

URS

A96 Inveramsay Bridge Improvement

Environmental Statement

April 2013

UNITED
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TRANSPORT
SCOTLAND



URS
23 Chester Street
Edinburgh
EH3 7EN

Tel +44 (0)131 225 1230
Fax +44 (0)131 225 5582

www.urs.com

ENVIRONMENTAL STATEMENT

April 2013

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GLOSSARY AND ABBREVIATIONS

This table provides a glossary of the main terms and an explanation of the key abbreviations used in this Environmental Statement.

Environmental Assessment Process

Baseline	The current environmental conditions against which potential impacts/effects are identified.
Baseline Study / Survey	The process of research and fieldwork by which the current baseline conditions are established.
Construction	Any activities, which take place during the construction phase, including temporary land take.
Effect	The result of an impact on a particular resource or receptor.
Environmental Impact Assessment (EIA)	A process for identifying and evaluating the likely effect of a proposed development on the environment. EIA normally forms part of the consent procedure.
Environmental Statement	A document or series of documents which reports the findings of the EIA
Impact	A physical or measurable change to the environment attributable to the Scheme.
Infrastructure	The facilities, services and businesses in a defined area.
Magnitude of effect	The actual change taking place to the environment, for example, the extent of land take or predicted change in noise levels.
Operation	Any activities forming part of or associated with the operation of the Scheme.
Permanent Land take	The permanent occupation of land by Scheme infrastructure, including physical features such as buildings.
Receptor	A component of the natural, created or built environment such as a human being, water, air, a building or a plant that is affected by an impact
Resources	Physical or qualitative features of the environment which are capable of identification and evaluation, and which are often the subject of some form of protective planning designation.
Scope	The extent of coverage of EIA.
Significance of impact	The product of an impact’s magnitude and the sensitivity, importance or value of the relevant receptor or resource
Sources of Effect	The Scheme activities or components, which give rise to environmental effects, as defined below.

Types of Effect

Cumulative Effect	An effect resulting from the accumulation of a number of effects. A cumulative effect may result from: The combination of different effects at a particular location; The recurrence of effects of the same type at different locations;
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Types of Effect

	The interaction of different effects over time or The interaction between the Scheme and other projects.
Direct Effect	An effect arising from an impact attributable to a project component or activity.
Environmental Effect	Identification of the possible range and location of potential impact, the words impact and effect have been used interchangeably
Indirect Effect	An effect arising from additional development works which are as a result of the Scheme.
Non-significant Effect	An effect, which is unlikely to have an influence on the decision-making process.
Permanent Effect	An effect, which is irreversible or likely to persist for the foreseeable life of the Scheme.
Residual Effect	An effect, which is likely to remain after the application of mitigation measures.
Secondary Effect	An effect, which may arise as a consequence of a primary effect, particularly between different environmental topics (e.g. reduced amenity of a community facility due to noise and disturbance).
Significant Effect	An effect, which, in isolation or in combination with other effects, is likely – in the opinion of the EA team – to have an influence on the decision-making process.
Temporary Effect	An effect which is of limited duration, due to either the cessation of the impact giving rise to it or the ability of the environment to accommodate or recover from it.
Unavoidable Effect	An effect which is an inevitable consequence of the Scheme and which cannot be removed or rendered insignificant by mitigation.
Mitigation	Measures adopted to reduce, ameliorate or avoid significant effects.

Engineering Terms

Construction Compound	A defined area (usually fenced off) where construction activity takes place
Permanent Land take	A requirement for land that will be needed as part of the operation phase of the Scheme
Temporary Land take	A requirement for land that will be needed during the construction phase of the Scheme only, and can be returned to other use afterwards

Air Quality Abbreviations and Glossary

AQMA	Air Quality Management Area
CO	Carbon Monoxide
CO₂	Carbon Dioxide
DEFRA	Department of Environment Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges

Air Quality Abbreviations and Glossary

EU	European Union
HC	Hydrocarbons
kg N/ha/yr	Kilogrammes of nitrogen (deposited) per hectare per year
km	Kilometres
LAQM	Local Air Quality Management
mg/m³	Milligrammes (of pollutant) per cubic meter (of air)
mg/m²/day	Milligrammes (of depositing material) per square meter (of surface) per day
NO₂	Nitrogen Dioxide
NO_x	Oxides of Nitrogen
PAN	Planning Advisory Note
PM_{2.5}	Fine Particulate Matter with an aerodynamic diameter of less than 2.5 µm
PM₁₀	Fine Particulate Matter with an aerodynamic diameter of less than 10 µm
SO₂	Sulphur Dioxide
SSSI	Site of Special Scientific Interest
TG	Technical Guidance
THC	Total Hydrocarbons
µg/m³	Microgrammes (of pollutant) per cubic meter (of air)
UK	United Kingdom
UKAQIA	UK National Air Quality Information Archive
Air pollutants	Amounts of foreign and/or natural substances occurring in the atmosphere that may result in adverse effects on humans, animals, vegetation and/or materials
Air quality sensitive receptors	People, property or designated sites for nature conservation that may be at risk from exposure to air pollutants that could potentially arise as a result of the proposed development/project
Air quality study area	The area assessed for air quality impacts during the Environmental Assessment
Ambient air quality	The concentrations of gases and particles in the atmosphere (troposphere) to which the general population would be exposed, as opposed to the concentration of pollutants emitted by a specific source
Annual mean concentration	The average (mean) of the hourly pollutant concentrations measured or predicted for a one year period
Baseline scenario	Scenarios with the proposed development/project not in operation
DMRB screening tool	An empirical computer modelling tool that predicts future air quality levels as a result of road traffic characteristics under different scenarios
Dust deposition rates	The rate at which particulate matter is deposited on to surfaces typically expressed in units of mg/m ² /day
Dust emissions	Airborne coarse particulate matter produced as a result of abrasive activities such as occur during the construction phase of a development/project
Emission factors	The average emission rate of a given pollutant for a given source, relative to units of activity. Used to model future pollution concentrations under different scenarios
EU limit values	Limits set by the European Union on air quality to be achieved by member states. In Scotland this EU Directive is prescribed under the Air Quality Limit Values (Scotland Regulations (2000) and subsequent amendments

Air Quality Abbreviations and Glossary

Fine particulate matter	Particulate matter with an aerodynamic diameter equal to or less than 2.5 μm
Greenhouse gases	Atmospheric gases that slow the passage of re-radiated heat through the Earth's atmosphere by absorbing infrared radiation
Local air quality assessment	A section within the air quality chapter of the Environmental Statement where local air quality was assessed under different scenarios
National air quality objectives	A series of objectives set by the Government's Expert Panel on Air Quality to be achieved either without exception or with a permitted number of exceedances within a specific timescale
Particulate Matter	Solid particles or liquid droplets suspended or carried in the air with an aerodynamic diameter equal to or less than 10 μm
Road links	Individual sections of the road network, usually divided by junctions, used in the modelling of scenarios
The Scheme	The proposed development/project
24 hour mean concentration	The average (mean) of the hourly pollutant concentrations measured or predicted for 24 consecutive hours in one day

Noise and Vibration Abbreviations and Glossary

L_{Aeq}	The equivalent continuous A-weighted sound pressure level, it is a single number that represents the total sound energy measured over that period. It is the sound level of a notionally steady sound having the same energy as a fluctuating sound over a specified measurement period.
$L_{A10,18h}$	L_{A10} is the noise level exceeded for 10% of the measurement period, it is generally used to describe road traffic noise. Defined in CRTN as the arithmetic average of the individual 1 hour $L_{A10,1h}$ levels between 06:00-00:00.
L_{den}	L_{den} is defined in terms of the equivalent continuous A-weighted sound pressure level levels (L_{Aeq}) during the daytime, evening, and night-time, and applies a 5 dB penalty to noise in the evening and a 10 dB penalty to noise in the night.
L_{night}	The equivalent continuous A-weighted outdoor sound pressure level (L_{Aeq}) during the 8 hour night-time period (23:00-07:00)
L_w	Sound power level, sound power (the sound energy radiated by a sound source per unit time) measured on the decibel scale.
dB	Decibel, unit of noise measurement.
dB(A)	A - weighted decibel. The human ear system does not respond uniformly to sound across the detectable frequency range and consequently instrumentation used to measure noise can be weighted to represent the performance of the ear, this is known as the 'A weighting'.
BNL	Basic Noise Level, term used in CRTN to refer to the traffic noise level ($L_{A10,18h}$) at 10m from the road
CRTN	Calculation of Road Traffic Noise
DMRB	Design Manual for Roads and Bridges
HGV	Heavy Goods Vehicles
NISR	Noise Insulation (Scotland) Regulations
AAWT	Annual Average Weekday Traffic
Ambient Noise	Ambient noise is the total noise in a given location, usually composed of many sources, near and far, such as road traffic noise, railway noise, birdsong, wind

Noise and Vibration Abbreviations and Glossary

	rustling vegetation etc.
Free-field	The noise level in the open without any reflections from any vertical surfaces such as buildings
Facade	The noise level at 1 m from a building façade. Noise is reflected from hard surfaces, such as a building façade, producing a slightly higher noise level than if the building was not there. CRTN specifies a façade correction of +2.5 dB

The following is an explanation of some of the abbreviations used in this Environmental Statement:

DMRB	Design Manual for Roads and Bridges
SEPA	Scottish Environment Protection Agency
SNH	Scottish Natural Heritage
AC	Aberdeenshire Council
SAC	Special Area of Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
NSA	National Scenic Area
RoD	Record of Determination
BAP	Biodiversity Action Plan
HGV's	Heavy Goods Vehicles
SPP	Scottish Planning Policy Statement
CAR	Controlled Activities Regulations
IEEM	Institute of Ecology and Environmental Management
IEMA	Institute of Environmental Management and Assessment
WCA	Wildlife and Countryside Act

1 INTRODUCTION

1.1 Introduction

This Environmental Statement (ES) has been prepared on behalf of Transport Scotland, an agency of the Scottish Government, to assess the potential environmental impacts of the A96 Inveramsay Bridge Improvement. The findings of the Environmental Impact Assessment (EIA) for this study are summarised in this Environmental Statement (ES). This assessment has been undertaken by URS.

