5 Overview of Assessment Process

5.1 Introduction

5.1.1 This chapter outlines the general approach followed for the EIA of the proposed scheme in accordance with DMRB and other relevant guidance. More detailed methodologies are provided in the respective chapters.

5.1.2 The aims of the environmental assessment are to:

- gather information about the environment of the study area and identify environmental constraints and opportunities associated with the area which may influence, or be affected by the proposed scheme;
- identify and assess potential environmental effects; and
- identify and incorporate into scheme design and operation, features and measures to avoid, reduce or offset adverse effects, or in some cases to enhance beneficial effects.

5.2 Scope and Guidance

Trunk Road EIA

5.2.1 The term 'trunk road' in Scotland refers to the strategic system of major roads and associated structures (including bridges) for which the Scottish Ministers have responsibility. The proposed scheme would form part of the trunk road network.

5.2.2 Annex E of Circular 8/2007 'The Environmental Impact Assessment (Scotland) Regulations 1999' (Scottish Government, 2007) provides guidance on EIAs of trunk road projects. Although the Environmental Impact Assessment (Scotland) Regulations 2011 consolidated, updated and replaced Part II of the Environmental Impact Assessment (Scotland) Regulations 1999, Parts III and IV of the 1999 Regulations concerning Roads, Bridges and Land Drainage, remain extant. Consequently the guidance contained in Circular 8/2007 in Annex E continues to apply and is relevant to the proposed scheme.

Design Manual for Roads and Bridges (DMRB)

5.2.3 The DMRB sets out governmental guidance on the development of trunk road schemes, including motorways, and is applicable to the proposed scheme. Volume 11 of DMRB specifically provides guidance on EIA, including the level of assessment at key stages of development and reporting of environmental effects.

5.2.4 DMRB considers three levels of assessment, comprising Stage 1, Stage 2 and Stage 3. The objectives of each stage are identified in Table 5.1.

Table 5.1: DMRB Stages of EIA

Stage	Objectives
Stage 1	Identification of environmental advantages, disadvantages and constraints associated with broadly defined route corridors.
Stage 2	Identification of the factors and effects to be taken into account in the selection of route corridor options and in the identification of the environmental advantages, disadvantages and constraints associated with these route corridors.
Stage 3	Assessment to be undertaken in accordance with Environmental Impact Assessment (Scotland) Regulations 2011 which implements EC Directive 85/337, with publication of an Environmental Statement or Environmental Assessment Report.

5.2.5 It should be noted that some recent DMRB guidance updates no longer refer specifically to assessment stages as listed above in Table 5.1, such as HA 213/08: Noise and Vibration (August

2008), which refers to 'simple' and 'detailed' assessment. However, for the purposes of consistency and clarity, this ES refers to 'Stage 3 assessment' throughout.

5.2.6 As set out in Section 3.3 (The Proposed Scheme) of Chapter 3 (Alternatives Considered), in early 2008 four route corridor options were identified and considered according to environmental advantages, disadvantages and DMRB Stage 2 environmental assessment, with the results published in a DMRB Stage 2 Corridor Report (Atkins, 2009a/b). An addendum to the DMRB Stage 2 environmental assessment (Jacobs, 2013) confirmed the Stage 2 route corridor to be taken forward to Stage 3. This ES presents the findings of the DMRB Stage 3 environmental assessment.

Scope of Environmental Assessment

5.2.7 Consultation for the proposed scheme is being undertaken according to the guidance provided in Planning Advice Note (PAN) 1/2013: Environmental Impact Assessment (Scottish Government, 2013) which was published towards the end of the preparation of this ES, replacing PAN 58 (Scottish Executive, 1999). Cognisance has also been taken of PAN 81: Community Engagement (Scottish Executive, 2007). Chapter 6 (Consultation and Scoping) describes the consultation process.

5.2.8 In accordance with DMRB Volume 11, assessment has been undertaken of the environmental parameters presented in Table 5.2 and reported in Chapters 7 to 19. This environmental topic structure takes into account the advice in Interim Advice Note (IAN) 125/09: Supplementary Guidance for Users of DMRB Volume 11 Environmental Assessment (Highways Agency et al., 2009). As set out in the environmental scoping report issued to statutory consultees, a separate policies and plans chapter is provided within this ES, although in line with IAN 125/09 relevant policies are also considered within the technical chapters.

