4 The Proposed Scheme

4.1 Introduction

4.1.1 This chapter provides a description of the proposed scheme, including information on the procurement process, design of the route, layout of the proposed scheme, methods and programme of construction.

4.1.2 This ES reports on the proposed scheme at the Stage 3 level of engineering design as defined in DMRB.

4.2 Scheme Procurement

4.2.1 It is likely that the proposed scheme will be procured by means of a Design and Build (D&B) Contract. Under the terms of this contract, the Contractor will undertake both the detailed design and construction of the project. Responsibility for operating and maintaining the trunk road would remain with the Scottish Government. Responsibility for operating and maintaining side roads would remain with Perth & Kinross Council on completion of the proposed scheme.

4.2.2 Under a D&B style of contract, a specimen (outline) design is prepared for the proposed scheme, which the appointed contractor(s) can optimise as the detailed design is developed. Such optimisation must be within the constraints imposed by the ES, including the Schedule of Environmental Commitments (which contains the mitigation identified through the EIA process), Statutory Orders and any specific limits set within the contract documents (Chapter 20: Schedule of Environmental Commitments). This will help to ensure that the detailed design will be implemented in compliance with this ES.

4.3 Sustainable Development Policy

4.3.1 Consideration of sustainable development issues will form an important element of all activities undertaken in the project's life cycle, including:

- project design and appraisal;
- tender evaluation;
- construction;
- maintenance; and
- operation (and decommissioning).

4.3.2 The A9 Dualling SEA Environmental Report (draft, June 2013) (refer to Section 2.4: Programme-Level Review) of Chapter 2: Need for the Scheme) included a preliminary range of environmental principles, based on a review of relevant plans, policies and strategies. The SEA states that '*the preliminary range of principles will be reviewed and tailored to be more A9 specific, with recommendations on strategic environmental design principles presented through the SEA Post Adoption Statement*'. These environmental principles include several of particular relevance to sustainable development, with some key examples provided below:

- promote local/ sustainable sourcing of materials;
- promote sustainable design and innovation to reduce material consumption;
- avoid and minimise waste generation; and
- maximise re-use of material resources and use of recycled materials.

4.3.3 At the time of completing this ES, the A9 SEA Post Adoption Statement was being finalised. The outcomes in relation to sustainability will be taken into account by Transport Scotland during the progression of the proposed scheme as part of the overall A9 dualling programme.

4.4 Traffic Conditions

4.4.1 The A9 between Luncarty and the Pass of Birnam has an Annual Average Daily Traffic (AADT) flow of approximately 15,900 (based on 2012 figures), of which it is estimated that HGVs constitute approximately 11% of vehicles.

4.4.2 Local traffic information was gathered through a combination of observed 12-hour Junction Turning Counts (JTCs) and Automatic Traffic Counts (ATCs) to produce traffic demand matrices, representative of base year 2012 traffic conditions, for the existing road network between Inveralmond and Dunkeld. These matrices were input to NESA software (Version 11.001.12) to generate a NESA base model which calibrated and validated well against independent traffic data.

4.4.3 Several traffic forecasting techniques were examined, including National Road Traffic Forecasts (NRTF), Scottish Trip End Program (STEP) and Transport Model for Scotland (TMfS) projections. From a review of these methods, factors derived from the latest available TMfS projections (TMfS, 2007) were considered to be the most suitable means of forecasting future year flows on the A9 section. TMfS is a strategic modelling tool, developed and made available by Transport Scotland for the purposes of assessing the influences of land-use and transport policies on traffic demand.

4.4.4 The anticipated AADT traffic levels for opening year (2019) and design year (2034) are 16,800 and 20,400 respectively. Whilst the proposed scheme is not expected to notably affect the traffic demand at a local level (Luncarty to Pass of Birnam), it is anticipated that the wider programme of proposed dualling of the A9 from Perth to Inverness may attract additional traffic to this strategic route. The flows at 2034 include the effect of full A9 dualling between Perth and Inverness, and as the additional traffic is only included in the future scenario, this is considered to represent robust (worst-case scenario) figures for the purposes of completing the environmental assessments reported in this ES, such as for water quality and traffic noise calculations.

