

1 Introduction

1.1 Introduction

This Environmental Statement (ES) for the A96 Threapland Junction Improvement scheme has been prepared on behalf of Transport Scotland.

European legislation (EC Directive 85/337/EEC as amended by EC Directive 97/11/EC) provides the framework for the Environmental Impact Assessment (EIA). In Scotland, this is transposed into domestic law by the Environmental Impact Assessment (Scotland) Regulations 1999, which applies to the ES for the Scheme. The findings of the EIA for this study are summarised in this Environmental Statement. Representations on this document should be addressed to:

**The Chief Road Engineer
Transport Scotland
Buchanan House
58 Port Dundas Road
Glasgow
G4 0HF**

Written responses are invited within seven weeks of the advertised date of publication of the ES. A non-technical summary has been published to accompany this document and is available free of charge.

The ES is available for public viewing at the above address and at locations listed in the Non-Technical Summary.

1.2 Background to the Scheme

Transport Scotland, an agency of the Scottish Government, is developing a Scheme to reduce accidents on the A96 at Threapland by improving the standard of the existing junctions. This is to address the safety concerns on this section of the A96 where there have been a number of accidents, including a fatality, in recent years. Scott Wilson has been appointed as Transport Scotland's Engineering Consultants to manage the development and assessment of the improvement proposals and to progress these towards construction with a view to the works starting in 2009. The location of the study area, to the east of Lhanbryde is shown in Figure 1.1, and a plan of the current Preferred Scheme is shown in Figure 1.2. A plan showing the baseline environmental constraints is shown in Figure 1.3.

In 1999 Scott Wilson was commissioned to carry out a Strategic Scheme Assessment of the A96, Inverness to Fochabers. Part of the study included a Design Manual for Roads and Bridges (DMRB) Stage 1 Assessment of Threapland Realignment. The study identified a need to realign approximately 750 metres of the existing A96 carriageway, including the junction immediately west of Lhanbryde at Threapland. Subsequent to the Strategic Scheme Assessment, a review of Route Action Plans was commissioned by the Scottish Executive (now Transport Scotland). This formed part of the latest Strategic Roads Review in order to

bring together and assess all the work undertaken to date. The review, published in November 2002, identified ten small schemes to be included in the Trunk Roads Programme, with the A96 Threapland Junction Improvements scheme being one of them.

In October 2005, Transport Scotland commissioned Scott Wilson to take forward the A96 Threapland Junction Improvement Scheme. The study objectives were set out in the scheme brief provided to Scott Wilson and state that the Design of the Scheme shall be in accordance with the Government's appraisal criteria for the assessment of trunk road schemes that take account of integration, economy, safety, environment and accessibility.

At the Inception Workshop held in January 2006, it was agreed that the primary aim of the Scheme is to improve the poor accident record and reduce the accidents at Threapland, by improving the standard of the junction and approaches to the junction. It is anticipated that all other scheme objectives will be achieved following successful attainment of the primary aim; the scheme objectives are described in Chapter 2 of this ES.

Two options, an 'online' and an 'offline' option, were identified to be taken forward for further investigation during a 'DMRB Stage 2 Assessment', including an environmental assessment. The results of this appraisal were presented in the A96 Threapland Junction Improvement Stage 2 Scheme Options Assessment Report (S100630/REP/16) with the recommendation that the 'online' option be adopted for further development and full DMRB Stage 3 Scheme Assessment. The 'offline' option considered at the Stage 2 Assessment is shown in Figure 1.4. Detailed information on the scheme options, their appraisal and the basis for the selection of the preferred, 'online', scheme is provided in Chapter 2.

In August 2007 Scott Wilson reported their conclusions to Transport Scotland, recommending that the 'online' option be developed as the preferred scheme layout. This recommendation was based on the overall layout, the economic benefits along with the good safety and environmental advantages in comparison with the 'offline' scheme. The offline option would have a significantly greater environmental impact due to its closer proximity to Loch Oire and local residences, landtake would also increase involving the need to remove a significant number of mature trees in the area. Transport Scotland accepted this recommendation and Scott Wilson was then instructed to develop the scheme, through Stage 3 Assessment, towards the endorsement of the Preferred Scheme to be promoted through the Order Publication stages. It is this preferred option that is the subject of this ES.

