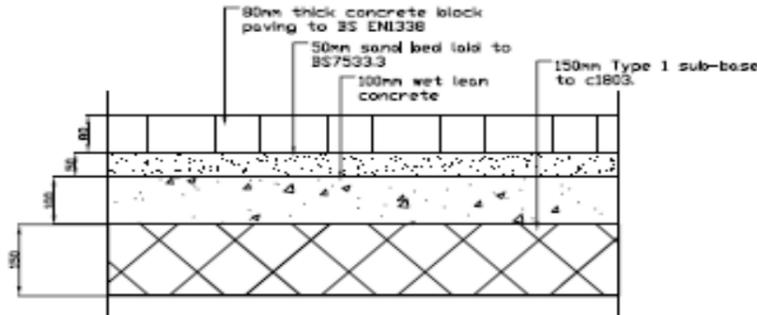
Drawing: 1100/05/043-052 – Footways, Footpaths, Paved Areas and Cycleways Types F15 to F18

TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK		 <p style="font-weight: bold; font-size: 24px; margin: 5px 0;">TRANSPORT SCOTLAND</p> <p style="font-size: 12px; margin: 5px 0;">Agency of  The Scottish Government</p> <p>Notes:</p> <ol style="list-style-type: none"> 1. All dimensions in mm. 2. Concrete block paved footways, footpaths, paved areas and cycleways shall comply with the requirements of specification Clause 1104, 1173AR and 1107. 3. Tactile PC concrete paving shall comply with the requirements of Clause 1104, 1173AR and 1174AR. 													
 <p style="text-align: center; margin-top: 10px;">CONCRETE BLOCK CONSTRUCTION: TYPE F15</p>	 <p style="text-align: center; margin-top: 10px;">CONCRETE BLOCK CONSTRUCTION: TYPE F16</p>														
 <p style="text-align: center; margin-top: 10px;">CONCRETE BLOCK CONSTRUCTION: TYPE F17</p>	 <p style="text-align: center; margin-top: 10px;">FLAGGED CONSTRUCTION: TYPE F18</p>														
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;"> FOOTWAYS, FOOTPATHS, PAVED AREAS AND CYCLEWAYS TYPES F15 TO F18 </td> </tr> <tr> <td style="font-size: 8px;"> Drawn by: </td> <td style="font-size: 8px;"> Date: 10/1/08 </td> </tr> <tr> <td style="font-size: 8px;"> Checked by: </td> <td style="font-size: 8px;"> Date: </td> </tr> <tr> <td style="font-size: 8px;"> Approved by: </td> <td style="font-size: 8px;"> Date: </td> </tr> <tr> <td style="font-size: 8px;"> Drawing No. </td> <td style="font-size: 8px;"> Scale: </td> </tr> <tr> <td style="text-align: center; font-weight: bold;"> 1100/05/043-052 </td> <td style="text-align: center;"> - </td> </tr> <tr> <td colspan="2" style="font-size: 8px;"> Drawn by: </td> </tr> </table>			FOOTWAYS, FOOTPATHS, PAVED AREAS AND CYCLEWAYS TYPES F15 TO F18		Drawn by: 	Date: 10/1/08	Checked by: 	Date:	Approved by: 	Date:	Drawing No.	Scale:	1100/05/043-052	-	Drawn by:
FOOTWAYS, FOOTPATHS, PAVED AREAS AND CYCLEWAYS TYPES F15 TO F18															
Drawn by: 	Date: 10/1/08														
Checked by: 	Date:														
Approved by: 	Date:														
Drawing No.	Scale:														
1100/05/043-052	-														
Drawn by:															

Drawing: 1100/05/055-064 – Footways, Footpaths, Paved Areas and Cycleways Types F19 to F22



Drawing: 1100/05/067-073 – Footways, Footpaths, Paved Areas and Cycleways Types F23 to F25

TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK		 <p style="font-weight: bold; font-size: 24px; margin: 0;">TRANSPORT SCOTLAND</p> <p style="font-size: 12px; margin: 0;">Member of  The Scottish Government</p> <p>Notes:</p> <ol style="list-style-type: none"> 1. All dimensions in mm. 2. Concrete block paved footways, footpaths, paved areas and cycleways shall comply with the requirements of specification Clause 1104, 1173AR and 1167. 3. Tactile PC concrete paving shall comply with the requirements of Clause 1104, 1173AR and 1174AR. 														
 <p style="text-align: center; font-weight: bold; margin-top: 10px;">CONCRETE CONSTRUCTION: TYPE F23</p>	 <p style="text-align: center; font-weight: bold; margin-top: 10px;">CONCRETE BLOCK CONSTRUCTION: TYPE F24</p>															
 <p style="text-align: center; font-weight: bold; margin-top: 10px;">CONCRETE BLOCK CONSTRUCTION: TYPE F25</p>																
TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK		<table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tr> <td colspan="2" style="text-align: center;">FOOTWAYS, FOOTPATHS, PAVED AREAS AND CYCLEWAYS TYPES F23 TO F25</td> </tr> <tr> <td style="width: 50%;">Drawn by: G.S.</td> <td style="width: 50%;">Date: 10/1/03</td> </tr> <tr> <td>Checked by: .</td> <td>Disc: .</td> </tr> <tr> <td>Approved by: .</td> <td>Scale: .</td> </tr> <tr> <td style="text-align: center;">Drawing ID:</td> <td style="text-align: center;">Title:</td> </tr> <tr> <td style="text-align: center;">1100/05/067-073</td> <td style="text-align: center;">-</td> </tr> <tr> <td colspan="2" style="text-align: center;">Drawing Code:</td> </tr> </table>	FOOTWAYS, FOOTPATHS, PAVED AREAS AND CYCLEWAYS TYPES F23 TO F25		Drawn by: G.S.	Date: 10/1/03	Checked by: .	Disc: .	Approved by: .	Scale: .	Drawing ID:	Title:	1100/05/067-073	-	Drawing Code:	
FOOTWAYS, FOOTPATHS, PAVED AREAS AND CYCLEWAYS TYPES F23 TO F25																
Drawn by: G.S.	Date: 10/1/03															
Checked by: .	Disc: .															
Approved by: .	Scale: .															
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1100/05/067-073	-															
Drawing Code:																

