11 Landscape

This chapter presents the landscape assessment of the proposed scheme, and is linked with the assessment of visual effects which are set out in Chapter 12 (Visual).

The existing landscape is described and classified into areas of distinctive character which assist in the evaluation of the sensitivity of the landscape and the development of mitigation proposals. Impacts are assessed for both the winter year of opening (when all mitigation elements will be in place but the mitigation planting is not fully effective) and during the summer 15 years after opening (when mitigation planting has become established and contributes to screening).

Appropriate grading of earthworks has been incorporated into the DMRB Stage 3 design proposals, and planting (including grassed areas, scrub and woodland) is proposed to provide screening and improve the fit within the surrounding landscape.

No significant residual adverse impacts on the landscape are predicted as a result of the proposed scheme, due to the alignment of the proposed route on the line of the existing road corridor and the sensitive design of the proposed scheme. The main residual impacts will result from proposed embankments and cuttings, and loss of mature or established planting. These impacts will be highest at the Tullybelton/Stanley Junction, where alterations to the landscape topography are greatest, and the Muir of Thorn/Gelly Wood where small areas of woodland will be lost at the edge of the Murthly Castle Inventory Garden and Designed Landscape.

11.1 Introduction

11.1.1 This chapter presents the assessment of the proposed scheme in terms of impacts on the surrounding landscape. The chapter is supported by Appendix A11.1 (Local Landscape Character Areas) and Appendix A11.2 (Review of SEA Landscape and Access Environmental Design Principles), which are cross-referenced in the text where relevant.

11.1.2 The assessment methodology is explained, baseline conditions are described and an assessment is made of the impacts on the landscape resource that would result from the proposed scheme (taking account of incorporated mitigation, as explained in Section 11.2: Approach and Methods). This includes an assessment of the changes in the character, quality and physical fabric of the landscape (including settlement areas) which are likely to occur.

11.1.3 The landscape assessment is primarily concerned with changes to:

- specific landscape features and elements;
- the overall pattern of elements, which together determine the landscape character and local or regional distinctiveness;
- special interests or values, such as designated landscapes, conservation sites and cultural associations; and
- perceived characteristics of the landscape, such as tranquillity and remoteness.

11.1.4 Impacts assessed as being of Moderate or greater significance are considered to represent significant changes to the fabric, character and quality of the landscape and mitigation would generally be required to reduce these where practicable.

11.1.5 Further considerations related to landscape assessment are addressed separately as follows:

- Chapter 12 (Visual): impacts on the character of views and visual amenity; and
- Chapter 16 (Effects on All Travellers): assessment of the views from the proposed scheme, as they would be experienced by vehicle travellers.

11.2 Approach and Methods

Study Area

11.2.1 The indicative study area for the assessment is represented by the Local Landscape Character Areas (LLCAs) identified as likely to be potentially affected by significant effects from the proposed scheme. The identified LLCAs, shown on Figure 11.1, occupy the land approximately 1km either side of the proposed scheme, based on professional judgement that beyond 1km indirect landscape impacts would be negligible due to topography and distance. This was subsequently confirmed during the site assessment.

11.2.2 The landscape assessment was undertaken in accordance with DMRB Volume 11, Section 3, Part 5 Landscape Effects, including Section 7, Variation for Widening Schemes (Highways Agency et al., 1993) and Interim Advice Note 135/10 (Highways Agency et al., 2010). The A9 is of recognised importance as a tourist route, so consideration has also been given to the A9 Dualling Strategic Environmental Assessment (SEA) and the design principles for mitigation proposals. Details of how the assessment takes account of the SEA Landscape and Access Environmental Design Principles are included in Appendix A11.2.