1.2.1 Purpose of the Environmental Statement

The purpose of the ES is to provide supporting information for the publication of Statutory Orders to comply with Transport Scotland's determination that the Scheme should be the subject of an Environmental Impact Assessment. Transport Scotland's Notice of Determination, outlines the decision to produce an ES. Throughout the ES, the A96 Threapland Junction Improvement proposals are referred to as the Scheme. It should be noted that the improvement layout shown in this ES is a conceptual design and will be subject to further detailed design prior to construction on site. The main aims of the EIA process are:

- To ensure that there will be a full consideration of the likely environmental effects of the Scheme in a way that enables both the importance of the environmental effects and the scope for mitigating these to be properly evaluated; and

- To allow the public, statutory agencies and other bodies to comment on the proposals, taking account of their environmental concerns

1.3 Scoping

Transport Scotland confirmed that relevant environmental disciplines were to be comprehensively covered within an ES. An ES Scoping Report was subsequently produced (S100630/REP/17) with the main objectives being to:

- Describe the available relevant baseline environmental information;
- Describe the consultations undertaken with the statutory consultation bodies to date, and to inform them of the proposal;
- Identify the environmental issues and potential impacts which would need to be addressed as a result of the scheme implementation;
- Suggest approaches / methodology for assessing such potential impacts;
- Outline possible mitigation measures; and
- Determine the need for further assessment.

The Scoping Report identified the key environmental issues concerned with the Scheme, enabling the scope of the ES to be fully determined. It was recognised that adverse impacts are likely to occur during construction and operation of the Scheme. Some impacts will be short term, for example during construction, with others being permanent, such as landtake being required for carriageway widening and re-routing of Threapland junction. As a result of the scoping procedure, mitigation measures have been incorporated within the Scheme design to reduce any adverse environmental impacts. This process of identifying and mitigating impacts has continued beyond scoping and complements the development of the engineering design.

1.3.1 Scoping Summary

A brief summary is given below, for each of the environmental disciplines, which explains why they have been taken forward for further investigation in the ES or, indeed, why they have been 'scoped out'. In-depth information for each discipline, to be taken forward, is contained within the relevant chapter of this ES. A summary of the environmental issues addressed within the ES are summarised in Table 1.1.

Air Quality

A Stage 2 DMRB local air quality impact assessment has previously been carried out. The number of residential properties located within 200m of the Scheme is identical to the baseline situation as there will be no change to the horizontal alignment of the A96. There is also no change in exposure to air pollution as no change in traffic conditions occur. In addition, pollution levels at all the residential properties within the study area are well below the current Scottish air quality objectives, therefore, air quality is not a major factor in implementing this improvement Scheme. It was therefore recommended that air quality would not be further assessed within the ES.

Cultural Heritage

There is a Category B-listed AA Sentry Box located adjacent to an eastbound lay-by that will be impacted during Scheme construction. This was assessed as a moderate adverse impact within the DMRB Stage 2 Assessment and mitigation measures are to be further investigated. The landtake for the junction improvements may also impinge on archaeologically sensitive areas and non-statutory archaeological features could be directly impacted during construction, hence this chapter is included in the ES.

Disruption Due To Construction

Construction impacts upon the community receptors will be assessed in this ES based on the proposed scale of the works. General construction activities will be identified including those relating to road improvements and site landscaping. Construction effects will be considered according to their nature, location and duration and their potential for environmental effects, individually or cumulatively.

Ecology and Nature Conservation

Key ecological and nature conservation receptors are found within close proximity to the Scheme boundary and so this issue is covered within the ES. Loch Oire Site of Special Scientific Interest (SSSI) is immediately adjacent to the A96 carriageway, mature trees with potential for bat roosts may have to be removed during construction, disturbance and loss of habitats during construction works may impact on breeding bird species, there is the potential for disturbance to otter activity during the construction period; and there will be direct and indirect, and temporary and permanent impacts, upon some of the semi-natural habitats within the impact area. Detailed mitigation measures will be required to prevent or minimise these potential impacts upon the ecological receptors.

Landscape Effects

Specific effects on the landscape are assessed as part of this ES. Upgrading of main roads can increase the dominance of such linear features within an open and flat landscape. There are also a number of residential receptors within the zone of visual influence for the Scheme, and a large number of vehicle travelers using the A96 carriageway, both of which could be impacted by the Scheme. Permanent landscape effects include cutting back slopes raising a section of the carriageway resulting in the removal of trees and gorse scrub.