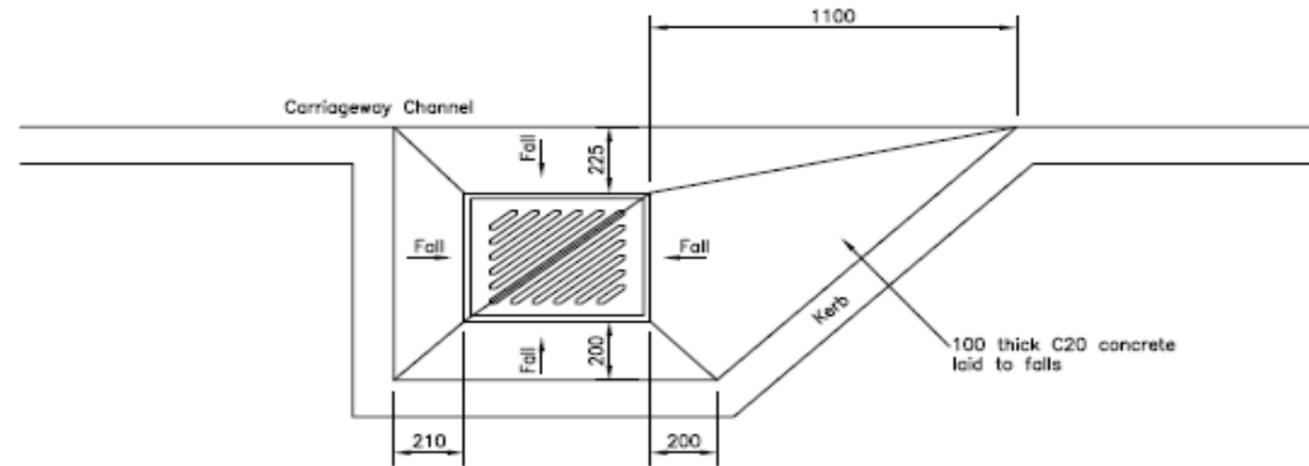
Drawing: 1100/05/085 & 088 – Recessed Gullies GS1 and GS2 with Kerb Surround

TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK

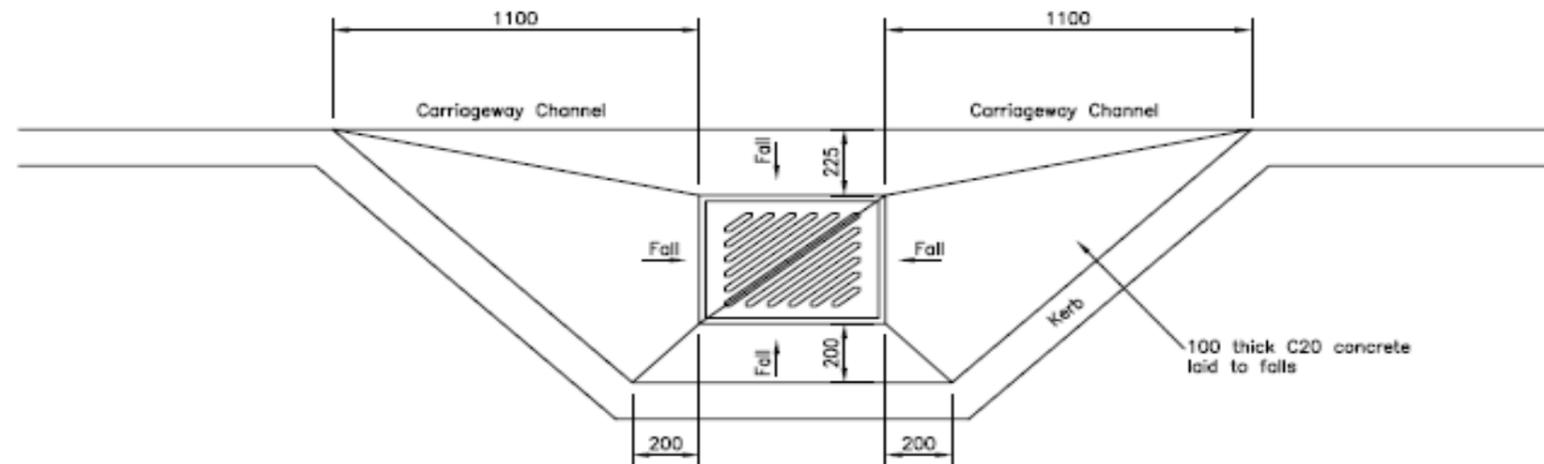


Notes:

1. All dimensions in mm.
2. Gullies to comply with Drawing No. 500/5/169-178



**TYPE GS1 SINGLE SPLAY ENTRY
 RECESSED GULLY WITH KERB SURROUND**



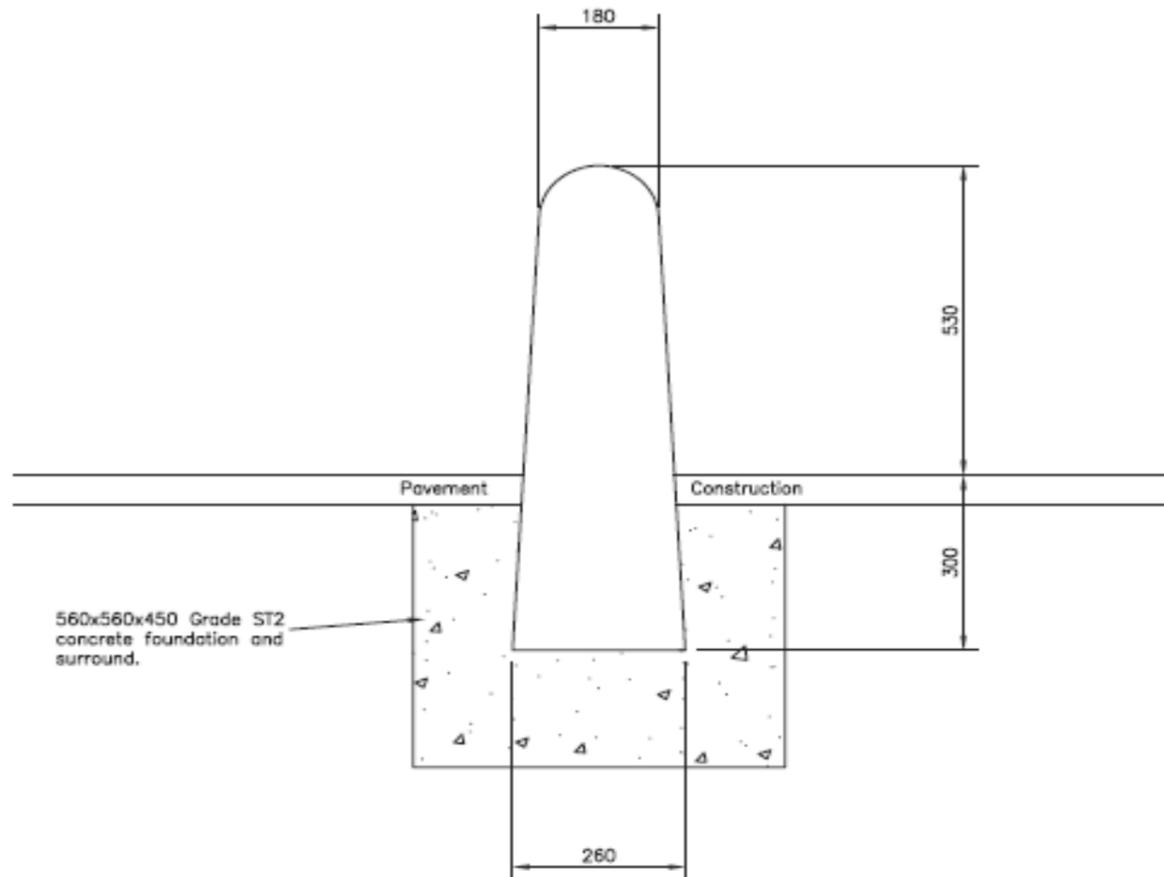
**TYPE GS2 DOUBLE SPLAY ENTRY
 RECESSED GULLY WITH KERB SURROUND**

Title	
RECESSED GULLIES GS1 AND GS2 WITH KERB SURROUND	
Scale Not to scale	
Drm	Date April 2005
Drawing Number 1100/05/085 & 088	
Revision	

