

1 Introduction

1.1 Background to the Scheme

- 1.1.1 The A90 trunk road is the main strategic link between Dundee and Aberdeen and the settlement of Laurencekirk is situated approximately 40km south of Aberdeen.
- 1.1.2 The A90 at-grade junctions at Laurencekirk have historical issues relating to safety and delay, and the junctions have been subject to a range of measures aimed at reducing accident frequency and severity. Safety improvements were undertaken in 2005 on the A90 on the approaches to the south junction with the A937, which included the introduction of a 50mph speed limit and the installation of speed cameras. However, a long running campaign, led by the local community, resulted in a petition to the Scottish Government being lodged in February 2009 seeking the construction of a grade separated junction at the A90/A937 southern junction.
- 1.1.3 The petition (PE1236) (Ref. 1.1) calls on the Scottish Parliament to urge the Scottish Government to improve safety measures on the A90 by constructing a grade separated junction where the A937 crosses the A90 at Laurencekirk. The Scottish Parliament Public Petitions Committee has considered this petition on several occasions and formally closed the petition in April 2017.
- 1.1.4 In January 2016, the Scottish Government announced £24 million for the design and construction of a new grade-separated junction at Laurencekirk as part of a package of additional investment alongside the Aberdeen City Region Deal.
- 1.1.5 In September 2016 Amey were commissioned by Transport Scotland to undertake the design and assessment for the A90/A937 Laurencekirk Junction Improvement scheme.
- 1.1.6 A Design Manual for Roads and Bridges (DMRB) Stage 2 Environmental Assessment Report (EAR) was completed in April 2018 (Ref. 1.2). The purpose of the EAR was to provide an assessment of the environmental effects of the four options and the associated sub-options for the scheme to help select a preferred option. Each option was assessed, to allow comparison and identification of an environmentally preferred option.
- 1.1.7 Option 1A was identified as the preferred environmental option in July 2018 and was taken forward for further assessment and design development as part of DMRB Stage 3. This option was refined throughout the stage 3 assessment process and the design provided to the environmental team for assessment, hereafter referred to as the scheme. This stage 3 Environmental Impact Assessment Report assesses the environmental impacts associated with this scheme.

1.2 Need for Environmental Impact Assessment

- 1.2.1 The formal requirement for an Environmental Impact Assessment (EIA) is determined by the EIA (Scotland) Regulations 1999 (Ref. 1.3) as amended by the EIA (Scotland) Amendment Regulations

2006 (Ref. 1.4). These Regulations implement European Commission Directive 85/337/EEC (Ref. 1.5) as amended by Directive 2014/52/EU (Ref. 1.6) and require an EIA to be undertaken on the effects of certain public and private projects on the environment, hereafter referred to as the EIA Regulations. The requirement for EIA of trunk road projects is set out in the Roads (Scotland) Act 1984 (c.54, Sections 20A and 55A) (Ref. 1.7) as amended by Part III of the EIA (Scotland) Regulations 1999, The EIA (Scotland) Amendment Regulations 2006 and The Roads (Scotland) Act 1984 (Environmental Impact Assessment) Regulations 2017.

- 1.2.2 Projects are described by type within the EIA Directive. Those of a type listed in Annex I of the EIA directive must be subject to a mandatory EIA. For projects listed in Annex II, EIA is not mandatory, and each project must be reviewed on a case-by-case basis against certain thresholds or where it is located in a sensitive area. If it is considered that the project is an Annex II project, then it should be screened against the criteria set out in Annex III to determine if an EIA is required.
- 1.2.3 The A90 Laurencekirk scheme as a trunk road project is promoted under The Roads (Scotland) Act 1984 (EIA) Regulations 2017 and is considered to be an Annex II project. A screening determination was therefore required on the need for an EIA. The screening determination was recorded within the Record of Determination which was approved in November 2018. Screening using Annex III criteria, reference to consultations undertaken and a review of available information identified that a statutory EIA was required.
- 1.2.4 The screening determination found that the project is likely to have significant effects on the environment due to the characteristics and location of the scheme. It was concluded that there was potential for significant effects, particular in relation to people and communities, from land take and beneficial impacts on travellers, significant visual impacts on some receptors, significant impacts on soils, materials and waste. Therefore, this stage 3 Environmental Impact Assessment Report was undertaken to determine impacts from the scheme and provide details on the mitigation required to ensure that residual effects on the environment are not significant.