Land Use

Land use impacts are assessed within the ES, as there is the potential for forestry and agricultural land to be directly impacted and lost to the Scheme. The agricultural land affected will be a mix of both arable and grazing grassland fields. Refinement of the scheme design will need to take account of the need to minimise landtake and the resultant affect on land use activities.

Traffic Noise and Vibration

A detailed noise assessment was undertaken during the DMRB Stage 2 Scheme Assessment. This was based on a comparison of the residential properties and other noise sensitive

receptors located within 300m of the existing A96 or any affected road. In addition, traffic noise levels at a selection of receptors were estimated to give an indication of the magnitude and significance of the change in noise levels as a result of the Scheme. As proximity of any receptors to the A96 will not change, the Scheme resulted in only negligible changes in traffic noise. For this reason the issue of operational traffic noise and vibration is not assessed further within the ES.

Community Effects

There will be a temporary impact on both residential and business receptors, as the scheme is constructed. There will also be a permanent severance of motorised access to the west Loch Oire road / A96 junction, with non-vehicular user access being maintained via a link to a proposed cyclepath / footpath on the south side of the A96. Vehicular access to Loch Oire and residential properties will be maintained, however, via the improvement of Threapland junction. These construction impacts upon community receptors will be assessed within the ES under the 'Disruption due to Construction' chapter, and there will be positive impacts for non-motorised users in the area when the scheme is operational. For these reasons Community Effects will not be considered further within a dedicated chapter in the ES.

Vehicle Travellers

The issue of views from the road will be fully considered within the Landscape Effects chapter of the ES. This assesses the construction of the carriageway improvements, new footpath/cyclepath and access roads from a landscape perspective. It is likely that the only issue causing driver stress at the current time in the vicinity of Threapland is the existing junction layouts and the potential they have to cause accidents. The expected decline in the number of accidents after the scheme is operational will result in less driver stress, and therefore the topic of Vehicle Travellers was scoped out from the ES.

Water Quality and Drainage

There is potential contamination from discharge of sediments, soils or chemicals arising as a result of construction activities, specifically into Loch Oire and the outfall watercourse. During the operation of the scheme there could also be the risk of pollutant-laden road runoff entering the Loch if not first captured by the road drainage system. These issues are further investigated within this ES. The scale of the impacts on aquatic ecosystems is also assessed and reported in Chapter 5, Ecology and Nature Conservation.

Geology and Soils

As the scheme is to be constructed predominantly on the existing road alignment it was assessed that Geology and Soils could be scoped out from the ES. The contractor, however, will be given construction guidelines that will ensure that any soils are re-used where possible, and that any material removed to landfill will be monitored via licensing and legislative guidelines.

Policies and Plans

This issue has been scoped out of the ES due to the scheme being predominantly constructed online and all relevant environmental issues being comprehensively covered within other ES

Chapters. Mitigation measures will be outlined in specific environmental topic sections within the ES.

Table 1.1 Environmental Issues Assessed in ES

Assessed in ES	Scoped Out
Cultural Heritage	Air Quality
Disruption due to Construction	Traffic Noise and Vibration
Ecology and Nature Conservation	Community Effects
Landscape Effects	Vehicle Travellers
Land Use	Geology and Soils
Water Quality & Drainage	Policies and Plans

1.4 Structure and Methodology of the ES

The ES is structured in accordance with Volume 11 of the Design Manual for Roads and Bridges. The Main Report is divided into ten chapters. Chapters 1 and 2 provide project background and scheme information relevant to the selection and detailing of the preferred scheme as well providing information on the structure of the ES.

Chapters 3 to 8 cover each of the specialist environmental topics within the scope of the ES, as outlined above, namely:

- Cultural heritage;
- Disruption due to construction;
- Ecology and nature conservation;
- Landscape and visual effects;
- Land use; and
- Water resources.

