

## 6 Overview of Assessment Process

### 6.1 Introduction

- 6.1.1 This chapter outlines the Environmental Impact Assessment (EIA) approach undertaken for the Proposed Scheme in accordance with DMRB and other relevant guidance.
- 6.1.2 The DMRB Stage 2 assessments were subject to non-statutory consultation via the A9 Dualling Environmental Steering Group (ESG), including feedback on a range of issues that the Consultation Authorities required further information on through the DMRB Stage 3 assessment.
- 6.1.3 Following DMRB Stage 2, a route-wide Scoping Report was produced covering A9 Dualling Projects across the South, Central and Northern sections. The Scoping Report confirmed that baseline information presented at DMRB Stage 2 would be further developed, as well as outlining the DMRB Stage 3 assessment approaches for each topic.
- 6.1.4 Note that **Chapter 4** above explained that the Dalwhinnie Junction layout was changed during DMRB Stage 3 to a compact form grade separated junction layout, and that the staggered diamond layout (DMRB Stage 2 Option 27) was removed from further consideration.

### 6.2 Topics for Assessment

- 6.2.1 DMRB Interim Advice Note (IAN) 125/15, published by Highways England in 2015, provides guidance on likely future changes to DMRB, including the proposed combination of ‘Community and Private Assets’ and ‘Effects on All Travellers’ into a single ‘People & Communities’ chapter. However, the approach taken for A9 Dualling Projects is to keep these topics as two separate chapters.
- 6.2.2 The Proposed Scheme for Project 8, Dalwhinnie to Crubenmore, is therefore assessed against the topics chapters noted and numbered below:

- |                                                                 |                                |
|-----------------------------------------------------------------|--------------------------------|
| <b>8. People and Communities – Community and Private Assets</b> | <b>13. Landscape</b>           |
| <b>9. People and Communities – Effects on All Travellers</b>    | <b>14. Visual</b>              |
| <b>10. Geology, Soils and Groundwater</b>                       | <b>15. Cultural Heritage</b>   |
| <b>11. Road Drainage and the Water Environment</b>              | <b>16. Air Quality</b>         |
| <b>12. Ecology and Nature Conservation</b>                      | <b>17. Noise and Vibration</b> |
|                                                                 | <b>18. Materials</b>           |
|                                                                 | <b>19. Policies and Plans</b>  |

- 6.2.3 Each chapter is presented using a common sub-section structure, discussed briefly below.

#### Introduction

- 6.2.4 Introduces the environmental topic and the issues considered in the Environmental Impact Assessment chapter.

### Approach and Methods

- 6.2.5 Provides information on the scope, study area and methodology used in the Environmental Impact Assessment, including any specific guidance adopted, any assumptions made, and any limitations. It describes how receptor sensitivity, magnitude and significance of impact are defined for the assessment.

### Baseline Conditions

- 6.2.6 Describes the relevant environmental baseline conditions, as determined through desk-based reviews of existing information, consultation, and field surveys. These sections of the ES may include reference to supplementary information provided as **Appendices in Volume 2** and also reference to GIS mapping provided as **Drawings in Volume 3**.

### Potential Impacts

- 6.2.7 As previously described, the Proposed Scheme is generally assessed in relation to land required for permanent infrastructure works (i.e. areas lost to development) and temporary construction stage works (i.e. additional land required to enable construction activity).
- 6.2.8 In order to account for any local adjustments that may be required on-site for permanent works, a 2-5m offset is applied around the extent of permanent infrastructure where possible. All land within this offset is considered within a 'permanent works assessment boundary'.
- 6.2.9 For additional land identified to enable construction stage activities and access, it is considered that such areas may be temporarily used/ trafficked during construction, but that they will be suitable for restoration to a condition that enables recovery post-completion.
- 6.2.10 **Figure 6-1** provides an overview of the permanent (solid red line) and temporary works (solid green line) boundaries applied in the assessment of the Proposed Scheme. A range of infrastructure details are also shown, including the proposed road layout, earthworks extents and pre-earthworks drainage, watercourse diversions and culverts, road drainage networks, SuDS basin locations and compensatory flood storage areas. The full extent of the Proposed Scheme, with assessment boundaries, is shown in **Drawings 5.1 to 5.9 (Volume 3)**.
- 6.2.11 It should be noted that **Figure 6.1** also shows a broken dot/ dash red line boundary around areas identified as required to replace or extend shelter belt trees on the east (southbound) side of the Proposed Scheme. These areas are shown to define an indicative 30m wide area required for winter resilience (WR) shelter belt planting (e.g. around the Dalwhinnie Junction).
- 6.2.12 Each indicative WR area is offset 30m from the edge of the southbound road verge. This is to provide a 'drop zone' for snow to minimise risk of snow drift onto the carriageway. These 30m zones are included as a recommended minimum (Tabler, 2003).
- 6.2.13 As noted in previous chapters, the River Truim is part of the River Spey Special Area of Conservation (SAC), and the DMRB Stage 3 design and assessment boundaries have taken account of local river migration based on most recent A9 dualling topographic survey and aerial photography.