Representations on this document should be addressed to:

Director of MTRIPS

Transport Scotland

Buchanan House

58 Port Dundas Road

Glasgow

G4 0HF

Written responses are invited within 6 weeks of the date of publication of the notice for the Environmental Statement. A non-technical summary (NTS) has been published to accompany this document. The ES can also be viewed on the Transport Scotland website: www.transportscotland.gov.uk.

The ES is available for public viewing at the above address and at locations listed in the accompanying NTS.

1.2 Need for Improvement at Inveramsay Bridge

Inveramsay Railway Bridge is located northwest of Inverurie and carries the Aberdeen to Inverness railway line over the A96 Trunk Road, a Scheme location plan is shown in [Figure 1.1 – Location Plan](#). The masonry arch structure has a 4.4m height restriction and traffic under the structure is restricted to a single lane controlled by traffic signals, due to the arch and span of the bridge. The bridge has been the cause of frustration for many people travelling and living along this section of the A96. The existing situation with the traffic signals and height restriction is making it increasingly difficult for motorists. Numerous bridge strikes have caused the closure of the road and the railway and the lengthy queues caused by the signals at peak times, have made the bridge a major cause for concern. The Average Annual Daily Traffic (AADT) Flow at the site is 9,200 vehicles per day, of which Heavy Goods Vehicles make up approximately 7% of the flow. Substantial queuing has been observed at the traffic signals at peak times. Accident records for the 5 year period from 2007-2011 indicate there have been 4 serious and 23 slight accidents in the study area. The severity ratio is half of the average value for a single carriageway.

The Scottish Government has publicly confirmed its commitment to the Inveramsay Bridge Improvement works on several occasions. In August 2008 the Aberdeen to Inverness Transport Corridor study recommended that the removal of the shuttle-working section at the Inveramsay A96 rail crossing should be taken forward for further detailed consideration within the Strategic Transport Projects Review (STPR). When the STPR Final Report was published in November 2009, it identified the need for an intervention to include 'a new Inveramsay Bridge.'

1.3 Background to the Scheme

A number of previous studies have been undertaken to investigate the removal of the traffic lights and replace the structure at the Inveramsay Bridge. In March 2008 BEAR Scotland carried out a study illustrating some outline options for new road alignments and bridge crossings. Transport Scotland undertook a study in September 2008 on Rural Traffic Signals operating on Bridges within Scotland's Trunk Road Network and presented some outline requirements, difficulties and estimated costs for removing the signals and replacing the bridge. In October 2010 Network Rail were asked to report on potential solutions and subsequently issued the Aberdeen to Inverness Rail Improvement GRIP 2 Engineering Study where three options were considered for replacing the bridge.

At the end of March 2011 URS were instructed by Transport Scotland to provide services intended to support the work of the STPR through the consideration of improvement options at Inveramsay Bridge with regard to their engineering, traffic, safety, economic and environmental aspects. These services include the delivery of a Design Manual for Roads and Bridges (DMRB) Stage 2 and a DMRB Stage 3 Assessment.

Following a public exhibition in October 2011, the Stage 2 Assessment and preferred option selection was completed in early 2012, and since then the Scheme has progressed through the Stage 3 Assessment. The Stage 3 Scheme Assessment Report, Engineering, Traffic and Economic Assessment accompanies this ES. For more information on the consideration of alternatives at Stage 2 see Chapter 2 – The Proposed Scheme.

1.4 Need for Environmental Impact Assessment

The formal requirement for EIA of Trunk Road projects is set out in the Roads (Scotland) Act 1984 (c.54, Sections 20A and 55A) as amended by Part III of the Environmental Impact Assessment (Scotland) Regulations 1999, The Environmental Impact Assessment (Scotland) Amendment Regulations 2006 and the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011 which consolidate, update and replace part II of the 1999 Regulations as amended.

The A96 Inveramsay Bridge Improvement Scheme falls within Annex 2 of the EIA Directive given that the works exceed 1 hectare taking into account both the permanent and temporary works.

To determine whether a formal Environmental Impact Assessment is required under the Environmental Impact Assessment Regulations identified above, the project has been subject to screening using the Schedule 3 criteria. This screening identified a need for an Environmental Impact Assessment to be reported in an Environmental Statement by virtue of the characteristics of the Scheme and the potential impacts of the Scheme. Therefore it was determined that an Environmental Impact Assessment (EIA) should be undertaken and reported in an Environmental Statement (ES). The Determination that a formal EIA and ES are required was published in a Record of Determination (December 2012).