11.2.3 The methodology described in this section was developed based on Guidelines for Landscape and Visual Impact Assessment (Landscape Institute and Institute of Environmental Management & Assessment, 2002; GLVIA2) which was the guidance current at the time. Subsequent to this, revised guidance was published on 13 April 2013 (see References - GLVIA3). The Landscape Institute released the following guidance for this situation:

> *"In general terms the approach and methodologies in the new edition are the same. The main difference is that GLVIA3 places greater emphasis on professional judgement and less emphasis on a formulaic approach. Members have asked for clarification on the status of projects developed under GLVIA2, but reviewed or implemented after publication of the third edition.*
>
> *An assessment started using GLVIA2 should be completed using that edition. However, if in the view of the professional a comparison should be undertaken with GLVIA3, and subsequently if necessary a re-assessment undertaken according to GLVIA3, then this should be discussed and agreed with the client in the first instance."*

11.2.4 A review of the most recent guidance confirmed that the methodology and approach used for the assessment of the proposed scheme meets the criteria of GLVIA3; the approach taken goes beyond that of GVLIA2 and is therefore well aligned with the more recent guidance. No re-assessment was therefore required.

11.2.5 The initial stage of landscape assessment involved the collection of baseline data relating to the individual elements and characteristics of the landscape.

11.2.6 The study area is covered by the SNH commissioned Tayside Landscape Character Assessment (SNH, 1999), which was used as the basis for the landscape character assessment. This document divides the study area into various Landscape Character Areas (LCAs) of particular Landscape Character Types (LCTs). Detailed desk-based and field assessment were undertaken to allow the boundaries of LCAs to be refined and considered at a more local scale. This provided a level of detail that enabled the evaluation of sensitivity and impact assessment. In some cases, this has meant the subdivision of land which is identified in the SNH assessments as being of a single LCT or LCA into smaller scale units, or LLCAs to better reflect local variations in character.

11.2.7 The information provided in the Tayside LCA was supplemented by data collected through both desk-based and field assessment as outlined below. As the landscape and visual impact assessments are closely related, the data collected were used for both as appropriate.

Baseline Conditions

Desk Study

11.2.8 The desk study entailed the following:

- a review of aerial photographs of the study area, and current 1:25,000 scale and 1:50,000 scale Ordnance Survey (OS), to help identify the presence of areas of statutory designation and protection, landscape elements and patterns;
- an examination of data relating to landscape, archaeology, ecology, buildings and settlements to provide a thorough knowledge of conservation interests. Other human interests were established by analysing data relating to recreation and public rights of way;
- review of baseline data contained in the A9 Luncarty to Pass of Birnam DMRB Stage 2 Environmental Assessment Report (Atkins 2009); and
- review of strategic studies of the wider programme of works being progressed by Transport Scotland to dual the full A9 from Perth to Inverness (see paragraph 11.2.2).

11.2.9 Information of relevance to the proposed scheme was extracted from these sources and the following topics were explored:

- pattern and scale of landform, land cover and built development;
- special values including national and local landscape designations, Conservation Areas and historical and cultural associations; and
- specific potential receptors of landscape impact, including important elements of the landscape, as well as residents, visitors and travellers.

11.2.10 A Virtual Reality Model (VRM) was prepared for the project, showing the proposed scheme including detail such as structures designs (e.g. overbridges), cuttings, embankments, and proposed planting. The VRM was used at various stages to inform the assessment.

Consultation

11.2.11 Consultation was undertaken with statutory and non-statutory consultees, with responses summarised in Appendix A6.3 (Chapter 6: Scoping and Consultation) and taken into account in the preparation of the assessment.

11.2.12 A draft copy of the ES was provided to statutory consultees including SNH in December 2013, and the finalisation of the assessment and completion of this ES chapter has been informed by comments received in January 2014 and follow-up meetings in February 2014 to discuss the assessment and the proposed mitigation including landscape planting.

Field Survey

11.2.13 The study area was visited to conduct an up-to-date field survey that included identification of specific landscape constraints and verification/supplementation of data collected in the desk study.

11.2.14 The field surveys, undertaken on 07 March 2013, were carried out by car and by site walkovers from the surrounding minor roads, tracks and footpaths by a team of two landscape architects. Further information on public usage of footpaths, cycle paths and bridleways is contained in Chapter 16 (Effects on All Travellers).