1.3 Scheme Location

- 1.3.1 Laurencekirk is a small town situated approximately 40km south of Aberdeen, as shown in **Figure 1.1** (Appendix A) and **Plate 1-1**. The town is located to the north west of the A90 which is a major north to south trunk road running through Dundee and Aberdeen.

Plate 1-1: Scheme Location



- 1.3.2 There are three junctions within the A90 that give access to Laurencekirk,
 - o the A937 north junction;
 - o the central B9120 staggered junction that gives access to St Cyrus; and
 - o the A937 south junction, where the staggered southern leg gives access to the A937 and Montrose area.
- 1.3.3 The area surrounding Laurencekirk and the scheme is predominantly rural with properties remote from the edge of the existing A90 trunk road. Properties are generally set back from the road, however there are several residential properties which access directly on to the A90. The surrounding area also consists of high quality arable agricultural land and earthworks associated with the existing road network. The topography over the area is gently rolling lowland farmland.
- 1.3.4 There are pockets of mixed woodland and trees around farms and around Laurencekirk. The largest and most significant area is the Community Woodland Denlethen Wood, which is located approximately 400m to the north west of the proposed scheme.
- 1.3.5 The Edinburgh to Aberdeen Railway Line passes through the study area. The A90 crosses the railway line to the south west of the scheme.

1.4 Scheme Description

- 1.4.1 The scheme comprises a new grade-separated junction (GSJ) located at the existing at-grade south junction with the A937 into Laurencekirk from the A90. The scheme design is shown in **Figure 1.2** and **Figure 1.3**.
- 1.4.2 The GSJ is a full-diamond layout with dumb-bell roundabouts. The layout comprises local realignment of the A937 carriageway which is elevated over the A90 by the means of a structure between roundabouts.
- 1.4.3 An alternative means of access is provided for Johnston Lodge which also comprises a shared use Non-Motorised User (NMU) track (existing direct access from A90) – with no closure of the existing central reserve gaps at the centre or north junctions into Laurencekirk.
- 1.4.4 For the purposes of the assessment, the construction programme has been assumed to last for approximately 12 - 15 months. This will allow the construction of the structure, traffic management and phasing for the embankment plus all road related construction.
- 1.4.5 More detail on the proposed scheme is provided in Chapter 2.

1.5 Environmental Impact Assessment Report Structure

- 1.5.1 The purpose of an Environmental Impact Assessment Report (EIAR) is to ensure that the environmental effects of a proposed scheme are fully considered, together with the economic or social benefits before a decision is made to provide consent to the scheme. The purpose of this EIAR is to investigate the likely effect of the proposed scheme on the environment and local communities, to describe environmental constraints and propose mitigation.
- 1.5.2 This EIAR will provide supporting information with the publication of statutory draft Orders and fulfils the Scottish Ministers' determination that the scheme should be the subject of an EIA. The Statutory draft Orders will consist of the Side Roads Order, Trunking Order and a Compulsory Purchase Order. The methods used in the preparation of this EIAR follow those set out in guidance published within the Design Manual for Roads and Bridges (DMRB) Volume 11 'Environmental Assessment'. The basic requirements of an EIAR are outlined in the DMRB Volume 11 Section 2, Part 2 (HA 202/08) (Ref. 1.8) and set out as a mandatory requirement in the DMRB Volume 11 Section 2 Part 6 (HD 48/08) (Ref. 1.9) paragraphs 3.2 to 3.4, as follows:

“An ES (EIAR) is the document that should contain information meeting the requirements of the EIA Directive as translated into UK law by the EIA Regulations. The ES will identify, describe and assess in an appropriate manner, in the light of each individual case and in accordance with Articles 4 to 11 of the Directive and the EIA Regulations, the significant environmental effects of the project on the factors mentioned in Article 3 of the EIA Directive. It will contain the information referred to in the EIA Regulations and Annex IV of the EIA Directive to the extent that the Secretary

of State or equivalent considers that it is relevant to the specific characteristics of the project and of the environmental features likely to be affected by it; and that (having regard in particular to current knowledge and methods of assessment) the information may reasonably be gathered.”

1.5.3 In line with the regulations, an EIAR should contain the following:

- a description of the project (in accordance with the relevant EIA Regulations)
- a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse environmental effects
- the data required to identify and assess the main effects which the project is likely to have on the environment
- an outline of the main alternatives studied and an indication of the main reasons for the choice of project, taking into account the environmental effects
- a non-technical summary of the information mentioned in paragraphs above.