4.4.5 The 'Do-Minimum' scenario has been agreed with Transport Scotland to include maintenance of the existing road over a 60 year appraisal period, as such it is anticipated that the current road infrastructure will be consistent with that in the 'Do-Minimum' scenario (i.e. without the proposed scheme).

4.5 Scheme Design

4.5.1 As explained in Chapter 3 (Alternatives Considered), the preferred route for the proposed scheme was identified following the DMRB Stage 2 assessment.

4.5.2 Throughout the development of the proposed scheme described in this chapter, consultation has been undertaken with statutory consultees and non-statutory consultees, including landowners that may be affected by the proposals. The feedback received from these consultations has been used to inform the DMRB Stage 3 design, with measures implemented, where reasonable and practicable, to address specific areas of concern. Further information regarding the consultation process is provided in Chapter 6 (Consultation and Scoping), with a summary of consultation responses and how these have been addressed provided in Appendix A6.3 (Summary of Key Issues).

4.5.3 The environmental constraints and issues identified within the study area of the proposed scheme have significantly informed route development. The DMRB Stage 3 design has been developed iteratively, taking into account the recommendations of environmental specialists, information sourced from the consultation process, and the results from the traffic, structural, geotechnical and drainage studies.

4.5.4 The proposed scheme and environmental constraints are shown on Figure 4.1, and Figure 4.5 shows this overlain on aerial photography to indicate the approximate alignment of the proposed scheme in the context of the existing A9 and its surroundings.

4.6 Summary of the Proposed Scheme

4.6.1 The existing 9.5km single carriageway section of the A9 between Luncarty and the Pass of Birnam is to be widened to a D2AP (dual carriageway rural all-purpose). It is to be a DMRB Category 7A road, which is the highest category of all-purpose road, with all intersections (both major and minor) being grade-separated. The following paragraphs provide a detailed overview of the main works elements associated with the proposed scheme. References are made to chainage (shortened to 'ch', for example ch1500), which is a reference to the number of metres from the start of the proposed scheme, from south to north.

A9 Mainline Carriageway Widening

4.6.2 The main carriageway will be widened to the west at the southern end of the proposed scheme and to the east at the northern end. The transition for widening from west to east is provided in the vicinity of the property known as Ladner, situated to the south of the existing Stanley Junction.

4.6.3 Widening is therefore proposed over two distinct sections:

- south of Ladner (ch0 to approximately ch2200, refer to Figures 4.1a-b), would be widened generally to the west of the existing carriageway over a length of approximately 2.2km; and
- north of Ladner (ch2200 to approximately ch9469, refer to Figures 4.1b-d), would be widened generally to the east of the existing carriageway over a length of approximately 7.3km.

4.6.4 The mainline will comprise of a dual carriageway with 2.5m verges and two lanes of 3.65m width in each direction, plus a 1m hardstrip to both the inside and outside lanes in each direction. A 2.5m wide central reservation will separate northbound and southbound traffic.

4.6.5 As part of the development of the DMRB Stage 3 design, both the horizontal and vertical geometry associated with the new sections of mainline carriageway have been designed in accordance with current DMRB standards (as of October 2013). The standard carriageway cross-sections utilised within the Stage 3 design are summarised in this chapter and further detailed in the DMRB Stage 3 Scheme Assessment Report: Part 2, Engineering, Traffic (Jacobs, 2014). The proposed scheme carriageway has been designed in accordance with DMRB TD27/05 (Cross-sections and Headrooms) (Highways Agency et al., 2005) and as per the DMRB-specified cross-section dimensions for a D2AP carriageway.