Sensitivity to Change

11.2.15 Once the LLCAs were identified, the sensitivity of each area to change as a result of the proposed scheme was assessed. In accordance with Landscape & Visual Assessment Supplementary Guidance (Scottish Executive, 2002), evaluation of sensitivity to change combines a review of

'susceptibility' (i.e. the vulnerability of the area to change arising from the proposed scheme) and 'value', as applied to the main elements of the landscape. Susceptibility and value take into account information about the various factors considered in arriving at the sensitivity evaluation, such as key features and characteristics, quality and value, which together create a sense of place.

11.2.16 The evaluation of sensitivity of landscape and settlement character areas away from the proposed scheme, but where people's experience of these could be altered by the proposals (for example through indirect landscape impacts or increases in traffic noise affecting their setting) focuses primarily on perceptual qualities such as remoteness, tranquillity and visible landscape impacts. Table 11.1 below outlines the criteria used to define the overall evaluation of landscape sensitivity. Where appropriate the intermediate categories of low to medium and medium to high sensitivity were also used in the assessment.

Table 11.1: Landscape Sensitivity Criteria

Sensitivity	Criteria
High	Landscape or landscape elements of particular distinctive character, highly valued and considered susceptible to relatively small changes.
Medium	A landscape of moderately valued characteristics considered reasonably tolerant of change.
Low	A landscape of generally low valued characteristics considered potentially tolerant of substantial change.

Impact Assessment

11.2.17 Landscape mitigation is predominantly achieved through alignment, earthworks, and landscaping which are incorporated into the design as assessed and reported in this ES. It is therefore not practicable to undertake an assessment of the potential landscape/visual impacts of the operational scheme in the absence of mitigation. Section 11.4 (Potential Impacts) therefore provides a brief summary of the types of effects that can occur during operation, and sets out potential temporary impacts during construction.

11.2.18 It should be noted, however, that as planting mitigation proposals are generally not fully effective during winter year of opening, this period can be considered similar to a scenario without mitigation planting. Residual impacts at both winter year of opening and summer 15 years later, (when mitigation planting is fully effective), are reported in Section 12.6 (Residual Impacts).

Magnitude of Change

11.2.19 Evaluation of the magnitude of the proposed changes upon the landscape involved a review of the nature and scale of the changes, together with the duration and degree of permanence using the criteria outlined below in Table 11.2. Where appropriate, intermediate categories of low to medium, and medium to high, were also used in the assessment.

Table 11.2: Landscape Magnitude of Change Criteria

Magnitude	Criteria
High	Notable change in landscape characteristics over an extensive area ranging to very intensive change over a more limited area.
Medium	Minor changes in landscape characteristics over a wide area ranging to notable changes in a more limited area.
Low	Minor or virtually imperceptible change in any area or landscape components.

Impact Significance

11.2.20 A scale ranging from Negligible to Severe impact significance was used in the assessment. An initial indication of impact significance was obtained by combining the sensitivity to change and magnitude of change assessments using the framework shown below in Table 11.3. Where

appropriate, intermediate categories of Slight to Moderate and Moderate to Substantial were also used in the assessment.

Table 11.3: Landscape Impact Significance

Magnitude / Sensitivity	Low	Medium	High
High	Moderate	Substantial	Severe
Medium	Slight	Moderate	Substantial
Low	Negligible	Slight	Moderate

11.2.21 As stated in paragraph 11.1.4, adverse impacts of Moderate or greater significance were considered to represent key landscape changes and mitigation would generally be required to reduce these where practicable.

11.2.22 It should be noted that the matrix provided in Table 11.3 provides an initial guide and the significance assigned may be adjusted using professional judgement.

11.2.23 For consistency with other chapters of the ES, impacts reported in this assessment are considered adverse unless otherwise stated.

Limitations to Assessment

11.2.24 This assessment has been undertaken on the proposed scheme design of October 2013. With regard to the assessment of landscape impacts in accordance with DMRB, no limitations to this assessment were identified.

