Non-technical Summary

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1 Introduction

1.1 Background to Scheme

The A68 is one of the main trunk roads used by traffic travelling to and from the outskirts of Edinburgh to the Scottish Borders and then southwards on to England. The length of the A68 within Scotland is approximately 95 km and the road passes through Midlothian, the Scottish Borders, Northumberland, Durham and Newcastle upon Tyne. As well as long distance travellers, the road is widely used locally for commuting to and from Edinburgh and the Scottish Borders.

This road improvement scheme is being proposed by Transport Scotland (TS), the Scottish Government Agency responsible for the delivery, operation and management of the rail and trunk road network within Scotland.

In 1997, the then Scottish Office (subsequently renamed the Scottish Executive and now the Scottish Government) assessed the A68 between Dalkeith and Melrose in detail to identify and prioritise sections of the road that required / may require improvement. The findings were presented to the Scottish Ministers within a Route Action Plan (RAP) and a Firm Strategy Report (FSR). This process was carried out for each main trunk road in Scotland. All of the RAP / FSR documents were reviewed and in March 2003, an announcement was made that ten improvement schemes would be developed in Scotland. Two of these schemes were located along the A68, the A68 Pathhead to Tynehead Junction Improvement was one and the A68 Soutra South to Oxton Improvement was the other.

In August 2003, Mouchel Parkman (now 'Mouchel'), in association with Scottish Borders Council (SBC), SIAS and Young Associates (Environmental Consultants) Ltd. (now AMEC Earth & Environment [AMEC E&E]), were commissioned by then Scottish Executive Enterprise, Transport and Lifelong Learning Department (now TS), as part of a Multiple Framework Agreement (MFA), to take forward the A68 Pathhead to Tynehead improvement scheme. The commission comprised the investigation, assessment and design of various road improvement options to allow a 'preferred' scheme to be selected and publicly advertised. A 'preferred' scheme is the option which is most viable after consideration of all the economic, environmental and engineering aspects (the proposed scheme).

1.2 Purpose of the Non-technical Summary

In terms of the environmental aspects, an Environmental Impact Assessment (EIA) of the proposed scheme has been completed and an Environmental Statement (ES) has been published under Section 55A of the Roads (Scotland) Act (1984), as amended by Part III of the Environmental Impact Assessment (Scotland) Regulations (1999). The results of the EIA are fully published in the ES allowing all interested parties an opportunity to review the assessment and the proposed scheme. To meet with legal requirements, a public consultation period of six weeks follows the date of publication

of the draft Road Orders and the accompanying ES to provide interested parties with the opportunity to present their views or comments to the Scottish Ministers before a decision is made.

This short report constitutes the 'Non-technical Summary' (NTS) of the ES, which summarises the environmental impacts and presents the main findings in an easily understandable form using non-technical language. The information contained in the NTS is divided into three chapters; Chapter 1 comprises an introduction, including an overview of the proposed road scheme. Chapter 2 contains a summary of the key issues arising from the ES process, focusing on the significance of the effects of the scheme and the main mitigation proposals. Chapter 3 then presents a summary of the main findings. As well as being produced as a separate report, the NTS is also bound into the front of the ES.

Copies of the ES are available for viewing by the public. These are on display at the following locations:

Transport Scotland
Major Transport Infrastructure Projects
Buchanan House
58 Port Dundas Road
Glasgow
G4 0HF

Midlothian Council
Midlothian House
Buccleuch Street
Dalkeith
EH22 1DN

Pathhead Post Office
139 Main Street
Pathhead
EH37 5PT

The publication of the ES and draft Road Orders will be followed by a 6 week period (3 week period for the Compulsory Purchase Order) during which any person wishing to make representation regarding the proposed draft Orders and/or the ES should lodge it in writing to the following address:

Director MTRIPS
Transport Scotland
Major Transport Infrastructure Projects
Buchanan House
58 Port Dundas Road
Glasgow
G4 0HF

Electronic copies of the ES and the NTS are available for download at http://www.transportscotland.gov.uk. Printed copies of the ES will be available following publication at a cost of £50.00 from the above address. The ES will also be available in CD format at a cost of £10.00 each.

2 Scheme Description

2.1 Scheme Overview

The location of the A68 Pathhead to Tynehead Road Improvement Scheme is illustrated within Figure 1. The proposed scheme starts at Hope, south of the village of Pathhead and ends at Fala Tunnel just south of the B6458 Tynehead / Saughland road. The proposed improvements cover a length of approximately 2.51 km. Within the scheme, there are four existing junctions joining the A68: the U60 Longfaugh road, the U77 Fala Dam road, the U78 Costerton road and the B6458 Tynehead / Saughland road. In addition to these, there are also a total of ten existing field access points. The improvement scheme is required because of the lack of overtaking opportunities and platoons of traffic that regularly occur, mainly due to slow moving traffic and heavy goods vehicles. These lead to drivers becoming frustrated and to dangerous or careless driving manoeuvres, often resulting in traffic accidents.

In order to provide these new overtaking opportunities and reduce accident statistics, it will be necessary to re-design these existing road junctions for safety reasons and to meet with current road design standards. Each of the junctions will therefore undergo improvement works such as the re-alignment of junctions for improved visibility, safer turning off / on or dedicated lanes from traffic turning off the A68 (known as ghost island junctions or stagger junctions). For both the U77 Fala Dam road and the U78 Costerton road, the existing junctions will be closed to vehicles (but remain open to pedestrians and cyclists), with a new side road then being constructed just north of the B6458 linking the southbound A68 to the U77 south of Haugh Head House.