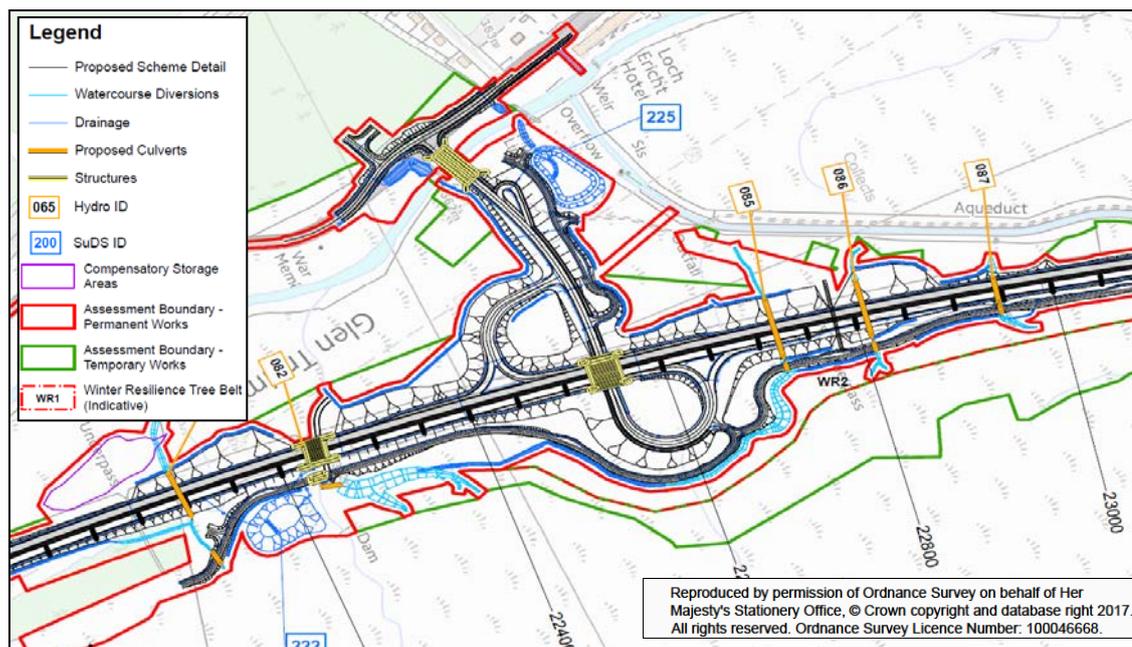


Figure 6-1: Permanent and Temporary Works assessment boundaries approach

- 6.2.14 Each topic assessment chapter considers permanent and temporary potential impacts as relevant to the particular receptors identified in their baseline sections. Note that certain topics do not focus on physical land use effects including, for example, noise and air quality.
- 6.2.15 Impacts are assessed based on their sensitivity and the magnitude of impact, which together define the significance of impact. The approach taken was to assess the Proposed Scheme including embedded mitigation (e.g. mammal ledges) which is built into the Proposed Scheme design, identify the significance of impacts and then, where necessary, define additional mitigation to address the impacts and report the residual significance of impacts at the end of each chapter.