1.5 Purpose of the Environmental Statement

The purpose of the Environmental Statement is to ensure that the environmental effects of a proposed development are fully considered, together with the economic or social benefits of the development. The ES will provide supporting information the publication of statutory orders and to comply with the Scottish Ministers' determination that the Scheme should be the subject of an EIA. From this point forward, the A96 Inveramsay Bridge Improvement will be referred to as 'the Scheme'. It should be noted that the improvement layout shown in this ES is a preliminary design and will likely 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;
- To allow environmental considerations to have an influence on the Scheme design; and
- To allow the public, statutory organisations and other bodies to comment on the proposals, taking account of their environmental concerns.

1.6 Scheme Objectives

The Design of the Scheme should be in accordance with the Government's appraisal criteria for the assessment of trunk road schemes, which take account of integration, economy, safety, environmental impact and accessibility. The Transport Scotland Service Brief identified the following main objectives:

- Remove congestion at Inveramsay Bridge by realigning the A96 such that the free flow of traffic is permitted without the use of the existing traffic signal controls;
- Improve the operational performance and level of service and safety on the A96 by reducing the effects of driver stress and journey times;
- Improve journey time reliability;
- Maintain the asset value of the A96 route;
- Ensure that facilities are fully compliant with the requirements of the Disability Discrimination Act 2005 through application of Transport Scotland's "Roads for All" guidance as amended or updated;
- Achieve good value for money for both taxpayers and transport users;
- Develop Engineering solutions for the proposed infrastructure in line with the requirements of DMRB; and
- Improve sustainability in design and construction.

An Inception Workshop was undertaken in April 2011, which enabled Scheme specific objectives to be derived from:

- Transport Scotland high level policy objectives;
- Service brief requirements; and
- Agreed Scheme specific DMRB Stage 2 Objectives.

These objectives were then confirmed at the Options, Value for Money and Risk Workshop held in December 2011. The agreed Scheme specific objectives are given below in Table 1.1:

Table 1.1 Scheme Specific Objectives

Project Objectives / Assessment Criteria		
Main Criteria	Sub Criteria	
Economy	EC1	Improve Journey Time Reliability
Safety	SAF1	Acceptable Standard of Geometry
Environment	ENV1	Minimise Visual Impact
	ENV2	Achieve Best Environmental Fit

Project Objectives / Assessment Criteria		
Main Criteria	Sub Criteria	
	ENV3	Minimise Property Impact
	ENV4	Minimise impact on flood area
Accessibility	ACC1	Minimise Severance
Integration	INT1	Minimise Disruption During Construction to Rail/NMUs
Other	O1	Minimise Disruption to Road User During Construction
	O2	Ensure Option is Viable for Construction i.e. Complexity of construction of Structure

These objectives were then used to undertake a comparative options assessment at the Stage 2 Workshop. An options assessment matrix was used and enabled the Scheme options to be comparatively scored.

These objectives have been noted and considered as part of this ES.

1.7 Location

The stretch of A96 under consideration is approximately 2.5km in length and is situated north west of Inverurie. The A96 bypasses the town of Inverurie to the south east before crossing underneath the existing A96 Inveramsay Bridge and continuing west, terminating just north of Pitcaple Castle at the junction to Pitcaple.

1.8 Plans and Policies

In addition to STPR as discussed in section 1.2, a number of planning policies must be considered as part of the EIA process, and those most relevant to the Scheme are discussed below.

1.8.1 National Planning Policy

National Planning Framework 2

The NPF2 was published in 2009 by the Scottish Government and outlines the key principles that guide the wider planning system in Scotland until 2030. NPF2 guides Scotland's spatial development to 2030, setting out strategic development priorities to support the Scottish Governments central purpose of promoting sustainable economic growth. Plans that are beneath the NPF2 in the planning policy hierarchy are directly influenced by the goals and themes in the document.

NPF2 states:

'Scotland needs an effective national transport infrastructure which will facilitate sustainable economic growth' (paragraph 106).

'We need to reduce journey times and make them more reliable; make connections which build and sustain economic growth; and improve links between cities, towns and rural communities throughout the country' (paragraph 107).

'For trunk roads, the Government is focusing on tackling congestion where it affects journey time reliability, targeted enhancement of capacity, managing demand on the network and addressing the accessibility needs of rural areas' (paragraph 133).

NPF2 makes no specific reference to Inveramsay Bridge but clear reference is made at Paragraph 133 with regard to making improvements along the A96 which is identified as a nationally important strategic trunk road.

The Scottish Government has commenced work in 2012 on the preparation of National Planning Framework 3 which will set the Governments development priorities over the next 20-30 years.

Scottish Planning Policy

The Scottish Planning Policy (SPP) document is a statement of the Scottish Governments policy on nationally important land use matters.

The planning system guides and facilitates development while at the same time *"protecting and enhancing the natural and built environment"*, and is considered to be central to the Scottish Government's central purpose of achieving sustainable economic growth (paragraph 4).

Transport is addressed as a subject policy within SPP and it is recognised that the relationship between transport and land use has a strong influence on sustainable economic growth. The strategic transport network, which includes trunk roads, is identified as being critical in support a level of national connectivity that facilitates sustainable economic growth.