The new A68 carriageway configuration will comprise of a layout known as WS2+1. The WS2+1 consists of a wide single carriageway with two lanes in one direction, providing overtaking opportunities and one lane in the opposite direction with overtaking prohibited in that direction. An example of the WS2+1 arrangement is already in place and in operation at Soutra Hill on the A68 south of this scheme.

The scheme comprises of alternating sections of WS2+1 to allow improved overtaking in both directions (Figure 2). Southbound vehicles will be provided with overtaking of approximately 833m in length extending from the junction for the U60 Longfaugh Junction to the B6458 Junction. A changeover section of approximately 463m in length will then be provided to allow safe access to and from the new side road leading to Fala Dam / Marldene and the B6458 Tynehead junction. The northbound overtaking will be approximately 648m in length and will start approximately 130m north of Fala Tunnel, ending 180m south of the B6458 Tynehead junction, at the changeover section mentioned above. Each end of the scheme will have a taper to introduce vehicles from one lane carriageway to two lane carriageway and vice versa.

The existing lay-by at Magazine Wood will be closed off with a replacement lay-by constructed slightly to the north (Figure 2). The private access point to Magazine Wood

and the field on the east of the A68 beside the lay-by will also be changed. Access will be provided from the rear of the relocated Magazine Wood lay-by.

All of the existing ten field access points off the trunk road will be stopped up. Alternative means of access to these fields will be provided by the use of new and existing field access points located on the side road network and off adjoining fields.

Two further maintenance lay-by's will be incorporated into the scheme, one adjacent to the northbound carriageway, 220m north of Tynehead junction and the second adjacent to the southbound carriageway, 200m north of Fala Tunnel. The first lay-by will be used for road maintenance, while providing access for Scottish Water to their plant in this area. The second will be used for road maintenance, while providing safe vehicle refuge for telecommunication companies to access their apparatus in the vicinity of Fala Tunnel.

2.2 Alternatives Considered

The consideration of alternative proposals was a lengthy but thorough process. Work to identify alternative suitable proposals for this particular stretch of road started in August 2003. The alternatives were identified with the objectives for the new scheme in mind, namely to improve the opportunities for guaranteed overtaking, reduce traffic platooning and improve safety.

Originally the scheme ran between the southern boundary of Pathhead to the B6458 Tynehead Junction. Three different options were prepared at this time for further consideration, although several modifications of each option were also investigated. A presentation review of these options, named 1, 2 and 3 was made to then Scottish Executive in July 2004. Following on from this review, it was intended that a full study, including detailed environmental assessment of each option would be carried out to identify the best practicable option (the preferred scheme).

After the presentation however, it was decided that of the three possible options only one option was actually realistic / possible and on that basis it was considered inappropriate to undertake a full assessment of all three options (this is referred to a Stage 2 assessment of the best options). The steps involved in this decision and process were recorded along with the Scottish Executive's decision that only one option (Option 1 'Side Roads Retained at Junctions/Changeover') should be taken forward and be subjected to a full assessment (known as a Stage 3 assessment of the preferred scheme).

Work on this assessment therefore began and as part of the process a Senior Management Presentation of the preferred option was held in March 2005. During these discussions, it was decided that the estimated total scheme cost made this option unviable also. Consequently the Scottish Executive requested that work on the assessment of Option 1 be stopped and that alternative, more economically viable, options sought.

Six new options for the proposed scheme were then developed, the majority of which consisted of a shorter scheme which had been moved around 1km south of Pathhead, to avoid the high pressure gas main and the abandoned underground limestone workings near to Hope. In April 2005, approval was granted for assessment work to re-commence at the Stage 2 level on two of the above six options, namely Options 12 and 14.

Following discussions within the Standards Section at the Scottish Executive a further option was developed as a hybrid of Option 14 and it was called Option 14A. The Scottish Executive confirmed in August 2005 that all three options should be subjected to the Stage 2 Assessment process.

The three scheme options were subject to a full DMRB Stage 2 assessment in terms of environmental, engineering and traffic/economic criteria (YA 2006, SBC 2006 and SIAS 2005) and a report produced in September 2006[1]. As a result, Option 12 was selected as the preferred scheme and has been taken forward to DMRB Stage 3 assessment (further details on the three options assessed and the subsequent preferred route are provided within Chapter 2 of the Environmental Statement).

2.3 Construction Requirements

In general, conventional construction methods will be employed for the scheme. Construction is planned to start in December 2009, with completion by December 2010. As the area is dominated by agricultural land and the ground investigations have not revealed any unusual ground conditions, no special construction methods will be required.

Wherever possible, required areas of new road embankment will be constructed using material excavated from cuttings. A large amount of material will however need to be imported into the site from elsewhere, but this will be brought in from as local a site as possible in order to minimise any effects on landscape, particularly for the new side road. The construction equipment to be used will be standard for road scheme construction and will be stored and maintained at the main site compound. Vehicle movements will be most frequent from the site compound at both the beginning and end of the working day. Typical standard working hours will be from 0730 hours to 1800 hours during the week and Saturday between 0800 and 1300. Sunday working is not anticipated and will only be allowed with permission of the Site Engineer and agreed in advance with Midlothian Council.

A construction site compound is likely to be established on site. This will be located away from all watercourses and out with any areas of particular ecological interest e.g. away from badger / otter activity. After site restoration, there will be no permanent environmental impacts.

[1] Mouchel Parkman and Young Associates, (September 2006). A68 Pathhead to Tynehead Improvement Scheme Stage 2 Environmental Assessment Report.

It is anticipated that disturbance to and restrictions upon existing traffic will be reduced through appropriate planning e.g. creation of the new side road prior to closure of existing U77 and U78 junctions. However, some traffic management will be required during the construction phase and this may comprise temporary road diversion (to avoid conflict with construction site traffic/activities), speed restrictions and traffic signalling. A detailed traffic management plan for the scheme will be developed by the Contractor in consultation with Midlothian Council and the Trunk Road Maintenance Agent (currently BEAR).