11.2.25 During the course of this assessment revised professional guidance on landscape and visual assessment was published (on 13 April 2013). As explained in paragraph 11.2.3 and 11.2.4, a review of the updated guidance indicates that the assessment meets the requirements of the later guidance, and this therefore does not represent a limitation to the assessment.

11.3 Baseline Conditions

11.3.1 This section classifies and evaluates the landscape resource of the study area, taking account of the geological, cultural and historical influences and identifying any designated or protected areas.

A9 Dualling: Strategic Environmental Assessment (SEA)

11.3.2 The A9 Dualling Programme SEA Draft Environmental Report, published for consultation by Transport Scotland in June 2013, includes a series of Strategic Considerations and Key Design Implications in relation to the landscape. These generally accord with standard good practice guidance in road design/landscape design, for example requiring '*respect for the distinctive local landscape character and qualities of the A9 corridor*' and the use of '*locally native and characteristic plant species and species mixes'*.

11.3.3 The outcomes and guidance of the SEA were reviewed and taken into account, within the landscape and visual assessment, outline landscape design proposals and mitigation for the proposed scheme as explained in Section 11.5 (Mitigation) and shown on Figure 11.2.

11.3.4 The specific Strategic Considerations and Key Design Implications are summarised below, and apply to both landscape and visual aspects. Appendix A11.2 explains how these have been taken into account and addressed by the proposed scheme:

- Ensure that distinctive local landscape character and qualities of the A9 corridor inform all aspects, ensuring road alignment and design responds to the landscape qualities and key characteristics of each landscape character area through which the route passes.

- Ensure a consistent approach to design to reinforce the overall identity of the A9 between Perth and Inverness. Ensure both construction and long term (25 years plus) potential landscape effects inform the landscape design.
- Enhance the views from the road to maximise the positive traveller experience. Key views to inform the siting of any lay-bys, and development of View Management Plans.
- Design for low maintenance and to accommodate future change.
- Where appropriate, minimise the effect of the road on the experience of the wider landscape, including lighting and noise.
- Minimise the landscape impacts of verge and boundary treatments, within the context of safety standard requirements.
- Avoid, or reduce effects on landscape features, retain and make best use of existing vegetation and re-use site won materials where possible.
- Maintain and where possible enhance ecological and landscape connectivity and minimise fragmentation. Protect species and habitats to support biodiversity, natural processes and LBAP targets, use locally native and characteristic plant species and species mixes.
- Secure adequate land for integrated landscape solutions.
- Aim to ensure the enhanced reputation of the A9 as one of the world's great tourist routes, through landscapes of national and international importance. This should be supported by a series of design guide strategies.

Regional Context

11.3.5 The study area is located to the north of Perth and follows an existing road corridor. The A9 trunk road passes close to the communities of Luncarty and Bankfoot.

11.3.6 The study area lies within the Central Lowlands at the eastern edge of Glenalmond and to the south of the Grampian Highlands, within the lower lying farmland to the west of the River Tay.

Landscape and Other Relevant Designations

11.3.7 The level of protection afforded to sites of landscape value and importance varies according to their designation as described below and shown in Figure 1.2 Environmental Constraints.

Nationally Protected Sites

National Scenic Areas (NSAs)

11.3.8 National Scenic Areas are recognised as the finest Scottish landscapes due to their outstanding scenery. A small southern section of the River Tay (Dunkeld) NSA is located to the north of the study area. The NSA is not inter-visible with the A9 route corridor due to intermediate screening provided by woodland and topography.

Inventory Gardens and Designed Landscapes

11.3.9 Within and around the study area there are three sites included on the Inventory of Gardens and Designed Landscapes, designated by Historic Scotland and SNH.

11.3.10 The following Gardens and Designed Landscapes (GDL) are located in or close to the study area:

- Murthly Castle;
- Battleby; and
- Scone Palace.

Other Statutory Designations

- River Tay Special Area of Conservation (SAC);
- Five Scheduled Monuments and eleven Listed Buildings within 1km of the proposed scheme;
- Cairnleith Moss Site of Special Scientific Interest (SSSI); and
- A number of areas of woodland identified on the Ancient Woodland Inventory (AWI), including Muir of Thorn/ Gelly Wood and Five Mile Wood.