The SPP states:

'The primary purpose of the strategic transport network is to provide for the safe and efficient movement of strategic long distance traffic between major centres, although in rural areas it also performs important local functions' (paragraph 174).

SPP also contains a number of other subject policies that have been referred to throughout the EIA process including but not limited to; economic development, historic environment, landscape and natural heritage, flooding and drainage and waste management.

A review of SPP was announced in 2012 and it is anticipated that an updated SPP will be published before the end of 2013.

Planning Advice Notes (PANs)

The Scottish Government has published a range of PANs to provide additional guidance on various topics in more detail than the SPP and advice included is typically more technical and specific to relevant topics and aspects of planning.

PANs that have been referred to as part of the EIA process are identified in each of the topic chapters (Chapters 5-12).

1.8.2

Regional & Local Policy

The development plan in Aberdeenshire comprises of the following documents:

- Aberdeen City & Shire Structure Plan (2009); and
- Aberdeenshire Local Development Plan (LDP) (2012).

It has been noted during the EIA process that the Proposed Aberdeen City & Shire Strategic Development Plan (SDP) (2013) has been published and its contents are a material consideration.

Aberdeen City & Shire Structure Plan (2009)

The 2009 Structure Plan is a strategic plan for the Aberdeen City and Shire region which aims to guide development which will ensure the regions develops as a prosperous and sustainable European city region. The Plan recognises that the NPF2 allocates the A96 as a strategic trunk road and page 10 specifically states that “road improvements to the A96 will include replacing the Inveramsay Bridge”.

Proposed Aberdeen City & Shire Strategic Development Plan (2013)

Like the 2009 Structure Plan the Proposed SDP recognises that the A96 requires significant upgrading between Aberdeen and Huntly, and Paragraph 3.32 confirms the Scottish Government’s long term commitment to “...*completing the A96 dual carriageway between Inverurie and Inverness over the lifetime of this plan*”. Whilst no specific plan is in place for the aforementioned long term goal at present, the shorter term improvement of “*replacing the Inveramsay Bridge to allow two-way traffic*” is specifically mentioned.

Aberdeenshire Local Development Plan (2012)

The Aberdeenshire LDP sets out the council’s stance on what development should take place within the area and its policy preferences. Site specific proposals are included and the purpose of the plan is to guide development and any changes in land use in a manner that will serve the public interest. One of the key aims of the LDP is to “*make efficient use of the transport network*” (Page 3). The main body of the LDP is supplemented by two volumes of supplementary topic led planning policies.

A number of specific policies apply to the scheme and have informed the scheme design. Many of the LDP’s policies are concerned with safeguarding natural resources and habitats, managing flood risk, protecting Aberdeenshire’s landscape and cultural heritage and enabling sustainable development to proceed. Specific LDP policies have been addressed in individual topic chapters where relevant.

1.8.3 Summary

Planning policy across national, regional and local tiers clearly support the replacement of Inveramsay Bridge as a short term improvement to the A96 which is a nationally strategic trunk road. Despite the stated commitment for the Scheme to proceed, the delivery of the Scheme has considered policy requirements set out in the development plan, for example implementing mitigation measures to offset any adverse impacts that could occur.

Assessment of the Scheme’s compliance with planning policy has been addressed in each of the ES topic chapters below (Chapters 5 – 12).

1.9 Description of the Study Area

The A96 trunk road as it approaches Inveramsay Bridge is rural in nature and consists of a single 2-lane carriageway. A general environmental constraints plan is shown in [Figure 1.2](#) – General Environmental Constraints.

The road runs parallel with the Aberdeen to Inverness railway line either side of the bridge crossing. The River Urie is to the east of the existing A96 and lies within a 1 in 200 year flood plain as identified by SEPA’s Flood Risk Map, it should be noted that the flood risk areas identified on [Figure 1.2](#) – General Environmental Constraints are indicative and further details on Flood Risk can be found in Chapter 10 – Road Drainage and the Water Environment.

Pitcaple Wood lies to the south west of the existing A96 and there are also some areas of ancient woodland within the area affected by the Scheme.

Pitcaple and Legastden Quarries Sites of Special Scientific Interest (SSSI) lie to the north of the existing A96 and partially lie within an area safeguarded for Minerals as identified in the Aberdeenshire Local Development Plan 2012.

Land use in the study area is largely characterised by the presence of agricultural land of various quality with residential housing along the existing A96 roadside and some woodland at Pitcaple Wood which is owned by the Forestry Commission. There are two main farms within the study area, Govals Farm and Milton of Inveramsay Farm. There are no cycleways or bridleways in the area and the only footpaths are within Pitcaple Wood.

Pitcaple Castle is located within its own grounds to the northwest of the study area away from the existing A96, both the property and its walls are Category A listed. There is a claimed Right of Way which runs between the Mill of Pitcaple alongside of Pitcaple Castle before joining the A96.

The existing habitats may be suitable for a range of ecological species, including European Protected Species. Govals Quarry (disused) within Pitcaple Wood is a Local Natura Conservation Site (LNCS).