The contractor will be required to comply at all times with the requirements of the final scheme specification with regard to prevention of pollution both during construction and operation of the scheme. Measures to deal with accidental spillages and discharges to watercourses are currently being developed in consultation with the Scottish Environment Protection Agency (SEPA).

An appropriate landscape strategy designed and specified by professional landscape specialists will be developed for the preferred scheme and will entail; some tree planting; profiling and seeding of cuttings and embankments that is sympathetic with the surrounding landscape; and reinstatement of affected field boundaries.

3 Environmental Impact Assessment

3.1 Introduction

As mentioned earlier, the development of a road scheme goes through three stages. The three stages and the process followed for this particular scheme are outlined below:

Stage 1 - Broadly defined improvement routes / options underwent a preliminary assessment, which included an update of the environmental data gathered together for the RAP. This was completed between August 2003 and June 2004.

Stage 2 – This involves the detailed assessment of the options identified at Stage 1 as being viable in general terms. In this case three options were proposed in July 2004, but subsequently six new options were developed due to the three initial schemes becoming unviable. Of these six, three were then taken forward and a full Stage 2 assessment completed. The outcome was the identification of this now proposed scheme for Stage 3 assessment. This decision was reached in September 2006.

Stage 3 - This entails a detailed assessment of, and in this case, publication of an Environmental Statement for the preferred scheme.

The Stage 3 environmental assessment involves several key stages. Firstly existing environmental conditions within the study area are established using a combination of desk-based research, consultations with statutory and other appropriate organisations and fieldwork. This allows potential environmental constraints and on-site sensitivities to be identified so that the environmental assessment can focus on the issues of particular relevance to the scheme. Consultations with organisations are a critical part of this. Potential environmental impacts, positive and negative, are then identified and their significance assessed. For impacts that are considered to be adversely (negatively) significant, measures are developed to either avoid, reduce or offset (known as mitigation) the impact using generally well accepted practical techniques. These measures are developed and committed to by the person responsible for building, operating and managing the improvements.

In addition to the environmental aspects, similar reports are completed in terms of economics and engineering to ensure that the very best and most cost effective way in making the improvements is applied. The Stage 3 process was completed in early 2008.

3.2 Consultation

A comprehensive consultation exercise has been undertaken, with both statutory and non-statutory consultees, as part of the environmental impact assessment process (as set out in the relevant legislation). Statutory organisations include Midlothian Council, the Scottish Government, Historic Scotland (HS), Scottish Natural Heritage (SNH) and

the Scottish Environment Protection Agency (SEPA). Non-statutory consultees included the British Horse Society, Edinburgh and Lothians Badger Group, Forestry Commission, Forest Enterprise, Lothian Bat Group, Forth Fisheries Foundation, Royal Society for the Protection of Birds (RSPB), Scottish Wildlife Trust (SWT), Scottish Badgers (SB), Sustrans and the Cyclist Touring Club Scotland (CTC). Other organisations such as Community Councils and Police are consulted as part of the other economics and engineering assessments.

Organisations were contacted by letter to inform them of the details of the proposed scheme and to seek any specific information that they may hold or any comments that they may have concerning the proposals. The information obtained helped to develop the alternative scheme options and also to select and assess the preferred scheme. As well as obtaining organisations' opinions associated with the development, the consultation process provided information about existing environmental conditions.

Key specific issues raised through the consultations related to the importance of the Salters Burn and other watercourses within and adjacent to the scheme, the potential for pollution and ecological / environmental damage, other ecological interests within the area including disturbance to badgers, bats and otters, protection of the landscape amenity and character and the danger and disruption caused to road users, pedestrians and cyclists.

3.3 Likely Significant Effects

The completion of the DMRB (Design Manual for Roads and Bridges) Stages 1, 2 and 3 processes and subsequent production of the Environmental Statement has identified the following aspects of the environment likely to be most significantly affected by the improvement scheme. These are:

- Cultural Heritage;
- Ecology:
- Geology;
- Landscape and Visual Impacts; and
- Road Drainage and the Water Environment; and
- Disruption due to Construction.

In total, eleven separate environmental subjects require assessment and a brief description of these along with the outcome of the assessment is provided below. All assessments have been completed in accordance with DMRB Volume 10 (Environmental Design) and Volume 11 (Environmental Assessment).

3.4 Air Quality

There are five receptors located within 200m of the proposed road scheme and within 200m of affected routes, all of which are residential in nature (Haugh Head House, Old

Crichton Dean, Marldene, Routhenhill and Hope) and may potentially be impacted upon by the widening and improvement works proposed.

Air pollutant concentrations were calculated for the base year (2008), the opening year (2010) and the design year (2025). These results are then compared to assess any changes in air pollutant levels. The assessment determined that there would be no significant changes in these concentrations, with predicted levels below the national air quality standards and objectives.

The overall change in nitrogen dioxide (NO_2) and particulate matter (PM_{10}) experienced at the receptor locations was also assessed. The representative number of receptors experiencing a change in pollutant concentration at each distance was then assessed to identify the overall number of properties experiencing an improvement, deterioration or no change in concentration. The number of properties experiencing a slight deterioration in air quality for NO_2 and PM_{10} was four with one property experiencing no change in concentration for both NO_2 and PM_{10}. Although there is a measurable deterioration at four properties, this is so slight that it is not significant in terms of the Air Quality Objectives for NO_2 and PM_{10} (no concentrations of PM_{10} increase by more than the $2\mu g/m^3$, the level considered significant; and no concentrations of NO_2 increase by more than the $4\mu g/m^3$, the level considered significant).