Table 5.2: Environmental Parameters Assessed in Chapters 7 to 19

ES Chapter Reference	Environmental Parameter/Title	Comments
7	Community and Private Assets	Combines DMRB Volume 11 topics 'land use' and 'community effects' as proposed by IAN 125/09.
8	Geology, Contaminated Land and Groundwater	None
9	Road Drainage and the Water Environment	None
10	Ecology and Nature Conservation	None
11	Landscape	None
12	Visual	None
13	Cultural Heritage	None
14	Air Quality	None
15	Noise and Vibration	None
16	Effects on All Travellers	Combines DMRB Volume 11 topics 'pedestrians, cyclists and equestrians' and 'vehicle travellers', as proposed by IAN 125/09.
17	Materials	Inclusion of this topic takes cognisance of IAN 153/11.
18	Policies and Plans	None
19	Cumulative Impacts	Inclusion of this topic takes cognisance of DMRB HA218/08.

Study Area

5.2.9 The study area required or recommended by DMRB and best practice guidance varies depending on the specific environmental parameter being assessed, but is typically 500m in each direction from the centreline of the proposed scheme. However, baseline environmental surveys commenced in parallel with the consideration of various design and alignment options, and

accordingly baseline data were collected for a wider study area to enable flexibility in the progression of the proposals.

5.3 Environmental Reporting

Chapter Structure

5.3.1 Chapters 7 to 17, as listed in Table 5.2, provide the following:

- an introduction to the subject area;
- approach and methods used in the assessment;
- baseline conditions (i.e. the 'existing' situation or for certain assessments the anticipated future situation in the absence of the proposed scheme);
- potential effects of the proposed scheme;
- proposed mitigation for the proposed scheme;
- residual effects of the proposed scheme (taking account of proposed mitigation); and
- references.

5.3.2 Chapter 18 (Policies and Plans) and Chapter 19 (Cumulative Impacts) have a slightly modified structure appropriate to the topic area. Chapter 20 (Schedule of Environmental Commitments) and Chapter 21 (Summary of Significant Residual Impacts) are presented in tabular format.

General Approach

Baseline Conditions

5.3.3 This EIA considers likely effects of the proposed scheme on each environmental parameter in comparison to baseline conditions, which were determined through field survey, desk-based review and consultation. Baseline conditions describe the environmental conditions at the site (and in the wider area as pertinent to the particular environmental parameter) in the absence of the proposed scheme (i.e. the 'Do-Minimum' scenario).

5.3.4 For assessments of potential impacts based on traffic data (such as drainage, water quality, air quality, noise and vibration), the assessment takes into account predicted changes in traffic flows in future years for the proposed scheme, and also considers the likely additional traffic generation as a result of the full A9 from Perth to Inverness being upgraded to dual carriageway as part of the wider programming for A9 dualling. Traffic volumes for the Do-Minimum scenario and the proposed scheme were derived from the traffic model as explained in Section 4.4 of Chapter 4 (The Proposed Scheme).

Potential Impacts

5.3.5 The general approach to assessment is based on the determination of the significance of an impact from a combination of the sensitivity or importance of the baseline conditions (i.e. the current site and its environs, including the sensitivity of receptors) and the magnitude of potential impacts. This process is described in the respective environmental chapters, and where alternative approaches were considered more appropriate these are described and justified; such as consideration of ecological effects taking account of Institute of Ecology and Environmental Management (IEEM) guidance in Chapter 10 (Ecology and Nature Conservation).

5.3.6 It should be noted that the magnitude and significance reported within the 'Potential Impacts' section of each chapter are on the basis of no mitigation.

5.3.7 Chapters 7 to 19 describe and assess the envisaged effects of the proposed scheme during both its construction and operation (i.e. following scheme opening).

Mitigation

5.3.8 PAN 1/2013: Environmental Impact Assessment (Scottish Government, 2013) presents mitigation as a hierarchy of measures ranging from prevention of environmental effects by avoidance, to measures to offset any effects that cannot be remedied. The mitigation hierarchy is summarised in Table 5.3.