1.5.4 An EIAR generally comprises four volumes, with different levels of detail and complexity.

- Volume 1: Non-Technical Summary (NTS) which is a brief report summarising the principal sections of the EIAR in non-technical language to be readily understandable by members of the public. The NTS is included with the EIAR but is also a freestanding document which is a comprehensive document drawing together all the relevant information about the environmental impacts of the project.
- Volume 2: EIAR;
- Volume 3: Figures; and
- Volume 4: Technical Appendices.

1.5.5 The chapters included in this EIAR are:

- Chapter 1 Introduction which provides the purpose of the report
- Chapter 2 The Project and Alternatives Considered which describes the scheme and relevant background information along with descriptions of the alternative options considered during previous stages. This chapter also considers the construction methods and details post construction operation and maintenance actions.
- Chapter 3 Planning Policy which provides a review of national and local planning policy relevant to the scheme.
- Chapter 4 Environmental Impact Assessment Process and Method which describes the approach to this assessment and explains how impact significance is determined.

- Chapter 5 Consultation which describes the consultation process undertaken, with statutory and non-statutory bodies, as part of the Environmental Impact Assessment process. Details on the methods used to collect information from the consulted are provided, together with an indication of their views.
- Chapters 6 to 15 Technical Chapters which describe the baseline conditions, likely impacts, mitigation measures, residual effects, limitations and conclusions. The topics described are:
 - Chapter 6 - Air Quality
 - Chapter 7 - Cultural Heritage
 - Chapter 8 - Landscape and Visual Effects
 - Chapter 9 - Noise and Vibration
 - Chapter 10 - Nature Conservation and Biodiversity
 - Chapter 11 - Road Drainage and the Water Environment
 - Chapter 12 - People and Communities
 - Chapter 13 - Geology and Soils
 - Chapter 14 - Materials
 - Chapter 15 - Interactions and Cumulative Effects
 - Chapter 16 Schedule of Environmental Commitments provides a summary of the mitigation measures and monitoring requirements that will be required by the scheme
 - Chapter 17 Summary and Conclusions presents a summary of the permanent environmental effects that are likely to arise from the scheme along with concluding comments.

1.6 Environmental Team

- 1.6.1 This report was produced by a team of technical specialists as set out in Table 1-1.

Table 1-1: EIAR Authors

Chapter		Author	Relevant expertise/qualification	Reviewer	Relevant expertise/qualification
1-4	Introductory Chapters	Kerith McClung Graduate Environmentalist	BSc (Hons) Environmental Science Kerith has three years of experience contributing to environmental assessments including A66 Bringham Broughton Roundabout, Queen Margaret University and Bassenthwaite Lake Cycle Scheme	Helen Craig Senior Environmentalist	BSc (Hons) Environmental Biology MSc Applied Environmental Sciences Member of Chartered Institute of Ecology and Environmental Management (MCIEEM) Chartered Environmentalist (CEnv) Helen has 10 years' experience of EIA and has been EIA co-ordinator for Department of Infrastructure schemes such as Lagan Footbridge and Cornamuck road realignment.
5	Consultation				
6	Air Quality	Malcolm Pounder Senior Environmentalist	Full Member of the IAQM and an Associate member of the Institution of Environmental Science Malcolm has written air quality assessment for schemes such as; A96, A90 Laurencekirk, Liverpool Southern Link Road and Queen Margaret University.	David Monaghan Principal Consultant	Chartered Environmentalist (SocEnv) Full Member of the Institution of Environmental Sciences (MIEnvSc) Full Member of the Institute of Air Quality Management (MIAQM) Member of the Institute of Environmental Management and Assessment (MIEMA) BSc (Hons) Environmental Science and Technology David has a proven track record in winning, managing and delivering technical air quality studies for road, rail, port, industrial, oil and gas, and low carbon, and waste management projects in Europe and the Middle East.
7	Cultural Heritage	Declan Hurl Senior Environmentalist	Post-Grad Certificate of Field Archaeology Member of Chartered Institute for Archaeology. Declan has over 30 years' experience and has completed archaeological assessments for schemes such as Queen Margaret University, A77 Maybole Bypass Liverpool (NLR, SLR, Churchill Flyovers) and Wales & Borders CVL	Andrew Warwick Principal Consultant	BSc (Hons) Environmental Biology MSc Applied Environmental Sciences MSc Environmental Planning Full Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) Chartered Environmentalist (CEnv) With Amey Andrew has delivered a number of Environmental Statements for DfI such as Lagan Pedestrian and Cycle Bridge, Rathlin Island Harbour Development and A32 Cornamuck Road Realignment.