The significance of an air quality impact of vehicular emissions on existing sensitive receptors have been determined by considering the magnitude of the impact together with the sensitivity of the location of each receptor. As the change in concentration of pollutants was determined to be insignificant, the magnitude of the change is considered to be negligible and insignificant.

All air pollutant concentrations were found to be well below the National Air Quality Standard objectives, and the overall impact was found to be insignificant. None of the proposed scheme options will create the need for an Air Quality Management Area; and no mitigation measures are considered necessary for any of the identified receptors.

3.5 Cultural Heritage

Aspects assessed under cultural heritage include Scheduled Ancient Monuments (SAMs), historic designed gardens, listed buildings, unscheduled / unlisted sites and previously unrecorded sites and features. An area of 500m from the centre of the proposed option is used as a study area.

A total of three SAMs of national importance and an additional six SAMs have been identified within 500m. The closest (Hope prehistoric enclosure) is located at least 200m from the scheme. There are no historic designed landscapes or listed buildings, although there are listed buildings in nearby villages out with the study area. There are also ten unscheduled sites within the 500m study area and as with all road construction projects, there is a risk that unidentified sites will become apparent during construction.

Potential adverse impacts on known features of cultural heritage interest have primarily been avoided by careful scheme alignment so as not to directly impact on the location of known sites of cultural heritage, e.g. the Hope prehistoric enclosure SAM. The majority of the improvements involve on-line works. As such, no adverse impacts upon the cultural heritage have been identified.

Historic Scotland has confirmed these findings by stating during consultation that the proposed route option poses no significant issues for the historic environment and therefore specific mitigation measures are not required.

Although, during Stage 3 consultation, Historic Scotland determined that given the small amount of new land take, no archaeological mitigation would be required, it is recommended that (due to the time lapse between consultation and proposed scheme construction) this is confirmed in advance of any site clearance / construction works. Historic Scotland may advise that some form of archaeological field evaluation within areas of new land take be undertaken prior to construction due to the potential for disturbance of unrecorded remains that may have survived undetected.

3.6 Land Use

Land use covers the elements of private property, community land, development land, forestry land, agricultural land, waterways and public utilities. The majority of the land use surrounding the scheme is agricultural, used mainly for grazing. There are six nearby private properties namely, Marldene, Haugh Head House, Old Crichton Dean, Routhenhill, 2 Fala Dam Cottages and Longfaugh Cottages. Community land includes the Magazine Wood lay-by and another lay-by at Hope. Forestry interests are Magazine Wood, Marldene Wood and small strips of connecting semi-mature woodland. There is no development woodland or waterways. There are several utilities present within the scheme corridor. These consist mainly of telecommunications apparatus owned by British Telecom, Thus, Cable and Wireless, Telewest and Global Crossing. Also present are Scottish Power, Scottish Water and Scotland Gas Networks.

In terms of private property, none of the properties will require demolition. Marldene will have a new access and turning area constructed due to the closure of the existing U77 junction with the A68. The field to the south of the Magazine Wood lay-by will have a new access point exiting from the lay-by itself and the lay-by itself will be moved slightly more to the north than its existing location.

The proposed scheme will result in the loss of 6.6 ha of agricultural land, consisting of 4.1 ha (Class 3_1) and 2.5 ha (Class 3_2). Although this is a sizeable area, in comparison to the amount of surrounding medium quality agricultural land, it is relatively small. Most of the land take is adjacent to the existing A68 road corridor and as such involves no severance. A sizeable portion of the Crichton Dean landscaped area is also affected by the proposed scheme. Trees in this area are less mature / more widely

spaced and wind blow is unlikely to be an issue. As such trees will be felled only within the area to be acquired (0.5 ha).

The majority of the public utilities impacts will involve diversionary work evolving around the areas of widening. This affects the various telecommunication apparatus, Scottish water plant and an 11kv overhead power supply all of which will be diverted into the new verges.

There will therefore be some impact upon private accesses, public utilities, loss of forestry and community land but these are all insignificant as alternative arrangements will be provided.

Mitigation and best practice that will be applied are:

- Minimisation of land-take where possible.
- Minimisation of public utility diversion where possible.
- Reducing degree of severance by following existing boundary lines where possible.
- Re-use of excavated agricultural soils in earth mounding and landscape mitigation.
- Restoration of disturbed areas to original use wherever possible.
- Compensation for the loss of land and the relocation of existing access arrangements.
- Provision of access tracks for the Saughland Farm field at Fala Tunnel and the fields to the south-west of the A68.
- Improvements to existing at grade crossing of Salters Burn, which will include stock holding pens for Longfaugh Farm.
- Woodland planting to replace trees felled in Magazine Wood to combat the effects of wind blow.

With the application of these measures there will be no significant impact on land use.

3.7 Ecology and Nature Conservation

Badgers and otters are present within the vicinity of the proposed scheme and the potential impact upon them as a result of the road widening has been dealt with within this assessment. The two main concerns relate to a potential risk during the construction phase and an increased risk from road traffic accidents while attempting to cross the completed, widened carriageway. In order to reduce these risks, mammal routes will be maintained throughout construction, whilst mammal fencing will be located at known hotspots to guide mammals to crossing facilities (mammal ledges and an underpass) to allow safe passage of otter and badger across the A68. Construction works will be timed to avoid sensitive times of the year e.g. otter breeding. Through applying these measures all impacts can be reduced to insignificant levels.

A long-established, mature coniferous plantation along the eastern edge of Magazine Wood, directly adjacent to the current lay by on the south bound carriageway represents a further area of ecological interest within the vicinity of the scheme. A section of this woodland will be felled in order to facilitate the construction of a new field access. The extent of this felling will be kept to a minimum and will be carried out outwith the bird breeding season. Furthermore, a number of trees within the vicinity have been identified as having the potential to support roosting bats. A pre-felling check will be carried out before the removal of any trees, thus reducing the risk of impacting upon any resident bats.