4.6.6 The mainline carriageway is to be provided at the same level as the existing single carriageway along the full length of the proposed scheme. It is proposed to utilise the existing single carriageway south of Ladner to form the southbound carriageway of the new dualled section. To the north of Ladner the existing single carriageway shall become the northbound carriageway of the new dualled section. The mainline carriageway longitudinal gradient ranges from 0.5% to 3%.

A9 Junction Provision

4.6.7 There are two grade-separated junctions to be provided as part of the proposed scheme: Tullybelton/Stanley Junction and Bankfoot Junction:

- the Tullybelton/Stanley Junction (refer to Figure 4.1b), which consists of an overbridge with merge and diverges in both directions to allow access both to and from the A9; and
- the existing grade separated arrangement at Bankfoot (refer to Figure 4.1c) will be rebuilt utilising the existing Hunters Lodge Bridge with merge and diverge tapers extended to appropriate standard.

Side Road Amendments/Upgrades

4.6.8 Side roads will be upgraded as necessary to provide access from the existing road network to the upgraded A9 via the proposed grade-separated junctions. Upgrades may involve simple

resurfacing or may require realignment and other improvements. Table 4.1 details the side road upgrades forming part of the proposed scheme.

Table 4.1: Proposed Side Road Amendments

Side Road Name	Approximate mainline chainage and Figure reference	Cross-section
Pitlandie Side Road	ch970 (see Figure 4.1a)	• 1m verge, 5.5m carriageway, 1m verge (increasing to 2m verge, 6.6m carriageway at curve widening east of the overbridge and reducing to 1m verge, 4.1m carriageway, 1m verge under existing railway viaduct).
Luncarty Link Road	ch1930-2930 (see Figures 4.1a-b)	• 1m verge, 3m footway/cycleway, 1m verge, 6m carriageway, 2.5m verge.
Tullybelton/Stanley Side Road	ch2950 (see Figure 4.1b)	• 2.5m minimum verge (varies), 6m carriageway, 2.5m verge.
Bankfoot Side Road	ch5040-5140 (see Figure 4.1c)	• 2.5m verge, 1m hardstrip, 7.3m carriageway, 1m hardstrip, verge varies.
Unclassified road to B9099	ch6000-6100 (see Figure 4.1c)	• 2.5m verge, 6m carriageway, 2.5m verge.

Access to Land and Properties

4.6.9 A number of rural properties, including farms, are located along the section of A9 to be upgraded. Through consultation with residents and landowners, revised accesses are proposed to tie into the existing road network. Due to road being designated as a Category 7A dual carriageway there will be no direct access to land or properties from the upgraded A9 dual carriageway.

4.6.10 Table 4.2 details the revised access provision forming part of the proposed scheme.

Table 4.2: Proposed Access Amendments

Access Road Name	Approximate mainline chainage and Figure reference	Cross-section
Ordie View Access Track	ch1030 (see Figure 4.1a)	• Resurface existing.
Combined Newmill Farm/ Marlehall Farm/ Pond Access Track	ch2475-2990 (see Figure 4.1b)	• 1m verge, 3.5m track, 1m verge with passing place.
Westwood Access Track	ch2950-3950 (see Figure 4.1b)	• 1m verge, 3.5m track, 1m verge with passing places.
Old A9 at East Mains	ch3560-3615 (see Figure 4.1b)	• 1m verge, 5.0m carriageway, 1m verge.
Coltrannie Access Track	ch6210-6890 (see Figure 4.1c)	• 1m verge, 5.5m carriageway, 1m verge (between unnamed side road and North Barns). • 1m verge, 5.5m carriageway, 1m verge (Over Coltrannie Accommodation Works Overbridge). • 1m verge, 3.5m track, 1m verge with passing places (All other areas).
Gelly Access Track	ch7600-8600 (see Figure 4.1d)	• 1m verge, 3.5m carriageway, 1m verge with passing places.
Murthly Accommodation Overbridge Track	ch8590 (see Figure 4.1d)	• 1m verge, 3.5m carriageway, 1m verge with passing places either end of structure.
Murthly Access Track	ch8600 (see Figure 4.1d)	• 1m verge, 3.5m track, 1m verge with passing places.
Pond Access Tracks	ch700 (see Figure 4.1a) ch2415 (see Figure 4.1b) ch2480 (see Figure 4.1b) ch5865 (see Figure 4.1c) ch8400 (see Figure 4.1d)	• 1m verge, 3.5m track, 1m verge.