Table 5.3: Mitigation Hierarchy

Level of Mitigation	Definition
Prevent	To prevent adverse environmental effects at source (e.g. building design or specification of construction equipment).
Reduce	If adverse effects cannot be prevented, steps taken to secure a reduction of effects (e.g. minimisation of the cause of the effect at source, abatement on site and abatement at receptor).
Remedy/offset	When effects remain that cannot be prevented or reduced, they should be offset by remedial or compensatory action (e.g. provision of environmental improvements, opportunities for access and informal recreation, creation of alternative habitats and prior excavation of archaeological features).

5.3.9 Mitigation takes into account best practice, legislation, guidance and professional experience. The principles and considerations identified in the A9 Dualling SEA (Halcrow, 2013) and related strategic work have also been considered.

5.3.10 Where possible and reasonably practicable, potential adverse environmental impacts of the proposed scheme have been prevented through an iterative approach to the design process, rather than relying on measures to mitigate the effects (e.g. incorporation of access arrangements for vehicles or pedestrians into the design).

5.3.11 Where complete prevention of potential effects was not feasible, measures have been proposed to reduce potentially significant effects through abatement measures either at source, at the site (e.g. visual screen planting and landscaping), or at the receptor (e.g. design of culverts). The level at which effects are considered 'significant' depends on the environmental parameter assessed, but generally potential effects of 'Moderate' or greater significance would be identified as priorities for mitigation.

5.3.12 Where potential adverse impacts cannot be prevented or reduced, consideration has been given to the specification of measures to be included in the Contract Documents that offset or, in certain circumstances, compensate for any damage. Measures as stipulated in this ES will form contractual requirements on the contractor (or Transport Scotland where applicable).

Residual Impacts

5.3.13 Residual Impacts sections within the chapters report the anticipated significance of impacts remaining following application of the proposed mitigation identified in the ES.

Summary of Impacts and Mitigation

5.3.14 Chapter 19 (Cumulative Impacts) considers the potential for cumulative impacts of the proposed scheme, and also of the proposed scheme along with other reasonably foreseeable developments.

5.3.15 Chapter 20 (Schedule of Environmental Commitments) provides a summary of proposed mitigation as reported in ES Chapters 7 to 18. Chapter 21 (Summary of Significant Residual Impacts) provides a summary of those impacts still considered significant after successful implementation of any proposed mitigation.

Changes to Scheme Design

5.3.16 The assessment of potential impacts and the identification of mitigation measures in the ES are based on the proposed scheme DMRB Stage 3 design as described in Chapter 4 (The Proposed

Scheme). As noted in Chapter 1 (Introduction), 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 would be subject to environmental review to ensure that the effects would be no worse than those reported in this ES.

5.4 References

Atkins (2009a). A9 Dualling: Luncarty to Pass of Birnam Strategic Planning Study - Engineering Report.

Atkins (2009b). A9 Dualling: Luncarty to Pass of Birnam Strategic Planning Study - Stage 2 Environmental Assessment Report.

Halcrow (2013). A9 Dualling: Strategic Environmental Assessment (SEA) – Environmental Report. June 2013.

Highways Agency et al. (1993). DMRB Volume 11, June 1993. The Highways Agency, Scottish Government, Welsh Assembly Government and Department for Regional Development Northern Ireland.

Highways Agency et al. (2008). DMRB Volume 11, August 2008, Section 3, Part 7, HA213/08. The Highways Agency, Scottish Government, Welsh Assembly Government and Department for Regional Development Northern Ireland.

Highways Agency et al. (2009). Interim Advice Note (IAN) 125/09: Supplementary Guidance for Users of DMRB Volume 11 Environmental Assessment.

Highways Agency et al. (2011). Interim Advice Note 153/11. Guidance on the Environmental Assessment of Material Resources.

Scottish Executive (1999). Planning Advice Note (PAN) 58: Environmental Impact Assessment.

Scottish Executive (2007). Planning Advice Note (PAN) 81: Community Engagement.

Scottish Government (2007). Circular 8/2007: Environmental Impact Assessment (Scotland) Regulations 1999.

Scottish Government (2013). Planning Advice Note (PAN) 1/2013: Environmental Impact Assessment.