Drawing: 1200/07/001 – Precast Concrete Bollard Type B1

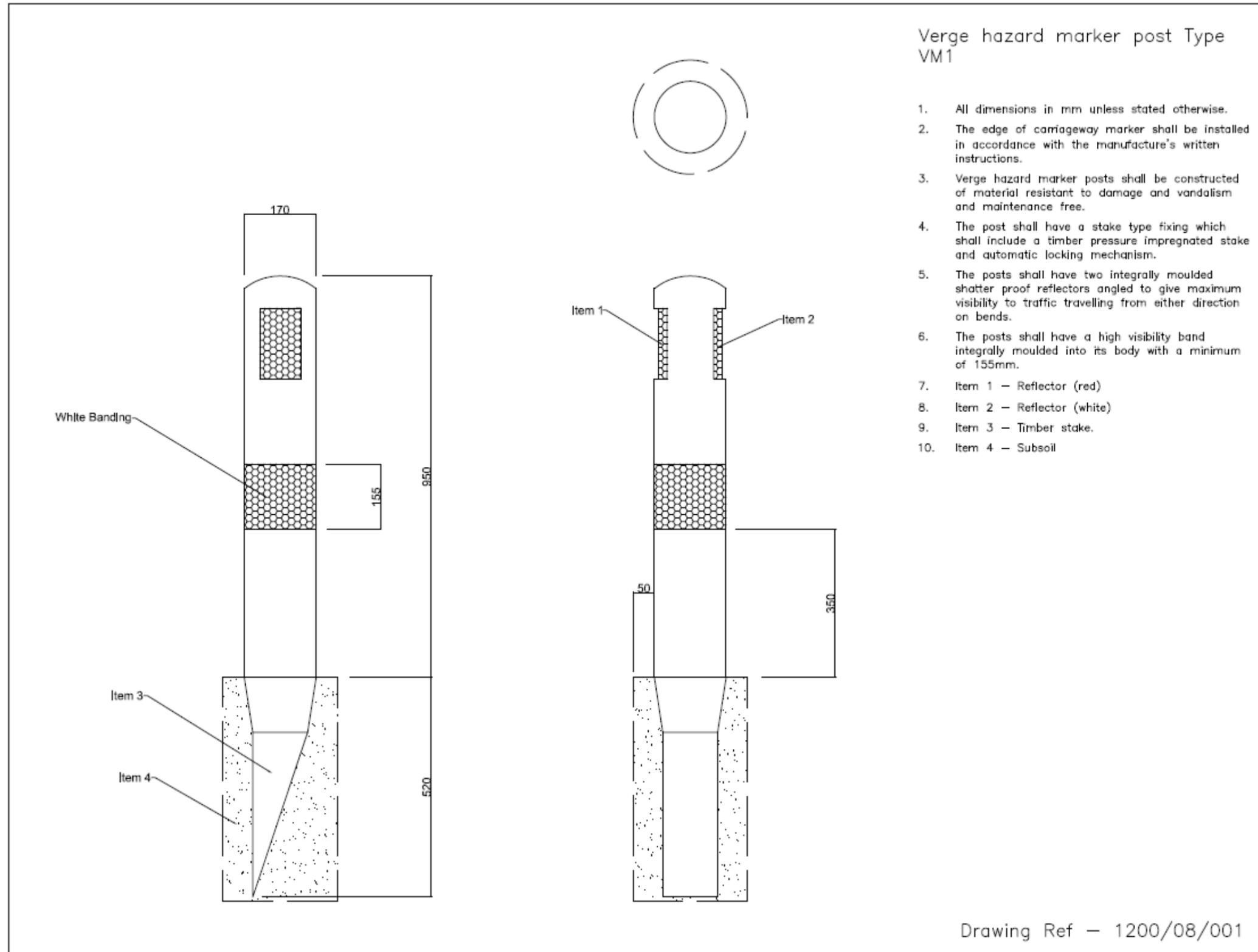


Notes:
 1. All dimensions in mm.