Pedestrian, Cyclist and Equestrian Provision

4.6.11 Facilities for pedestrians and cyclists are a feature of the proposed scheme, with various links and accesses being provided to assist such movements. These are summarised below, with further detail in Chapter 16 (Effects on All Travellers):

- ch1135-2120: combined footway/cycleway from Ordie View to Luncarty Link Road (Figures 16.2a-b).
- ch2120-2940: combined footway/cycleway on Luncarty Link Road (Figures 16.2a-b).
- ch2940-3560: combined footway/cycleway from Tullybelton-Stanley Junction to East Mains (Figure 16.2b).
- ch3040-2940: combined footway/cycleway from Westwood Access Track to Luncarty Link Road (Figure 16.2b).
- ch2900: combined footway/cycleway from Core Path at Five Mile Wood to Stanley Road Access to Newmill Cottages (Figure 16.2b).

4.6.12 The proposed scheme includes improved provision for non-motorised users, particularly between Luncarty and Bankfoot. Figure 16.3 illustrates the intended provision for non-motorised users between Luncarty and Bankfoot with the proposed scheme in place, which makes use of the above improvements and links to the existing path network.

Overbridge Structures

4.6.13 As indicated in the preceding paragraphs, overbridges will be required at certain locations as part of the proposed scheme, associated primarily with junctions or the need to maintain existing access over the A9 as part of accommodation overworks or NMU provision.

4.6.14 The design will be informed by strategic design guidance currently being prepared for the wider programme of A9 dualling, and is anticipated to include the following key requirements:

- open aspect / open span arrangement;
- low bridge abutment heights;
- leaf piers not to be used;
- no piers in the central reserve; and
- patterned profile type finish on all exposed vertical concrete surface.

4.6.15 A typical overbridge style is shown on Figure 11.3a and on Figure 11.3b (accompanying Chapter 11: Landscape).

Earthworks

Cuttings and Embankments

4.6.16 The location (chainages) of cuttings are shown on Figure 4.1, and summarised in Table 4.3 below. Slope angles of cuttings and embankments in the Stage 3 design will generally be at a gradient of 1: 2.5, though GI information indicates that these will be relaxed to 1:3 at the following locations:

- ch0-500 on the northbound carriageway: Existing 1:2 slope to be tapered to 1:3 from ch0-50.
- ch4500-5570 on the southbound carriageway.
- ch6030-6390 on the southbound carriageway.
- ch6490-6860 on the southbound carriageway.

Table 4.3: Road Cuttings and Embankments in DMRB Stage 3 Design

Cuttings		Embankments	
Chainage/location	**Max Depth**	**Chainage/location**	**Max height**
ch0m-550, northbound	10.2m	ch600-680, northbound	2.3m
ch810m- 960, northbound	10.7m	ch720-820, northbound	7.5m
ch980m-1600, northbound	14.2m	ch970, Pitlandie accommodation access road	9.3m
ch1360-1600, southbound	4.6m	ch1640-1760, northbound	5.1m
ch1750-2000, both carriageways	3.3m	ch1640-1760, southbound	5.6m
ch2800-3050, northbound	7.1m	ch2050-2460, both carriageways	5.5m
ch2800-3050, southbound	3.3m	ch1940-2940, Luncarty Link Road	12.7m
ch4150-4400, southbound	8.8m	ch2800-3200, Tullybelton / Stanley Junction	13.8m
ch4500-5260, southbound	12.2m	ch4930-5130, Bankfoot Junction northbound	1.5m
ch5260-5670, southbound	20.6m	ch5680-6000, southbound	8.2m
ch6030-6380, southbound	11.6m	ch6900, Coltrannie accommodation access road	7.3m
ch6490-6860, southbound	8.7m	ch7870-8440, southbound carriageway	3.0m
ch7670-7870, northbound	3.7m	ch8600, Gelly accommodation access road approach to overbridge	10.2m
ch7670-7870, southbound	4.2m		

