

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 1

MANAGEMENT, INSPECTION AND MAINTENANCE

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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 aerially 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 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

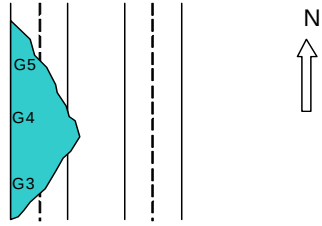
ANNEX 7.1/D – Flooding Report Sample

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.