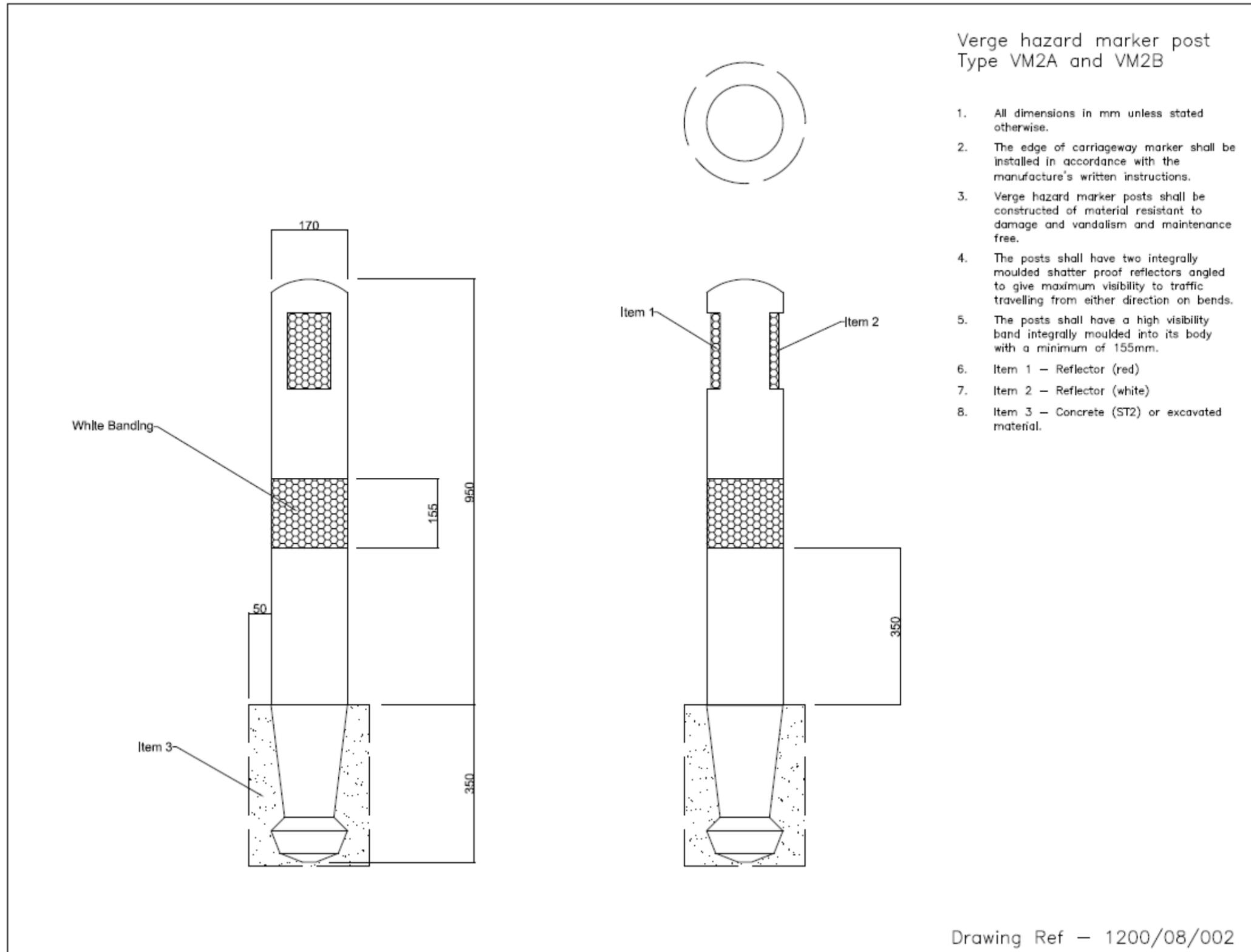


Title	
PRECAST CONCRETE BOLLARD TYPE B1	
Scale Not to scale	
Drn	Date April 2005
Drawing Number 1200/07/001	
Revision	