1.9.1 *Topography*

The general topography within the study area varies from a low lying river valley to the north of the A96 to more gently sloping undulating farmland to the south of the road. The highest level within the study area is approximately 176m (AOD) at Gallows Hill down to approximately 64m (AOD) at the River Urie.

The study area is constrained by Gallows Hill to the south west and the River Urie to the East and North. The land slopes down from Gallows Hill towards the flood plain of the River Urie. The road and railway line cut across this slope. SEPA's flooding map indicates that the River Urie has been the subject of flooding previously.

Travelling north from the existing Inveramsay Bridge (67m AOD) the study area is bound by the low lying flood plain of the River Urie to the east and the railway and Pitcaple Wood to the west.

South of the existing Inveramsay Bridge the land rises on a gentle slope towards Govals Farm and then Gallows Hill further south.

The existing A96 emerges from the wooded area just south of Pitcaple and follows the line of the River Urie to the north although at a higher level on embankment up to the existing Inveramsay Bridge. It then runs along side the railway line with no significant embankments or cuttings. The road then turns away from the railway line running southwards towards Inverurie with no significant earthworks features.

1.9.2 *Climate*

The climate at Inveramsay can be described as a changeable, temperate climate however in comparison with Scottish averages the area receives a higher hourly average of sunshine and a lower average level of rainfall.

The average low temperature of the area is 5°C while the average high temperature is 11°C. The average yearly precipitation is approximately 800mm (<http://www.metoffice.gov.uk/climate/uk/averages/19712000/sites/craibstone.html>).

1.9.3 **Land Use**

The land use in the study area is characterised by mainly agricultural with some forestry use. Much of the land is farmland with varying uses from grazing to arable.

Further information on land use is contained in Chapter 8 – Community and Private Assets.

1.9.4 **Man-Made Features**

Major Carriageways

The existing A96 Aberdeen to Inverness trunk road runs from northwest to southeast through the study area. It is single carriageway and mainly 7.3m wide with varying verge widths.

Junctions & Side Roads

There are 2 existing at-grade public road junctions on this section of the A96, namely:

- Staggered at-grade priority junction at C117C at Pitcaple/ leading to Chapel of Garioch and unclassified road U201C leading to Whiteford; and
- At-grade priority junction for unclassified road U81C leading to Harlaw.

Each of these currently permit trunk road access/egress in each direction.

There are 15 direct access points off the A96 serving a mixture of residential, agricultural and forestry activities.

Railway Bridge and Rail Lines

The existing Inveramsay Rail Bridge (TRBDB Number A96 220) is a masonry arch structure carrying the Aberdeen to Inverness Railway over the A96. It currently carries a bi-directional single line railway with a 75mph speed restriction. As a result of bridge strikes by overhead road vehicles, signing improvements for a height restriction of 4.4m have been completed to meet current regulations.

The Aberdeen to Inverness Railway carries regular passenger services operated by First ScotRail. There is also some limited freight traffic. This means the bridge is being crossed by trains approximately 24 times a day (Monday to Saturday).

The railway itself is the most significant engineering constraint running northwest to southeast across the study area. Along this section of the A96 the railway is parallel with the road for the majority of its length. There are also several sections where vertically the road and railway are almost level. Other structures on this section of the railway include a railway footbridge located approximately 400m northwest of Inveramsay Bridge and there are also two masonry bridges at Milton of Inveramsay carrying the railway over the River Urie and an existing farm access track.

Residential Properties

There are 10 residential properties that currently have direct access off the A96 within the study area, namely:

- The Lodge (at Pitcaple Castle);
- Station Cottages (6 no. houses, including Rowan and Dunmuir Cottages);
- Dier Cottage;
- Dockendale; and

- Mill House.

There are also a further two residential properties at Milton of Inveramsay, off the U81C unclassified road to Harlaw.

Agricultural Properties

There are two main farms within the study area that currently have access off the A96, namely:

- Govals Farm; and
- Milton of Inveramsay Farm.

Other Properties

Pitcable Wood is located to the south of the railway between the existing Inveramsay Bridge and Pitcable. This is owned and operated by the Forestry Commission Scotland.

Pitcable Castle is located within its own grounds to the northwest of the study area away from the existing A96. Both the property and its boundary walls are listed. The castle grounds comprise several residential properties at The Stables and The Lodge as well as outbuildings to the north of the castle adjacent to the walled garden.

Former railway sidings are present to the north of the A96 between the River Urie and the railway. They are currently used as a service yard for a farm and includes numerous derelict buildings/sheds and scrap vehicles.

1.10 Environmental Considerations

Each of the technical chapters in this ES describe the likely environmental impacts that will arise in the local and wider area as a result of the Scheme being constructed and completed, while mitigation measures are suggested to minimise these impacts where possible.

1.11 Report Structure

The proposed Scheme has been subjected to EIA, which has established detailed information about the likely main environmental effects. This ES reports on the findings of the EIA process.