These Chapters will address in detail the environmental effects the scheme will have and any mitigation required with regards to each specialist topic. These chapters follow the same format and assessment hierarchy for ease of comparison, unless otherwise indicated within the topic chapter, as follows:

- Introduction – introduces the environmental topic;
- Approach & Methodology – describes the methodology that has been used in the assessment of the environmental topic. Unless specified as otherwise, the methodology

used is generally based on the Design Manual for Roads and Bridges, Environmental Assessment, Volume 11;

- Baseline Information – describes the existing condition of the study area used for the topic as well as the baseline information obtained and the date of any surveys undertaken. The baseline also takes into account any changes, which have been identified as likely to occur either prior to construction or prior to the operation of the Scheme;
- Predicted Impacts – identifies the possible range and location of potential impacts before mitigation comprising:
 - Effects of Construction;
 - Effects of Operation;
 - Significance of environment effect – generally set out in tabular form. The assessment of significance comprises:
 - Consideration of the ‘nature of the effect’ (positive, neutral and negative effects are identified and evaluated for both the construction and operational stages and whether or not the effects are direct or indirect; secondary; cumulative; short, medium and long-term; permanent and temporary)
 - The ‘magnitude of effect’ (this considers the scale of change, the degree to which the environment is affected, the likelihood or probability of an effect occurring and the implications of any cumulative effects). For this ES, the magnitude of impact is based on a scale comprising ‘Severe’ (an acute change to the environment), ‘Moderate’ (a moderate change to the environment), ‘Slight’ (a small change to the environment) and ‘Negligible’ (a negligible change to the environment).
 - The ‘sensitivity of the receptor’ to the effect based on a scale comprising ‘Negligible’, ‘Low’, ‘Medium’, ‘High’ and ‘Very High’.
- Mitigation – provides a hierarchy of measures to avoid adverse impacts to features where possible (e.g. by modifying the design or location), and where this is not possible then to minimise the scale, significance or degree of impact and finally to offset or compensate impacts where possible e.g. provision of new opportunities for access;
- Residual Impacts – describes the impacts, which are likely to remain after the application of mitigation measures, measured at the year of opening and 15 years after construction;
- Summary – provides a brief summary of the assessment. The Environmental Impact Assessment (Scotland) Regulations 1999 require that the ES should describe the likely main or ‘significant’ impacts on the environment of the proposed scheme. In order to determine the ‘significance of environment effect’, consideration has been given to both the magnitude of effect and the sensitivity of the receptor. This is a qualitative judgment where ‘Substantial’ (a significant implication for the environment), ‘Moderate’ (an implication for the environment), ‘Minor’ (a limited implication for the environment) and ‘Negligible’ (an insignificant implication for the environment) has been used to describe the ‘significance of environment effect’, which is set out in a matrix as shown in Table 1.2

below. Entries in the matrix shaded grey represent where the main or significant impacts are expected to be experienced.

Table 1.2 Significance of Environmental Effect matrix

MAGNITUDE OF EFFECT	SENSITIVITY OF RECEPTOR				
	VERY HIGH	HIGH	MEDIUM	LOW	NEGLIGIBLE
SEVERE	Substantial	Substantial	Moderate	Minor	Negligible
MODERATE	Moderate	Moderate	Minor	Minor	Negligible
SLIGHT	Moderate	Minor	Minor	Negligible	Negligible
NEGLIGIBLE	Negligible	Negligible	Negligible	Negligible	Negligible

Chapters 9 and 10 provide a summary of the key scheme impacts and effects of any mitigation, and reports the assessment made of the overall impact of the full scheme.

A glossary of the main terms used throughout this ES is given in Appendix 1 to provide a clearer understanding of the technical language.

The Non-Technical Summary (NTS) provides an outline of the scheme proposals and highlights the key impacts and mitigation measures in non-technical language. This is available as a separate document.

1.5 Information Sourced

Environmental information has been obtained from a wide variety of publicly available sources together with a general knowledge of the study area. The information has been drawn from these sources and updated as necessary during the study. Details of the information sources used in this ES are given in Appendix 2.

1.6 Consultation

The consultation process involved writing to the consultation bodies as defined by the Environmental Impact Assessment (Scotland) Regulations 1999. Discussion of the consultations undertaken takes place in each topic chapter of this report. Consultations were undertaken with the consultation bodies as part of the optioneering studies and the Scoping Study, and a summary of the responses from statutory and non-statutory consultees to all consultations is given in Table 1.3. Non-statutory consultees were also consulted at this stage

because of their particular interest in the Scheme or the local Threapland area. Copies of the correspondence received from those organisations consulted as part of the EIA and Scoping Study are included as Appendix 3.