The felling of trees as a result of the development proposals will be offset via the planting of trees in the vicinity of Magazine Wood and in other areas throughout the scheme extent.

General best practice will be applied to all construction works, with sensitive times of year / day avoided and SNH and SEPA requirements adhered to at all times.

3.8 Landscape Effects

The landscape and visual impact of the proposed scheme has been assessed taking into account the proposed mitigation in the winter fifteen years following the scheme opening. The assessment indicates that appropriate mitigation measures as recommended above will reduce the significance of the landscape impact of the scheme to slight and therefore not significant overall.

The A68 Trunk Road represents an existing adverse feature of the area and will not be significantly changed by the online widening. Indeed, significant opportunity exists to enhance the visual amenity and biodiversity of the area by improving the hedgerows and strengthening tree belts through planting enhancements.

3.9 Traffic Noise and Vibration

Traffic noise and vibration may alter due to changes along the A68 and the construction of a new side road linking the A68 with the U77 Fala Dam road. This assessment addresses the effect of changes upon properties within 300m of the existing scheme and other affected routes. A total of five properties are present within 300 m of the existing road; Marldene, Old Crichton Dean, Haugh Head House, Routhenhill and Hope. Changes in noise will occur along the A68 as a result of increased traffic speeds and changes in noise will also occur along the U77 Fala Dam Road and the U78 Costerton Road due to the closure of the U77 / U78 junctions with the A68 and the opening of a new side road.

The traffic noise assessment, carried out for the five receptors within 300 m of the A68, indicates that an increase of 1 dB(A) and above would not occur at any of the receptors for both 2010 and 2025.

The properties of Old Crichton Dean and Haugh Head House will both experience a benefit from the proposed road scheme due to the closure of the U77 and U78 junctions and transferral of traffic along a new side road linking the U77 to the A68 (a decrease in noise of between 1 and 3 dB(A)).

The properties of Marldene, Routhenhill and Hope are all predicted to experience a slight increase in noise levels due to increased traffic speed along the A68 (Marldene and Hope) and due to the closure of the U77 and U78 junctions with the A68 and the opening of the new side road (Routhenhill). The increase in noise is predicted to be less than 1dB(A) for all three properties, which is considered imperceptible. As current guidelines confirm that increases in noise of <1dB are imperceptible, the changes from this proposed scheme are therefore unlikely to be significant.

Traffic induced vibration has also been assessed and for each of these five properties, this is predicted as imperceptible and insignificant.

The need for noise mitigation in the form of statutory insulation is assessed against the requirements of the Noise Insulation (Scotland) Regulations 1975 and the Memorandum on the Noise Insulation (Scotland) Regulations 1975. Although all five receptors lie within 300 metres of the altered carriageway, Hope is the only receptor likely to experience noise levels in excess of 65 dB(A) $L_{10\ 18\ hour}$. The increase in noise levels between the Do minimum and Do Something Scenarios is likely to be only 0.1dB(A), therefore the residential property would not be entitled to compensation in accordance with the NI (Scotland) R 1975.

On this basis it is therefore possible to confirm that the chosen scheme alignment is unlikely to have a significant impact on any of the five potentially sensitive receptors and it will not increase noise levels such that properties are entitled to compensation in accordance with the NI (Scotland) R 1975.

3.10 Pedestrians, Cyclists, Equestrians and Community Effects

Levels of pedestrians, cyclists and equestrians are considered to be low for this section of road. Although there is a footpath running from Pathhead to Fala Tunnel on the northeast side of the road, it is used infrequently and mainly for local access to the A68 for bus services or for local links between farms and nearby properties. A vehicular safety barrier is also awkwardly sited on the footpath which reduces its use to pedestrians and cyclists. Cyclists do however cross the A68 at two locations; between the U60 Longfaugh road and the U77 Fala Dam road and between the B6458 Tynehead / Saughland road and the U78 Costerton road. The only community use within the area is the Magazine lay-by along with a bus service that drops/picks up on the A68 at request.

There are four junctions within this section, which are used locally and by commuters returning home from Dalkeith / Edinburgh. These side roads provide access to the nearby private properties and villages. The U60 junction and the B6458 junction will be

improved as part of the scheme while the U77 and U78 junctions will be closed to vehicles. A new side road linking the A68 to the U77 will provide access to the properties of Marldene, Old Crichton Dean, Haugh Head House and Routhenhill.

An improved combined footpath / cycleway will be provided on the north east side of the A68, and access to the U77, U78 will be maintained for pedestrians and cyclists. As such, it is considered that there will be no significant impact on cyclists crossing the A68 or for pedestrians.

Vehicle journey times will change however, particularly for the residents at Marldene when wishing to travel north. With the closure and realignment of the U77 and the closure of the U78, access to the A68 will be via the realigned section of the U77 and the new access road. The alteration to the side road network results in an additional 1.671km being added to northbound journeys for the residents of Marldene. Assuming that a vehicle on the local road network travels at an average speed of 48kph (25mph) and on the A68 an average of 80kph (50mph), the increase in the journey time from Marldene to the northbound point will be 2.5 minutes (5 minutes on a round trip). Although this is a slight increase, it has not been determined as significant.

Properties to the east of the A68 are provided for by the introduction of the new side road which offers an improved and safer access onto the trunk road network and there is little or no effect on properties to the west of the A68.

There are no significant impacts on community use as a result of the proposed scheme option. No new bus stops are proposed but buses will be able to stop on demand as is the current regime. The Magazine Wood lay-by is to be relocated slightly north of its current location.