Drawing: 1200/08/001

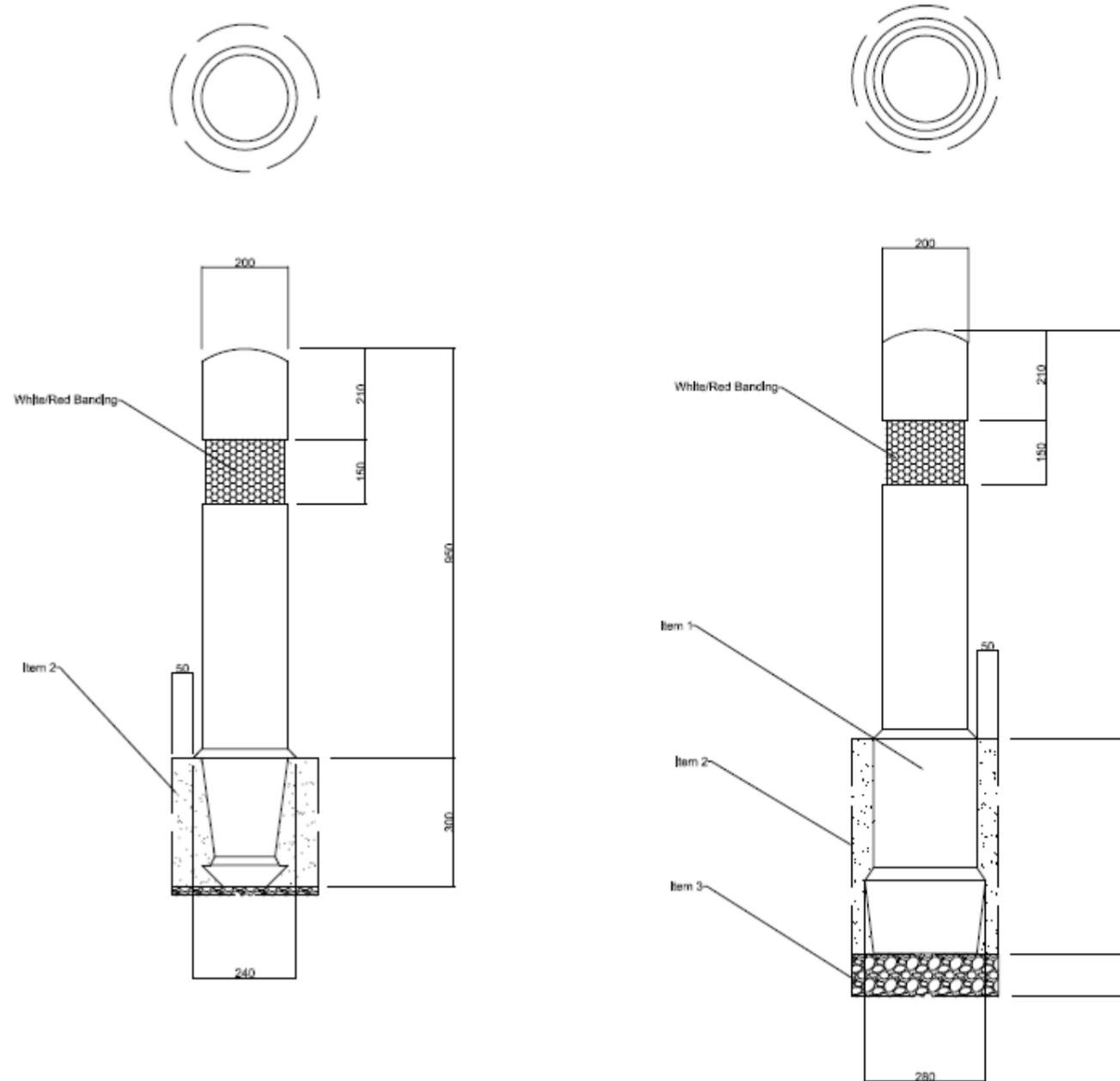


Drawing: 1200/08/002



Drawing: 1200/09/001

Edge of Carriageway Hazard
Markers – Type ECB1

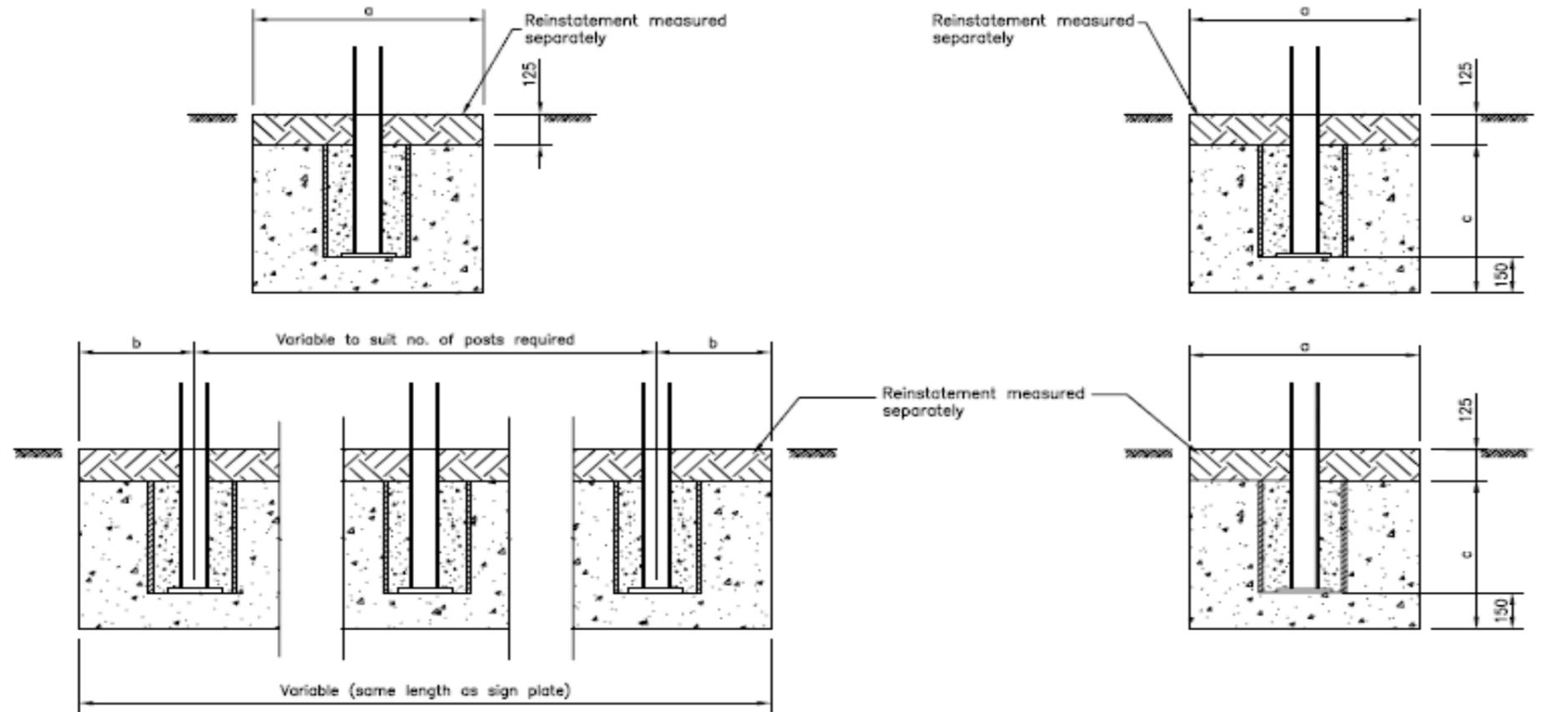


1. All dimensions in mm unless stated otherwise.
2. The edge of carriageway marker shall be installed in accordance with the manufacture's written instructions.
3. Verge hazard marker posts shall be constructed of material resistant to damage and vandalism and maintenance free.
4. A 150mm retro-reflective red and white band shall be attached to the marker.
5. Item 1 – Permanent ground socket
6. Item 2 – Concrete (ST2)
7. Item 3 – Gravel