Schedule 4 of the EIA Regulations confirms the information to be included in an ES. Accordingly, this ES provides the following:

- a description of the proposed Scheme, including details of the site and the road design and land-use requirements during construction and operation;
- an outline of the main alternatives and the main reasons for the choice of the preferred Scheme, taking into account environmental effects;
- a description of the aspects of the environment likely to be significantly affected by the proposed Scheme;
- a description of the likely significant effects of the proposed Scheme on the environment, including direct and any indirect, secondary, cumulative, short, medium and long term, permanent and temporary, positive and negative effects, and a description of the methods used to assess the effects on the environment;
- a description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment;

- an indication of any difficulties encountered in compiling the required information; and
- a non-technical summary of the above information.

The contents of this ES are shown in Table 1.2 below:

Table 1.2 – Structure and Content of the Environmental Statement

ES Component	Description
Non-technical summary (NTS)	
Provided at the front of the ES	Summary of the ES in non-technical language. Also available as a separate document.
Volume 1	
Chapter 1 – Introduction	This chapter provides the project background and the structure of the ES.
Chapter 2 – The Proposed Scheme	This chapter provides information on the Scheme proposal and explains the alternative options that were considered prior to selecting the preferred option.
Chapter 3 – Scoping and Consultation	This chapter provides a summary of consultation carried out throughout the assessment process. <i>Accompanied by Appendix 3.1</i>
Chapter 4 – Assessment Methodology	This chapter describes the assessment methodology employed for the EIA process.
Chapter 5 – Landscape	This chapter provides a landscape and visual assessment of the Scheme proposals along with landscape mitigation proposals. <i>Accompanied by Appendix 5.1</i>
Chapter 6 – Nature Conservation	This chapter provides an assessment of the Scheme proposals on ecological receptors and details mitigation measures to minimise negative impacts. <i>Accompanied by Appendices 6.1- 6.4</i>
Chapter 7 – Cultural Heritage	This chapter provides an assessment of the cultural heritage features that may be affected by the Scheme proposals and details mitigation measures required to protect cultural heritage features. <i>Accompanied by an Appendix 7.1</i>
Chapter 8 – Community and Private Assets	This chapter provides an assessment of the community and private assets effects directly associated with the Scheme improvements. It assesses the potential temporary and permanent effects on local residences, community facilities and services, businesses and amenities.
Chapter 9 – Geology & Soils	This chapter provides an assessment of potential impacts on geological attributes and soils in the area. Additionally, it suggests potential mitigation measures to ensure any impacts are minimised where possible.
Chapter 10 – Road Drainage & the Water Environment	This chapter provides an assessment of the potential effects on the water environment as a result of the Scheme improvements and recommends mitigation measures required to offset any significant effects. <i>Accompanied by Appendices 10.1 and 10.2.</i>
Chapter 11 – Air Quality	This chapter provides an assessment of the potential effects on local air quality which may

ES Component	Description
	result from the Scheme during the construction phase and upon completion.
Chapter 12 – Noise & Vibration	This chapter provides an assessment of potential effects relating to noise and vibration which may be caused by the Scheme. <i>Accompanied by an Appendices 12.1-12.3.</i>
Chapter 13 – Cumulative Assessment	This provides the assessment made of the overall (cumulative) impact of the proposed Scheme. Consideration is also given to the cumulative impact of other developments in the area.
Chapter 14 – Summary of Effects and Mitigation	These provide tabulated summaries of the main potential impacts identified, the mitigation proposed, and the key residual impacts remaining after implementation of mitigation.
Chapter 15 – Schedule of Environmental Commitments	This section sets out the environmental commitments proposed in the ES for the Scheme. The purpose of these environmental commitments is to mitigate potentially adverse impacts that have been identified in each section of the ES.
Figures (accompanying all chapters)	Graphics supporting the ES chapters, illustrating the proposed Scheme and environmental information. Figure reference corresponds to the relevant ES chapter (e.g. Chapter 7 refers to Figure 7.1 et seq.).

A glossary of terms and a list of abbreviations are provided at the front of the main report.

This ES presents the assessment of the proposed Scheme as described in Chapter 2 – The Proposed Scheme. The design of the proposed Scheme may be refined but will still be deemed to comply with this ES provided that such refinements to this design will be subject to environmental review to ensure that the residual impacts will be no worse than those reported in this ES.