Earthworks Balance

4.6.17 A summary of the estimated earthworks quantities for construction of the proposed scheme is provided below in Table 4.4, with further details of material use and management of waste during construction provide in Chapter 17 (Materials). The export quantity is material that is considered unsuitable to be re-used as engineering fill.

Table 4.4: Estimated Earthworks Volumes

Import/Export (disposal)	Volume (m^3)
Estimated import	382,500
Estimated disposal	180,500

Fencing and Environmental Barriers

Fencing

4.6.18 To secure the land area acquired for the implementation of the proposed scheme, temporary fencing would be erected prior to the commencement of construction, where appropriate. Whilst much of the agricultural land bounding the proposed scheme is arable in nature, a requirement for stock-proofing may be necessary in some areas.

4.6.19 On completion of the works, any permanent fencing required to denote the permanent highway boundary will generally be a timber post and wire fence. Alternative methods of signifying property boundaries may include the planting of hedgerows or the construction of walls. However, it is important to note that a highway fence is not a requirement for an A-class road, and provision will therefore be subject to review through the detailed design.

Environmental Barriers

4.6.20 Environmental barriers may be required to reduce the potential impacts of the proposed scheme at specific locations. Where the requirement has been identified within this ES, environmental barriers will be incorporated to provide mammal mitigation (including otter fencing) or noise attenuation, as described respectively in Chapter 10 (Ecology and Nature Conservation) and Chapter 15 (Noise and Vibration).

Drainage Design and Watercourse Crossings

4.6.21 The proposed scheme design for both drainage design and watercourse crossings takes consideration of the Water Environment (Controlled Activities) Regulations 2011 (CAR). These require certain licences to be sought for design and construction activities affecting watercourses, including engineering works (culverts and bridges) and discharges (outfalls, attenuation and treatment). The watercourse crossings and drainage design have been discussed with the Scottish Environment Protection Agency (SEPA) in the context of CAR requirements.

Drainage Design and Flooding

4.6.22 The drainage design for the proposed scheme has been developed in accordance with Sustainable Drainage Systems (SUDS) guidance and through consultation with SEPA and Perth & Kinross Council. The drainage system makes use of combined surface and groundwater filter drains to provide most of the carriageway drainage. Exceptions to this include kerbed areas, such as junctions and bridge decks where gullies would be used to collect surface water.

4.6.23 Pre-earthworks drainage consisting of shallow filter drains or lined ditches would be used to collect run-off from adjacent land and field drains. A number of likely outfall locations have been identified; these are described in more detail in Chapter 9 (Road Drainage and the Water Environment). This chapter also defines potential effects on the water environment and the mitigation measures required to prevent, reduce or offset these effects in accordance with the EIA Regulations.

Watercourse Crossings

4.6.24 Wherever possible, watercourses will be maintained along their existing line. However, the requirement for a watercourse realignment of a small tributary of the Ordie Burn has been identified.

4.6.25 Existing watercourse crossing culverts would be lengthened where required and where necessary new culverts provided to convey flows under upgraded existing roads, new roads and access tracks. Existing culverts under the A9 for Ordie Burn and Shochie Burn are twin cell reinforced concrete box culverts and extensions would mirror the existing in size and material. The culvert extensions are proposed to be bottomless arch design, enabling substrate to be retained along the watercourse bed. This will tie in with the existing box culvert, as substrate has built up in these over time. In terms of construction methods, ground investigation has flagged a potential need for the foundations of the extensions to be piled (the existing structures have spread footings).