Chapter		Author	Relevant expertise/qualification	Reviewer	Relevant expertise/qualification
8	Landscape and Visual	Susan Irwine Landscape Architect	Chartered Member of the Landscape Institute (CMLI) Susan has been a Landscape Architect for approximately 29 years and built up extensive skills and experience in design and detailing of large-scale complex hard and soft landscape proposals, for both public and private clients. Susan has also prepared a number of Landscape and Visual assessments for a variety of infrastructure schemes, including; wind farms, roads, hydroelectric schemes and overhead power lines	Tracy Smith Principal Landscape Architect	BSc. (Hons) Horticulture Chartered Member of the Landscape Institute (CMLI) Various road schemes, including A96 Dualling: East of Huntly to Aberdeen
9	Noise and Vibration	Kerith McClung Graduate Environmentalist	BSc (Hons) Environmental Science. Kerith has experience complete noise and vibration assessment for various road schemes, including, Queen Margaret University and Northern and Southern Link Road.	Mike Potts Principal Environmentalist	Chartered Environmentalist (CEnv) Full Member of the Institute of Acoustics MIOA Post-graduate Diploma in Acoustics & Noise Control Mike has undertaken construction and operational noise and vibration assessment for numerous major infrastructure projects including major port and harbour developments, new and altered roads, park and ride facilities, wind farm developments and urban development, both in the UK and overseas
10	Nature Conservation and Biodiversity	Lorna McRae Environmentalist	BSc (Hons) Marine Biology, MRes Evolutionary Biology and Systematics, Graduate Chartered Institute of Ecology and Environmental Management. Lorna has worked on various contracts during her time at Amey for a range of clients including Transport Scotland, Network Rail, Scottish Water, Highways England, and Department for Infrastructure.	Helen Craig Senior Environmentalist	See above
11	Road Drainage and Water Environment	Craig Prentice Assistant Environmentalist	MSc Sustainability and Environmental Studies (with distinction) BA (Hons) Geography Practitioner Member, Institute of Environmental Management and Assessment (IEMA) Craig has experience completing assessments such as A1 Old Craighall Junction and A96 Dualling between East of Huntly to Aberdeen.		
12	People and Communities	Oliver Ockenden Graduate Environmentalist	BSc (Hons) Environmental Science Oliver has experience completing DMRB assessments such as Woodbridge Level Crossings and Linton Crossroads		

Chapter		Author	Relevant expertise/qualification	Reviewer	Relevant expertise/qualification
13	Geology and Soils	Adam Kelly Graduate Environmentalist	BSc (Hons) Environmental Health MSc Environmental Engineering Adam has experience assisting in the provision of Environmental Statements for major projects, including New Deer substation, Wales & Borders and the Forth Bridge.	Jayne Griffiths Senior Environmentalist	BSc Applied Science: Resources Science Member of Chartered Institute of Water and Environmental Management CEnv CSci Jayne has extensive experience working in the development, design and construction of highway and infrastructure improvements and renewals projects. These include road, rail and utilities projects.
14	Materials				
15	Interactions and Cumulative Effects	Kerith McClung Graduate Environmentalist	See above	Helen Craig Senior Environmentalist	See above
16	Schedule of Environmental Commitments				
17	Summary and Conclusions				

1.7 Review and Comments

1.7.1 A consultation period will follow publication of the draft Orders. This will allow comments or representations to be made to Transport Scotland on the proposals.

1.7.2 Copies of this Environmental Impact Assessment Report, Non-Technical Summary, Figures and Appendices will be available for inspection during normal office hours at the following locations:

Transport Scotland Buchanan House 58 Port Dundas Road Glasgow G4 0HF	Aberdeenshire Council Headquarters Woodhill House Wesburn Road Aberdeen AB16 5GB	Mearns Community Campus Library Mearns Community Campus Aberdeen Road Laurencekirk AB30 1ZJ
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1.7.3 This Environmental Impact Assessment Report can also be viewed on the Transport Scotland website (Ref. 1.10).

1.7.4 Any comments on the proposals should be addressed in writing to 'Director of Major Projects' at Transport Scotland before the closing date for comments and representations given in the Public Notice.