3.11 Vehicle Travellers

The assessment of the scheme in terms of its effects on the quality of driving conditions for vehicle travellers includes the changes to the views from the road and the effects of the scheme on driver stress.

'View from the road' is defined as the extent to which vehicle travellers, particularly drivers, are exposed to the different types of scenery through which a route passes.

'Driver stress' relates to three main components; frustration, fear of potential accidents and uncertainty relating to the route being followed.

In terms of the view from the road, travelling vehicles will be exposed to short-term temporary disturbance of views during the construction of the improvement works. As the hedgerows are removed and the views to the landscape opened up, this will enhance the views that a driver obtains while travelling along the A68. Once the landscaping has been completed post-construction, the short-term disturbance will be removed and there will be a slight beneficial improvement for driver views. The new

side road between the A68 and the U77 will involve the creation of an embankment which may potentially reduce the views for this particular area of the site.

3.12 Road Drainage and the Water Environment

There are two main watercourses within the vicinity of the proposed scheme.

The Salters Burn, which flows from the west side of the A68 in a generally north easterly direction, crosses to the east of the A68 just north of the existing U77 Fala Dam junction via a culvert. Approximately 3.5 km downstream of the A68 crossing point it joins the East Water, which then becomes the Keith Water. The water quality of this watercourse has been characterised as A1 (excellent quality) by SEPA.

The other main watercourse is the Cakemuir Burn, which flows beneath the A68 at the southern tie-in of the scheme at Fala Tunnel. This becomes the Fala Dam Burn approximately 1 km downstream of the A68 crossing point of the Cakemuir Burn. It then joins the East Water, a tributary of the Keith Water. SEPA has classified the Cakemuir Burn as A2 (good quality) under the Water Framework Directive, which is probably not at risk of failing to meet Good Ecological Status (GES).

Two further unclassified burns / drainage ditches, exist within the vicinity of the proposed scheme, both of which enter the Salters Burn downstream of the A68 crossing.

The increased run-off associated with a widened A68 represents an important potential impact upon the high quality watercourses within the vicinity of the construction proposals. Furthermore, the construction of new culverts beneath the A68 also represents a potential risk. However, under guidance from SEPA and with the implementation of accepted drainage systems and best practice, it is not considered that the proposals will have any great negative impact upon the local watercourses.

3.13 Geology and Soils

Road schemes have the potential to impact upon the geology and soils of an area through direct and indirect impacts on sites of importance or scientific interest, loss or sterilisation of mineral deposits or soil resources, disturbance of contaminated land or surcharging of ground which may accelerate erosion and subsidence.

The proposed scheme will not impact on any sites of geological interest, mineral extraction locations or any known areas of contaminated land. No impact is predicted in relation to surcharging of ground.

As most of the road improvement work needs to be built upon embankments, rather than cut through the landscape (due to the topography), material will need to be brought into the site for this purpose. Any material dug up from site that can be recycled will be used for the widening of the road or for the new side track as far as is possible and material brought to the site will be from a local source so that the raised

areas do not impact upon the natural landscape character. Topsoil removed during site preparation will be reused on verges and landscape areas.

No areas of current mineral extraction have been identified within the present study area, with the nearest area of extraction being present at the coal workings near the south end of the scheme. In addition, no areas of contaminated land were identified during the geological ground investigations completed in 2006.

3.14 Policies and Plans

The local and national planning guidance and appropriate development plans put in place by the Local Authority (Structure and Local Plans) have been reviewed in order to check for constraints or any issues that may need to be considered during the design of the preferred scheme.

As the preferred scheme complies fully with current development planning policies and proposals and also with relevant planning guidance, there are no overriding reasons in this respect why it cannot proceed as proposed.

In addition, at the time of assessment completion, there were no other planning applications within or close to the scheme area that would require further consideration in terms of this particular scheme's proposals.

3.15 Technical Constraints

As the proposed scheme has been developed over approximately four years, there have not been any notable technical constraints to the gathering of information and to the assessment process. All of the assessment work has been completed at appropriate times and at adequate levels (e.g. ecological surveying completed at appropriate times of year and repeated as required).