#### Mitigation

- 6.2.16 Given the iterative design development described under **Chapter 4**, each chapter recognises that some mitigation measures have been 'embedded' through design development. Each topic chapter summarises the embedded mitigation relevant to the assessment topic, and the assessment of permanent and temporary impacts is undertaken in cognisance.
- 6.2.17 Each chapter includes a series of mitigation tables which identify:
- Standard A9 Mitigation – typical best practice items that will be applied and referenced across all A9 Dualling projects
  - Embedded Mitigation – items that are embedded through the Proposed Scheme design, but which must be delivered during the construction stage to ensure the Proposed Scheme results in the residual impact assessed
  - Project Specific Mitigation – items that are further required to mitigate Proposed Scheme impacts, such as peat/ habitat restoration, landscape proposals and management plans, that must be implemented to avoid, reduce or offset identified impacts

- 6.2.18 For a range of assessment topics, additional mitigation requires additional land to provide, for example, replacement woodland and/ or screen planting, peat restoration and ecological habitat management, or to address morphological (erosion and scour) risks.
- 6.2.19 **Figure 6.2** below shows an interim step in the development of additional mitigation proposals, where each relevant topic used GIS to identify and record land areas required around the works assessment boundaries. Each area was assigned a reference, with the relevant purpose recorded. In many instances, land required for mitigation envelops temporary works areas.

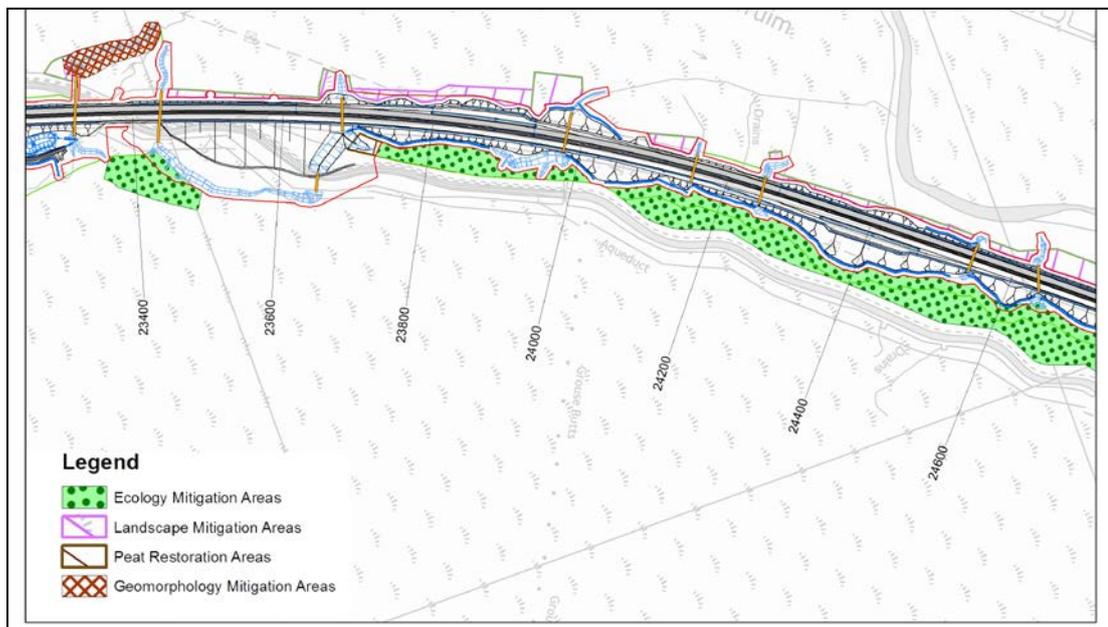


Figure 6-2: Overview of identification of land required for mitigation approach

- 6.2.20 This approach enabled discussions between specialists to determine which mitigation proposals were conflicted, or were required before others could be introduced; for example, peatland restoration before appropriate ecological habitat or landscape planting or seeding. The adopted approach also supports assessment of potential residual and cumulative effects.
- 6.2.21 The developed outcome is presented in **Environmental Mitigation Drawings 6.1 to 6.14 (Volume 3)**. These identify what environmental mitigation applies to each land parcel. **Appendix 6.1** provides details on species mixes illustrated on the **Environmental Mitigation Drawings**.
- 6.2.22 All land identified for mitigation purposes will be included within the Land Made Available for the Proposed Scheme, and subject to Compulsory Purchase, where applicable. Note that Land Made Available (LMA) and Compulsory Purchase Order (CPO) boundaries for the Proposed Scheme may differ. CPO will apply to land that is required for the Proposed Scheme, but which is not already owned by Scottish Ministers; whereas, LMA relates to all land made available, which will include Scottish Ministers' land and land subject to CPO.
- 6.2.23 In certain instances, the **Environmental Mitigation Drawings (Volume 3)** may identify exclusion zones; this is where areas within the overall LMA boundary are to be protected from damage by prevention of access to Contractors and excluded from construction activity. Typically, such areas may be within, or on the boundary of, designated nature conservation sites.
- 6.2.24 With respect to the mitigation tables noted previously, **Table 6-1** below summarises the format and column headings used.