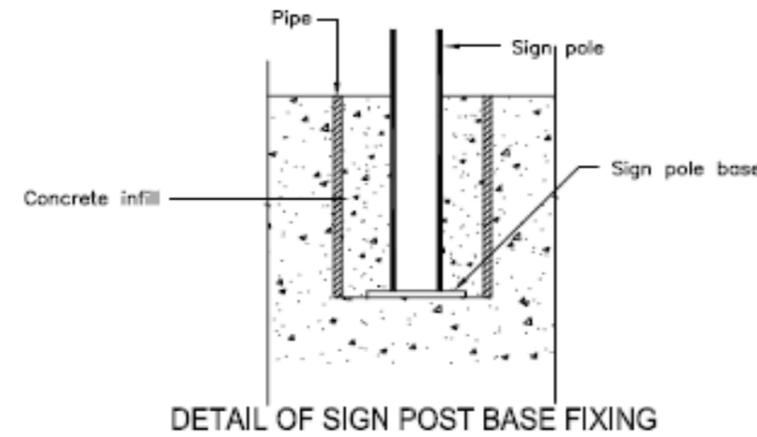
Drawing ref – 1200-09-001

Drawing: 1200/10/1 – Details for Sign Post Foundation Sheet 1 of 2

TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK



For Post Diameter	76mm	83-102mm	114-140mm	163-194mm
'a'	610	830	990	1525
'b'	305	415	495	765
'c'	460	610	915	915



DETAIL OF SIGN POST BASE FIXING

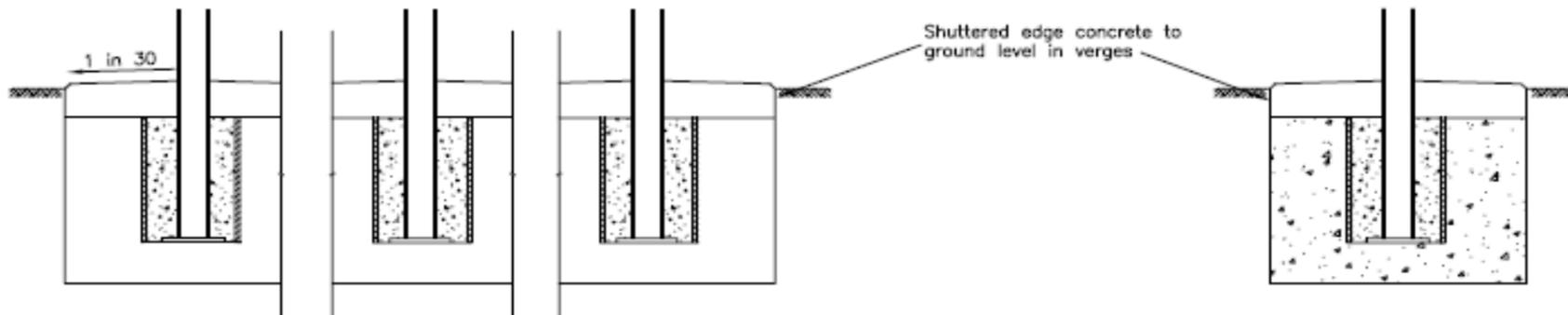
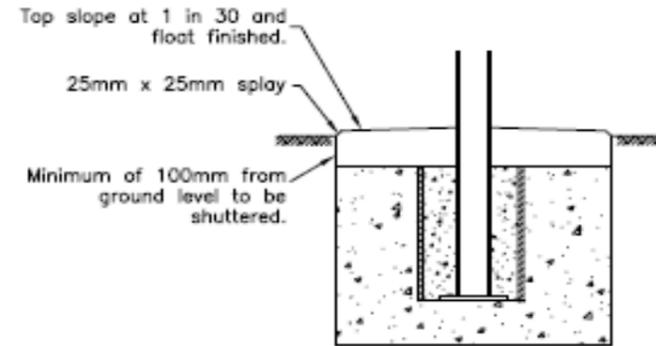
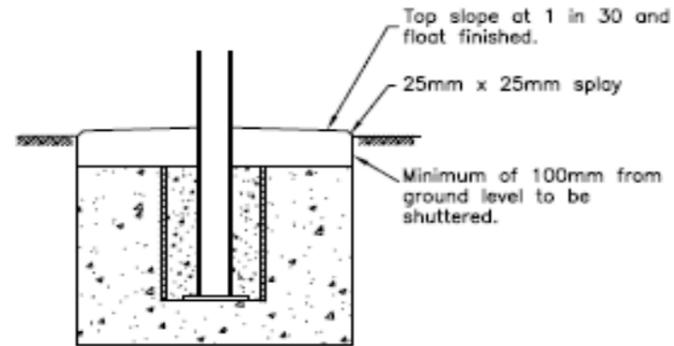
Notes;

1. To be read in conjunction with series 1200.
2. Concrete to be to Clause 2602 mix to be ST5.
3. The size, number and materials for columns is to be in accordance with chapter 13 of the Traffic Signs Manual.
4. For signs erected in grass verges, concrete foundations are to be brought up to ground level as indicated on Sheet 2.