4.6.26 The locations of proposed watercourse crossing structures considered in the EIA are shown on Figure 4.1, with illustrative cross-sections of the main watercourse culverts/crossings provided on Figures 4.2 to 4.4. The form of these crossings was selected based on achieving a balance between environmental, engineering and economic factors and are as follows:

- Shochie Burn (Figure 4.2) : existing culvert length 46m – proposed 20.6m extension to 66.6m in total;
- Ordie Burn (Figure 4.3): existing culvert length 30m – proposed 15.6m extension to 45.6m in total; and
- a new overbridge (Figure 4.4): crossing of the Ordie Burn to the west of the Tullybelton/Stanley Junction.

4.6.27 The detailed design of these watercourse crossing structures would be developed by the appointed contractor, subject to suitable provision being made for flood flows and ecological and geomorphological mitigation, and compliance with the environmental commitments detailed within this ES. Reference should be made to Chapter 9 (Road Drainage and the Water Environment) and Chapter 10 (Ecology and Nature Conservation).

4.6.28 The Water Environment (Controlled Activities) Regulations 2011 (CAR) requires certain licences to be sought for design and construction activities affecting watercourses, including engineering works (culverts and bridges) and discharges (outfalls, attenuation and treatment). The watercourse crossings and drainage design have been discussed with SEPA in the context of CAR requirements.

Traffic Signs and Lighting

Traffic Signs

4.6.29 The traffic signs required in the provision of the proposed scheme would be prepared to the relevant design standards. The detailed design of this element of the works would be the responsibility of the contractor, and subject to compliance with the contract documents. As part of the design process, the Contractor would consult Transport Scotland and the local roads authorities.

Lighting

4.6.30 A lighting appraisal was carried out as part of the DMRB Stage 3 engineering assessment and no lighting is to be provided on the proposed scheme.

4.7 Construction Methods and Programme

4.7.1 This section provides a brief outline of the envisaged construction programme and typical construction activities. Typical construction methods for these activities and the construction assumptions made for the purposes of this ES are provided in Appendix A4.1 (Construction Information).

4.7.2 This section sets out a possible construction sequence for the proposed scheme, however, the design and construction process adopted by the contractor may vary from that described in this outline methodology. The contractor would be permitted to change the construction process and duration of each works element provided that environmental effects are no greater than those described in the ES, and that commitments given in the ES are adhered to (or measures providing equivalent mitigation, subject to agreement with Transport Scotland).

4.7.3 It is currently anticipated that construction will not commence before 2017. The overall construction period is expected to be 22 months.

Outline Construction Programme

4.7.4 To assist the EIA process, the approximate duration of construction activities has been estimated. A timescale for each element of the works is difficult to determine precisely as this would be determined by the date of commencement of the works, and the construction methods employed by the contractor. An outline of the possible timing for the works is indicated in Table 4.5.

Table 4.5: Indicative Construction Works Timescales

Phase Number	Timescale
Phase 1	
Traffic Management	January 2017
Construct Northbound Mainline – South Tie-In to ch2700	January 2017 – November 2017
Construct Southbound Mainline – ch2700 to North Tie-In	January 2017 – November 2017
Phase 2	
Reconfiguration of traffic management in advance of Phase 3	December 2017
Phase 3	
Construct Southbound Mainline - South Tie-In to Ladner	December 2017 –September 2018

Phase Number	Timescale
Construct Northbound Mainline - Ladner to North Tie-In	December 2017 – September 2018
Central Reserve works	October 2018
Road opening	November 2018

Typical Construction Activities

4.7.5 The key elements of the construction works have been broken down to facilitate the assessment of environmental effects. The construction activities associated with the proposed scheme are outlined in Table 4.6.