Table 6-1: Mitigation schedule headings

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
Each item is given a unique ID	Location provided as chainage or OS NGR reference	Notes when the measure is to be implemented (see below)	Explains what is required	Provides additional context on the rationale or anticipated benefit	Records whether further consultation or approval is required to agree the measure before implementation

6.2.25 Note that ‘Timing of Measure’ should be understood to refer to the implementation or delivery of the required mitigation measure, and not when the benefit of mitigation may be expected or realised. For example, SuDS will provide an operational benefit in terms of treatment of road surface runoff and discharge quality; however, they need to be delivered during construction of the Proposed Scheme.

6.2.26 Four principal phases are defined for the ‘Timing of Measure’:

- Design – allows for further design and consultation under a typical Design and Build contract
- Pre-Construction – allows for pre-construction survey/ species translocation, advance planting/ clearance, permitting
- Construction – to include for temporary construction stage works and implementation of mitigation ‘embedded’ into Proposed Scheme design
- Post Construction/ Operation – allows for local landscape and other restoration measures, as well as ongoing management and maintenance

#### Significant Residual Impacts

6.2.27 Each chapter identifies significant residual impacts that are likely to remain following implementation of proposed mitigation, as relevant to the topic under consideration.

#### Combined Impacts

6.2.28 Within some topic chapters, there is identified potential for a number of residual impacts to affect the same receptor/ resource. Where this is the case, a section on Combined Impacts outlines the impacts that have been identified and the potential combined effects.

#### References

6.2.29 Relevant reference sources are included at the end of each individual topic chapter.

## 6.3 Policy Compliance

6.3.1 Rather than include a compliance assessment in every topic chapter, these have been collated and presented in **Chapter 19, Policies and Plans**.

## 6.4 Cumulative Effects – Chapter 20

- 6.4.1 European Commission guidelines (EC, 1999) define cumulative impacts as those that result '*...from incremental changes caused by other past, present or reasonably foreseeable actions together with the project*'.
- 6.4.2 Cumulative impacts can be identified as either the combined effect of different environmental impacts on a single receptor/ resource, or the combined effect of impacts from a number of different proposed developments.
- 6.4.3 EIA Regulations require the consideration of cumulative effects. **Chapter 20** considers the range of significant residual effects across assessed topics. The chapter outlines the potential for these effects to have a cumulative impact on any single receptor/ resource, and identifies those effects which, in combination with other identified major projects, could potentially result in cumulative effects on the environment. For the purposes of this EIA, 'major projects' were assessed as any projects requiring, or likely to require, an EIA, and all projects in the A9 Dualling Programme.

## 6.5 Schedule of Environmental Commitments – Chapter 21

- 6.5.1 To provide a single reference source for the range of EIA mitigation required, a Schedule of Environmental Commitments is provided in **Chapter 21**.
- 6.5.2 This Schedule clearly identifies each mitigation item required by each topic assessment chapter, including Standard, Embedded and Specific (Additional) Mitigation. Where practicable, each item tabulated includes further detail on rationale, timing and consultation requirements.
- 6.5.3 Where relevant, Monitoring Requirements are also discussed, identifying whether monitoring is applicable during the anticipated 'defects' period for a road scheme, e.g. up to one or two years for road infrastructure related defects, and up to five years for landscaping and habitat or peat management works, and can therefore be assigned to the Principal Construction Contractor.
- 6.5.4 Longer term monitoring requirements (i.e. beyond one, two or five years, as noted above) are typically assigned to ongoing routine management and maintenance inspections through the operation phase of the route. These would typically be assigned to Transport Scotland and the relevant Trunk Road Operating Company or managing agent, where applicable.

## 6.6 Summary of Significant Residual Impacts – Chapter 22

- 6.6.1 Residual impacts following mitigation are described in each topic chapter. A summary of residual impacts across the Proposed Scheme is then provided in **Chapter 22**.

## 6.7 References

- 6.7.1 Relevant references for introductory Chapters 1 to 7 of this ES are compiled and listed at the end of Chapter 7.