Title	
DETAILS FOR SIGN POST FOUNDATION SHEET 1 OF 2	
Scale Not to scale	
Drn	Date
	April 2005
Drawing Number	Revision
1200/10/1	

Drawing: 1200/10/2 – Details for Sign Post Foundation Sheet 2 of 2

TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK



MOWING STRIP DETAIL FOR SIGNS IN GRASSED AREAS
 (SEE DETAIL 12/1(1) FOR DIMENSIONS Etc.)

Notes:

1. To be read in conjunction with series 1200.
2. Concrete to be to ci2602 mix to be ST5.

Title
 DETAILS FOR SIGN
 POST FOUNDATION
 SHEET 2 OF 2

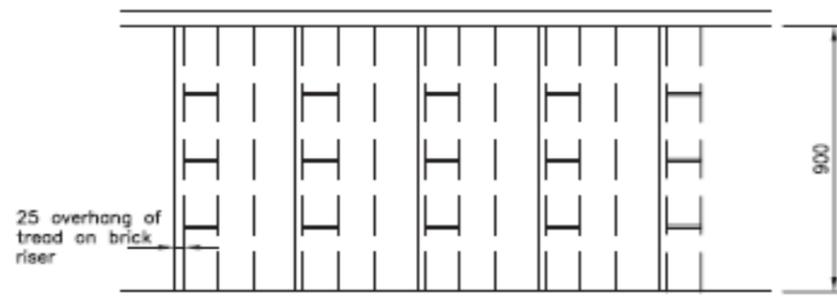
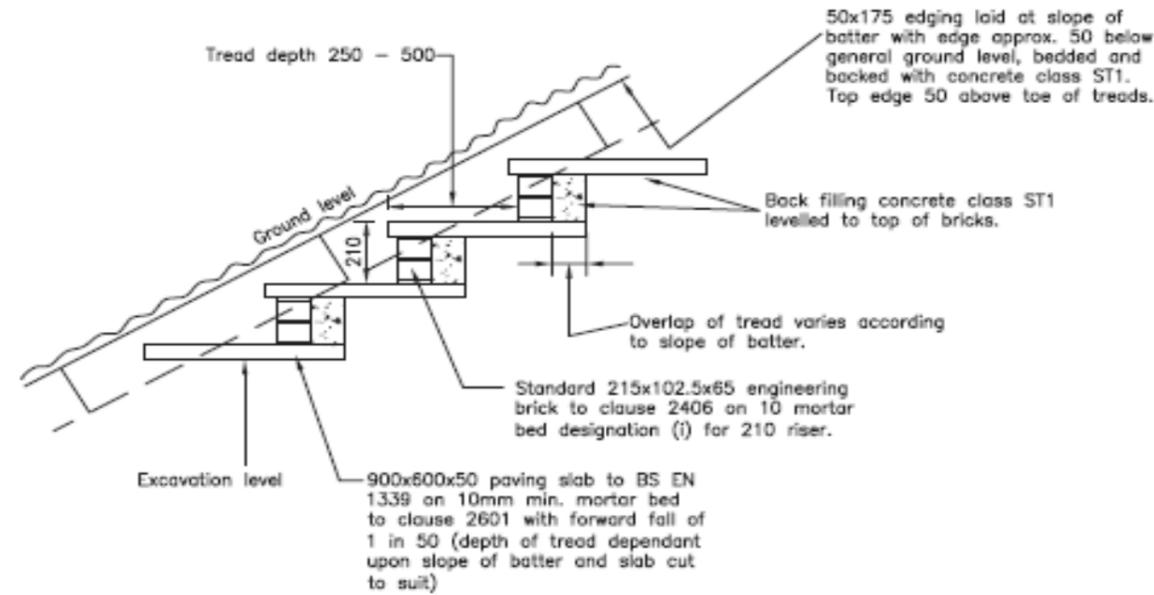
Scale Not to scale

Drn	Date April 2005
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Drawing Number 1200/10/2	Revision
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Drawing: MCX 0138 (Modified) – Typical Access Steps

TERM CONTRACT FOR MANAGEMENT AND MAINTENANCE OF THE SCOTTISH TRUNK ROAD NETWORK



PLAN

Notes:

1. Steps to be provided on all gradients more than 600 in height where cabinets 600 are provided.
2. This drawing shows the construction detail required for steps. The Operating Company shall provide drawings of step details for gradients where this standard detail is inappropriate.
3. Classes & grades of materials shall comply with the Specification for Highway Works.

Title
INSTALLATION DRAWING
NMGS 1&2
TYPICAL ACCESS STEPS

Scale Not to scale

Drn	Date
	April 2005

Drawing Number	Revision
MCX0138(modified)	