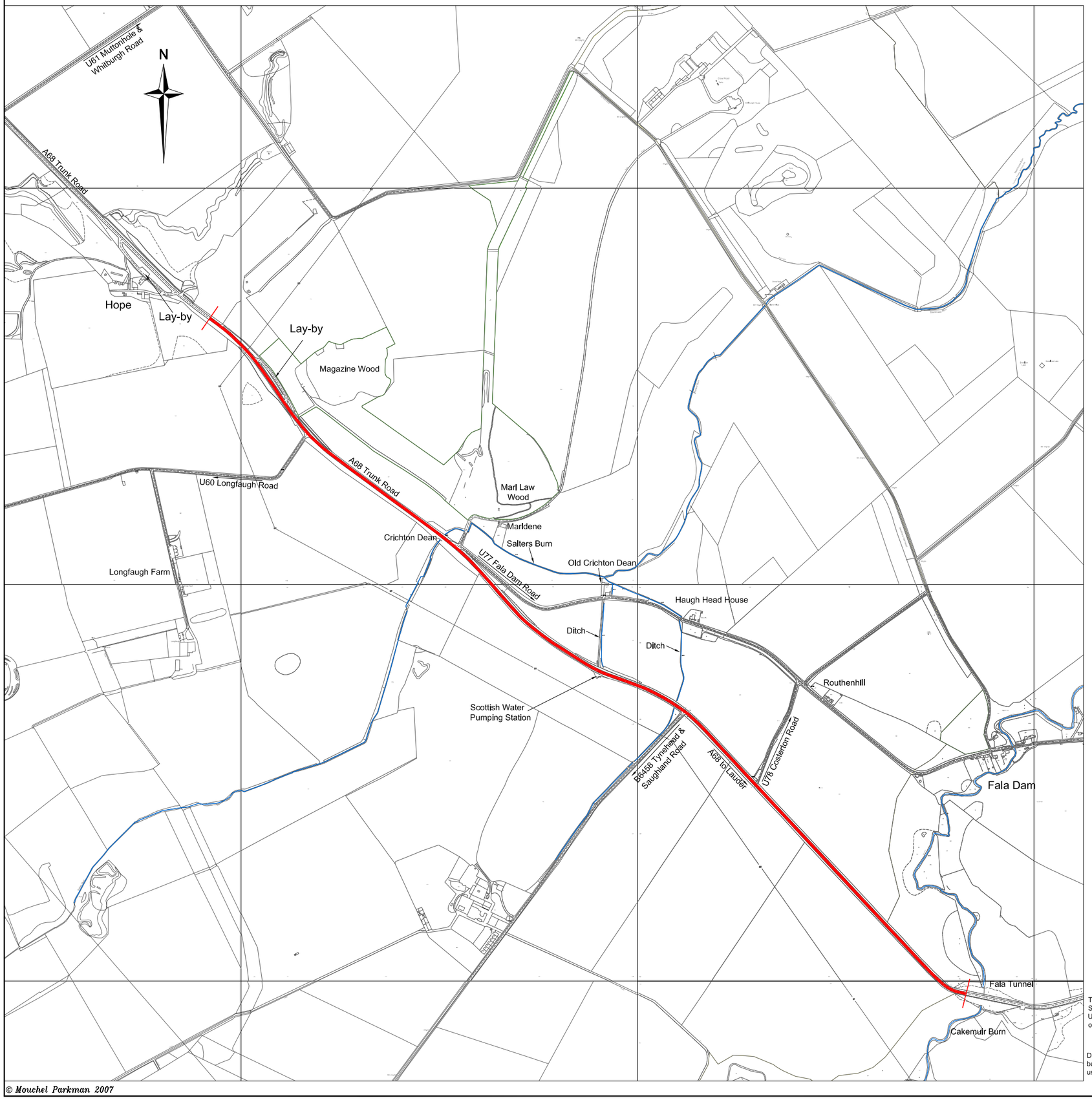
4 Conclusions

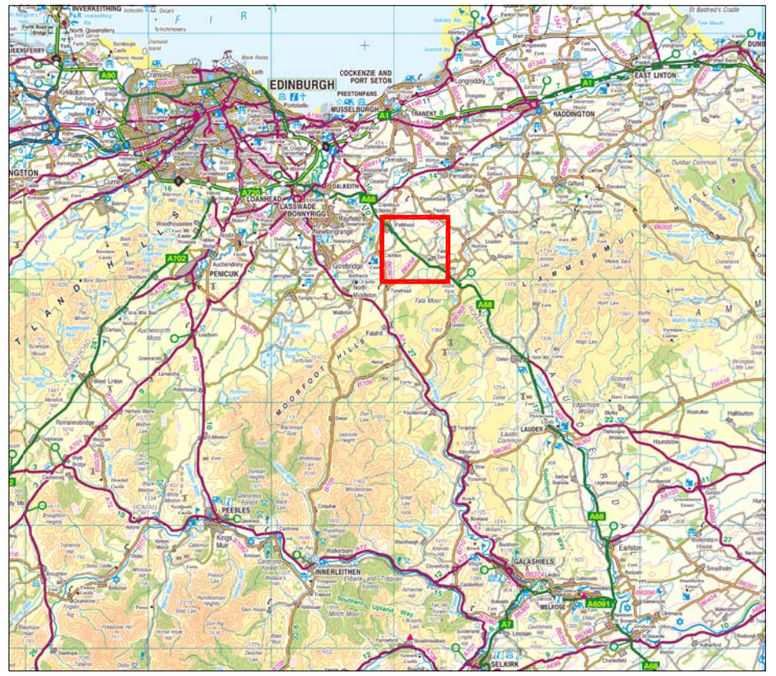
Transport Scotland proposes to implement a road improvement scheme along a section of the A68 between Pathhead and Fala Tunnel. The need for improved road conditions on this particular section of the A68 trunk road was identified in 1997 by the then Scottish Executive. The improvements themselves are required in order to provide improved overtaking opportunities for vehicle travellers, reduce driver frustration and stress caused by the presence of traffic platoons and slow moving heavy goods vehicles. Improved driver visibility will also reduce the risk of road traffic accidents and therefore assist in improving the overall safety of the A68. The type of improvement to be made has been decided upon after a series of detailed economic, environmental and engineering studies and investigations to identify the best option to be constructed.

The proposed scheme will comprise of a WS2+1 carriageway configuration which will provide overtaking opportunities for both northbound and southbound travelling vehicles. An example of this type of scheme is present at Soutra Hill.

The key areas raised by specific consultees and identified as the main issues are ecology (the protection of watercourses including Salters Burn; protection of species including badger, otter and bat; habitat preservation and the protection of woodland), water quality (pollution during construction and degradation), geology and soils (importation of fill material) and community effects (particularly the closing of the U77, U78 and the potential impacts to pedestrians, cyclists and equestrians). Following the completion of the environmental impact assessment (as reported within the Environmental Statement), it can be concluded that with the implementation of a comprehensive suite of mitigation measures designed to avoid or minimise potential impacts, and the use of best practice during construction activities / traffic management, the proposed scheme will not have any permanent significant adverse impact on any of the environmental topics assessed. The scheme will result in slight beneficial impact in terms of improving driver views from the road and through the installation of a better drainage system.