Tree Preservation Orders

11.3.11 There are no Tree Preservation Orders identified within the study area.

Non-designated Landscape Features

- The Great Highland Fault line sits to the north and west of the scheme. The fault line is a recognised geographical feature and designates the start of the mountainous Scottish Highlands.
- There is an area of mature mixed woodland located along the River Almond to the south east of the scheme including Methven Wood, Cosnakie Wood, Barber's Wood and Dryarch Wood. These woodland areas create a unique natural character within the landscape.

11.3.12 Neither of these features will be affected by the proposed route due to their distance from the road and screening provided by intervening vegetation and topography.

Geology and Soils

11.3.13 The study area lies within the Central Lowlands rift valley, to the south of the Highland Boundary Fault. The geology of the Central Lowlands largely comprises Paleozoic formations, which composed of carboniferous sedimentary rock. Coal and iron bearing rocks are also located across the region.

11.3.14 Fluvioglacial sands and gravels form the majority of drift geology beneath the route, with the occasional occurrence of Alluvium and Glacial Till. The solid geology is predominantly made up of Devonian Sandstone with beds of Mudstone of the Teith and Scone Foundations.

11.3.15 The study area consists of a wide range of soils at various grades. The majority of soil results in agricultural land of Grade 3.2 quality, capable of producing high yields of oats, barley and grass. Grade 2 and 3.1 types were also identified, as well as poorer quality Grade 5 land capable of producing only a narrow range of crops.

11.3.16 The geology and soils of the study area are considered in detail in Chapter 8 (Geology, Contaminated Land and Groundwater).

Landform and Drainage

11.3.17 The terrain typically slopes in a south-easterly direction and is characterised by floodplains, moss lands and undulating hillsides. The land is predominantly agricultural, with medium and large open fields used for both grazing and crops. The Perth to Inverness rail line runs in close proximity to the A9 to the south of the study area before veering eastwards at Luncarty and running around the River Tay floodplain through Stanley and Murthly, crossing the A9 at the Pass of Birnam.

11.3.18 There are a number of waterbodies and watercourses across the study area. Cairnleith Moss SSSI is a wetland area at the edge of Murthly Castle estate, near the northern end of the study area. This is designated for its complex mosaic of wet heath, swamp and acid grassland communities.

11.3.19 Numerous watercourses and drainage channels run across the area as described in Chapter 9 (Road Drainage and Water Environment). The two largest watercourses, the Shochie and Ordie

Burns, cross the A9 to the north of Luncarty. The River Tay lies to the east of Luncarty, and is largely screened within the study area by mature woodland and the undulating topography to the east of the road.

Historical Account

11.3.20 The study area has strong evidence for historic settlement within the river valley dating from the Neolithic, Bronze and Iron Ages, with several Scheduled Monuments along the road corridor, including sites of hut circles, cup and ring marked stones and standing stones.

11.3.21 Murthly Castle is one of the oldest and most historically important buildings in the study area. The castle was built originally as a royal hunting lodge and has been owned by the same family since 1615. Construction of a new castle began in the 19th century, but was never completed. The castle is situated within a large estate that includes over 2,000 acres of amenity woodland and commercial forestry. Battleby House, in the south of the study area, was built in 1861 and is important for a unique plant collection built up by Sir Alexander Cross during the 20th century.

Settlement and Land Use

11.3.22 Land use in the study area is primarily agriculture and forestry, with a number of small settlements breaking up this pattern. Luncarty is located at the southern end of the study area, with Bankfoot located towards the northern end. Both villages have increased in size in recent years with new housing areas constructed for commuters travelling to Perth. Outwith the villages, there are numerous farms and scattered dwellings across the study area.

Vegetation

11.3.23 Vegetation cover across the study area is heavily influenced by settlement and farming operations. The majority of the land is utilised for arable crops, with occasional pasture. At the north of the study area, the moorland of Cairnleith Moss SSSI includes areas of wetland and acid grassland.