Table 1.3: Consultation responses from statutory and non-statutory consultees (continued over)

Consultee	Comments
	Statutory consultees
Health & Safety Executive	Environmental Statement should not include measures that conflict with the Health and Safety at Work Act 1974 and its relevant statutory provisions.
Historic Scotland	Noted the presence of a D-shaped cropmark, known on the local SMR as Larchfield NJ26SE0034, in close proximity to the proposed Loch Oire junction. Proposals for sequential mitigation measures were also recommended.
Moray Council, Access Officer	Stopping up of the Loch Oire road is acceptable providing through access is left for non-motorised users. Any scheme should incorporate safe provision for cyclists on the A96.
Moray Council, Environmental Health	No concerns in respect of air quality. Construction noise disturbance to be controlled by working hours and BS5228. No information about traffic noise levels. There is a possibility of contaminated land in the vicinity of the works due to an infilled sand pit.
Moray Council, Environmental Protection	Suggest consideration of the creation of a cycle path as an alternative travel mode to cars to reduce environmental impacts on the area.
Moray Council, Planning & Development	Information relating to locations of Sites of Interest to Natural Science (SINS) was provided.
Moray Council, Transportation (and HITRANS)	There have been a number of serious accidents that have involved the Threapland Garden Centre junction, and there is no provision for cyclists along the new section of road.
Scottish Environment Protection Agency (SEPA)	Main concerns would be the protection of nearby water bodies e.g. Loch Oire. Suitable protection should be taken to ensure no discharges from the construction works.

<i>Consultee</i>	<i>Comments</i>
Scottish Natural Heritage (SNH)	There is a risk of sediment of pollution entering Loch Oire SSSI. Strict adherence to construction method statements required, including SEPA PPGs 5 and 6. Road drainage should avoid draining directly into Loch Oire. Appropriate protected species surveys should be carried out and SNH kept informed. Guidance was given regarding the presence of otters, badgers, red squirrels, bats, and breeding birds.
	<i>Non-statutory consultees</i>
Aberdeenshire Council Archaeology Service	There is a D-shaped enclosure in the two fields to the south of the road, and archaeological features could be found in the land that could be cut back for embankments. Advise archaeological investigation prior to any earth moving to tackle this possibility.
Deer Commission Scotland	No deer collision information for this area. DCS welcome any improvements to the road that will increase driver awareness and vision.
Forestry Commission	No comment on the proposals, as they do not affect Forestry Commission land or trees. Support the potential improved safety of the road.
Inverness and East Highland Local Economic Forum	No information to declare or issues to raise, as the area of the road is outwith their area.
Lossie District Salmon Fisheries Board	Appropriate method statements to be agreed for the works, and culverts not to impede the passage of fish species.
NESTRANS	This road is outside the area of NESTRANS concern, and suggested that we contact HITRANS, as it would be more appropriate for them to comment.
North East Scotland, Biological Records Centre (NESBRC)	The site is adjacent to one SSSI, three non-statutory designated sites, and areas on the ancient woodland inventory.

<i>Consultee</i>	<i>Comments</i>
Royal Society for the Protection of Birds (RSPB)	Works should be scheduled to begin between August and March to avoid the main breeding bird period. Only other concern is that no adverse effects on Loch Oire SSSI are incurred.
Scottish Badgers	There are records of badger road traffic accidents in this area. Request appropriate pre-construction surveys are carried out.
Scottish Council for Development and Industry	No specific comments with regards to the scheme, though they fully support the improvements to the road.
Scottish Executive Environment and Rural Affairs Department (SEERAD)	No comments to make regarding rural communities.
Scottish Water	Attention should be paid to fuel being used and stored for excavation purposed, which if spilled, could cause contamination.
ScotWays	Advised that there is one right of way in the vicinity (GM65), bearing in mind there may also be general access rights over property/area under the terms of the Land Reform (Scotland) Act 2003.
Spey District Salmon Fisheries Board	No impact upon the fisheries interest of the Spey or its catchments
SUSTRANS Scotland	Cyclist / walker access should be maintained along the Loch Oire road.