Figures





Scale A1 1:25,000 ; A3 1:50,000

FIGURE 1

Scheme Extent

REV	REVISIONS	BY	CHKD	APPD	DATE
F	Copyright updated	ED	ED	ED	05/07
E	Minor Amendments to Place Names	AS			10/06
D	Lay-bys and Pumping Station labelled	RM			08/06
B	OS Information added and Scheme Extents Amended	PG			11/05
B	Scheme Extents Amended	MP			06/05
A	Boundary definition altered	PG			05/04

AMENDMENTS

CLIENT
TRANSPORT SCOTLAND
An agency of SCOTTISH EXECUTIVE

ENGINEER
mouchelparkman

IN ASSOCIATION WITH
ABERDEENSHIRE COUNCIL, DUMFRIES & GALLOWAY COUNCIL, SCOTTISH BORDERS COUNCIL, SIAS AND YOUNG ASSOCIATES

DRAWING ORIGINATOR
Scottish Borders Council

PROJECT TITLE
A68 Pathhead to Tynehead Junction Improvement Scheme

DRAWING TITLE
Scheme Location Plan

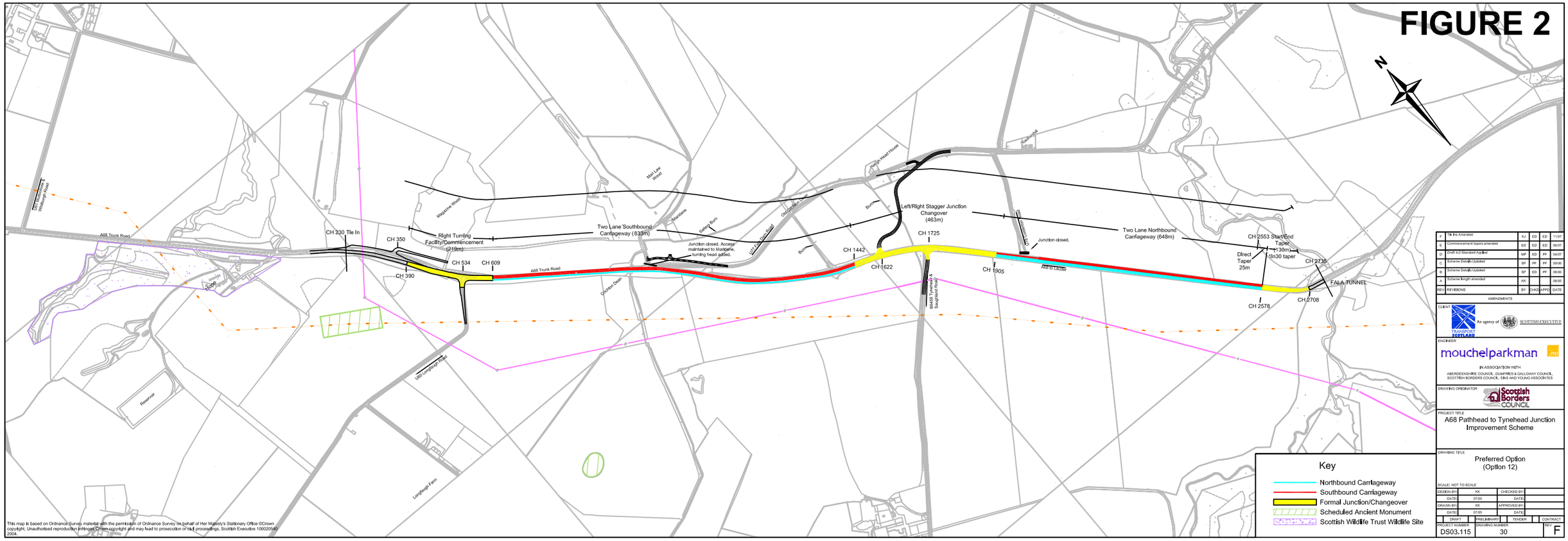
SCALE: AS SHOWN

DESIGN BY:	P Frankland	CHECKED BY:	
DATE:	March	DATE:	
DRAWN BY:	A Tunnah	APPROVED BY:	
DATE:	March 2004	DATE:	

DRAFT | PRELIMINARY | TENDER | CONTRACT

PROJECT NUMBER	DRAWING NUMBER	REV
DS03.115	01	F

FIGURE 2



REV	REVISIONS	BY	CHKD	APPD	DATE
	AMENDMENTS				
F	Tie Ins Amended	KJ	ED	ED	11/07
E	Commencement tapers amended	ED	ED	ED	06/07
D	Draft 4.0 Standard Applied	MR	ED	PF	04/07
C	Scheme Details Updated	SF	PF	PF	09/06
B	Scheme Details Updated	SF	ED	PF	08/06
A	Scheme length amended	KK			08/05

CLIENT: Transport Scotland — An agency of Scottish Executive

ENGINEER: mouchelparkman

IN ASSOCIATION WITH: ABERDEENSHIRE COUNCIL, DUMFRIES & GALLOWAY COUNCIL, SCOTTISH BORDERS COUNCIL, SIAS AND YOUNG ASSOCIATES

DRAWING ORIGINATOR: Scottish Borders Council

PROJECT TITLE: A68 Pathhead to Tynehead Junction Improvement Scheme

DRAWING TITLE: Preferred Option (Option 12)

SCALE: NOT TO SCALE

DESIGN BY:	KK	CHECKED BY:	
DATE:	07/05	DATE:	
DRAWN BY:	KK	APPROVED BY:	
DATE:	07/05	DATE:	

DRAFT | PRELIMINARY | TENDER | CONTRACT

PROJECT NUMBER:	DRAWING NUMBER:	REV:
DS03.115	30	F