Table 4.6: Typical Construction Activities

Section	Construction Activities
Advance Works	• Environmental mitigation to be implemented in advance of the main construction contract. • Advance services diversions. • Building demolitions. • Archaeological investigations and excavations.
Roadworks	• Site establishment and plant compounds at strategic locations. • Temporary and permanent fencing. • Site clearance and demolition. • Temporary and permanent surface water outfalls. • Service diversions. • Topsoil stripping and storage. • Pre-earthworks drainage. • Earthworks (cuttings and embankments). • Environmental bunds and landscaping. • Drainage, service ducts and chambers. • Topsoil spreading, seeding and turfing. • Pavement construction. • Roadwork finishes including safety barriers, signs, road markings. • Accommodation works.
Structures	• Construction of river crossings. • Bridge construction. • Culvert construction. • Retaining wall construction.
Environmental	• Earthworks mitigation. • Landscape and ecological mitigation planting.
Temporary Works	• Temporary works to facilitate bridge construction. • Temporary carriageway to maintain traffic flows where roads are narrow or are affected by construction of the scheme. • Narrow lanes, contraflows or lane / road closures. • River or stream diversions to facilitate culvert construction. • Temporary balancing ponds at drainage outfalls.
Maintenance	• Landscaping maintenance. • Pavement rehabilitation and other routine maintenance and defects repair works • Winter maintenance.

Construction Compounds

4.7.6 The location of construction compounds is not known at this stage, as these will be determined by the appointed contractor depending on phasing and execution of the works. However, where possible these would be located close to the proposed works where there is suitable access.

4.7.7 The proposed scheme is to be progressed under the Roads (Scotland) Act 1984. Under this legislation, the contractor may wish to acquire additional land for construction compounds outside the land identified on the Compulsory Purchase Orders (CPOs). In this case, a separate planning application or a number of planning applications for the construction compounds may be required.

This would also apply to any other land that may be required beyond the CPO for related activities such as of temporary access routes/haul roads.

4.7.8 The construction compounds would provide toilet facilities, messing facilities, and parking for office based staff and site operatives. In addition, stores and workshop areas (located within or near the compounds) would be provided for the construction phase.

Environmental Mitigation

4.7.9 The contractor would be required to implement all relevant environmental mitigation measures at the appropriate time. These would include a range of measures to avoid or reduce construction and operational effects.

4.7.10 Where possible, physical environmental mitigation features, such as earthworks, would be constructed soon after the completion of the main engineering elements. Earthworks side slopes and verges would be topsoiled and seeded/planted early to minimise the risk of sediment-laden runoff, which may affect the carriageway drainage system and create a potential pollution risk to watercourses. Planting works and ecological habitat creation areas are seasonally dependent and these may be left until later in the construction period following completion of the main works.

Land Acquisition

4.7.11 All construction work would take place within the limit of the land made available to the contractor as defined within the contract documents. However, as explained above in paragraph 4.7.7, construction compounds maybe outwith this land. The land made available would include some or all of the land acquired under CPO, land to which the Scottish Ministers already has ownership of or access to, or other areas the contractor has acquired by agreement to facilitate construction of the works.

4.7.12 The land to be acquired for the proposed scheme includes land necessary to construct the proposed scheme and associated infrastructure and to undertake essential environmental mitigation measures.

4.7.13 The contractor may wish to utilise other areas of land not covered by the CPO. In such an instance, the contractor would have to secure the use of these areas by agreement and through separate planning applications, where appropriate. As the location of these areas is currently unknown, it has not been possible to include an assessment of the effects of them within this ES.

4.8 References

Environmental Impact Assessment (Scotland) Regulations 2011 (as amended).

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

Highways Agency et al. (2005). DMRB Volume 6, February 2005, Part 2, TD 27/05 Cross-sections and Headrooms. The Highways Agency, Scottish Government, Welsh Assembly Government and Department for Regional Development Northern Ireland.

Jacobs (2014). A9 Dualling: Luncarty to Pass of Birnam – DMRB Stage 3 Engineering Report.

Roads (Scotland) Act 1984. www.legislation.gov.uk/ukpga/1984/54/contents

Water Environment (Controlled Activities) (Scotland) Regulations 2011.