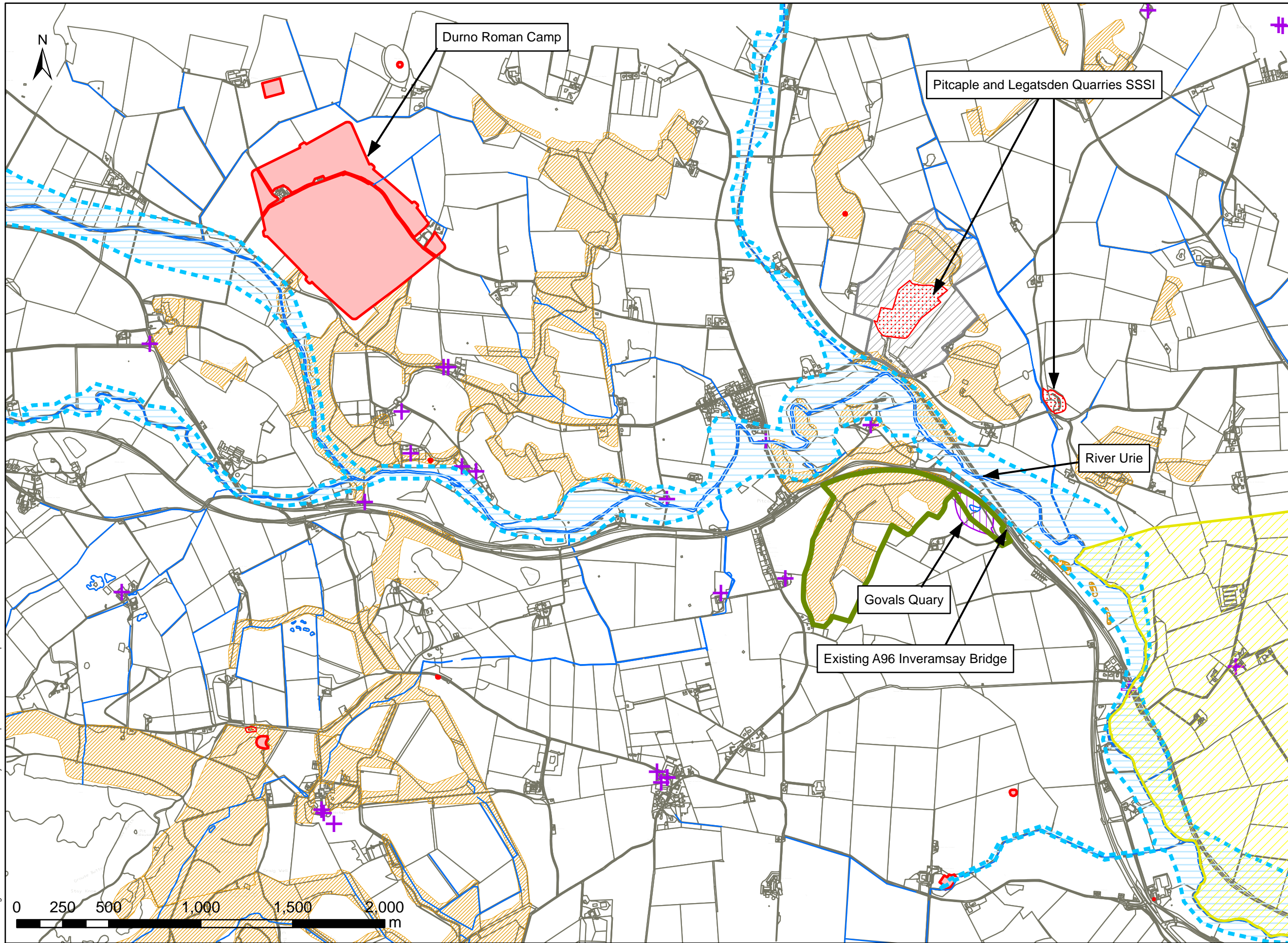
Some aspects of the proposed Scheme design and details of aspects such as construction methods and traffic management will depend on the Contractor’s construction proposals which are not yet available. Assumptions have therefore been made based on the professional judgement of the EIA practitioners, and are stated in the ES, to allow predictions of likely impacts.



A96 Inveramsay Bridge Improvement



Figure 1.1
Location Plan



- KEY**
- Site of Special Scientific Interest (SSSI)
 - - - SEPA flood risk map*
 - Watercourse/Waterbodies
 - Scheduled Monuments
 - + Listed Buildings
 - Forestry Commission Woodland
 - Area Safeguarded For Minerals (Aberdeenshire Local Development Plan 2012).
 - Ancient Woodland Inventory (AWI)**
 - ▨ Long-Established (of plantation origin)
 - ▨ AWI additions**
 - Local Nature Conservation Sites**
 - + Govals Quarry***
 - ▨ Battle of Harlaw (Historic Scotland Inventory of Battlefields).

* The flood map shows an estimate of the areas of Scotland with a 0.5% or greater probability of being flooded in any given year, or put another way the areas estimated to have a 1 in 200 or greater chance of being flooded in any one year.

** The four small woodlands in this category are not in the Ancient Woodland Inventory, but are nevertheless considered to also fall into the class of ancient woodland called 'Long-established woodland of plantation origin', owing to their existence on 1st edition OS maps and subsequent maps, in accordance with SNH guidance. SNH state that woodlands smaller than 2ha were not captured in the Ancient Woodland Inventory.

*** Govals Quarry is also a Site of Interest to Natural Sciences (SINS).

Note that the Landscape Character Type for the entire the area illustrated on this map is classified by Scottish Natural Heritage (SNH) as being Agricultural Heartlands - Central Wooded Estates.



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A96 INVERAMSAY BRIDGE IMPROVEMENT

GENERAL ENVIRONMENTAL CONSTRAINTS



FIGURE 1.2

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