11.3.24 A number of different woodland types have also been identified and are described below:

Broadleaved woodland

11.3.25 The Muir of Thorn / Gelly Wood in the north of the site is listed on SNH's Ancient Woodland Inventory (AWI) as long established woodland of plantation origin. The woodland comprises large areas of birch woodland as well as larch, hazel, rowan, willow spp, oak and alder.

Coniferous Woodland

11.3.26 There are large areas of coniferous woodland throughout the study area, including large plantations on the Murthly Castle estate and Five Mile Wood. The majority of these woodlands are commercial forestry plantations, several of which provide an important habitat for red squirrels.

Mixed Woodland

11.3.27 The Murthly Castle estate also includes areas of mixed woodland, particularly within the parkland around the castle itself. There are also stands of mixed woodland within the Muir of Thorn/ Gelly Wood, along the River Tay and in many of the shelterbelts and blocks of woodland that help to screen the A9 from nearby properties.

SNH Landscape Character Assessments

11.3.28 The study area is situated within two LCTs defined by SNH in the Tayside LCA (SNH, 1999). The majority of the site is classified by the 'Lowland Hills' type, while the southern section of the study area falls into the 'Lowland River Corridors' type which extends along the valley of the River Tay.

11.3.29 The key characteristics of 'Lowland Hills' LCT are:

- low ridges and hills separating lowland straths and adjoining the nearby uplands;
- transitional character with pastures on lower slopes, giving way to rough grazing and open moorland;
- evidence of several phases of historic settlement;
- extensive woodland, including forestry plantations; and
- influence of modern development.

11.3.30 The key characteristics of 'Lowland River Corridors' LCT are:

- well defined river corridors in broader lowland landscapes;
- semi-natural woodland on steeper slopes; and
- rapids, weirs and mills where harder rocks cross the valley.

Local Landscape Character Assessments

11.3.31 The LCTs defined by SNH have been further subdivided as part of this assessment and Local Landscape Character Areas (LLCAs) have been identified, taking account of the local landscape features. These are summarised in Table 11.4 below, with summary descriptions provided in the following paragraphs. Detailed descriptions of the LLCAs are contained in Appendix A11.1.

Table 11.4: Local Landscape Character

LCT	LLCA	Sensitivity
Wooded Farmland	Moneydie to Harrietfield	Medium
River Valley	River Tay	Medium to high
Open Farmland	Bankfoot Farmland	Low to medium
Woodland	Muir of Thorn/ Gelly Wood	Medium
Urban	Luncarty	Low to medium
	Bankfoot	Medium

Wooded Farmland Type - Moneydie to Harrietfield LLCA

11.3.32 The Wooded Farmland LCT comprises a diverse, undulating and rural landscape. Land use is mainly agricultural but contains a high proportion and variety of woodland cover, either as plantations, shelterbelts or clumps of trees around scattered, traditional-style buildings. The congruity of open fields to woodland is an important characteristic.

River Valley Type - River Tay LLCA

11.3.33 This character type comprises the meandering valley of the River Tay. Dense woodland vegetation along long stretches of the river banks contrasts with the smooth texture of the open agricultural farmland and undulating topography of the surrounding floodplain.

Open Farmland Type – Bankfoot Farmland LLCA

11.3.34 Open Farmland is an extensive landscape character type which forms the majority of the study area. It has a gently rolling landform of open character with a lower number of trees. Farmsteads are scattered, often associated with small clumps of trees. Fields are often bordered by drystone walls, post and wire fences, and hedgerows.

Woodland Type - Muir of Thorn/ Gelly Wood LLCA

11.3.35 The Woodland character type comprises dense plantations and long-established woodland, used predominantly for commercial forestry, and containing recreational path, with areas of mature woodland providing habitat for conservation purposes. There is a diverse range of tree species with a well established understorey within the areas of non-commercial mature woodland. The landform is generally gently undulating with occasional small ponds set within low lying areas. Although the majority of woodland within the study area has a commercial use, much of the area to the north is within the Inventory GDL of Murthly Castle. A small section of the River Tay (Dunkeld) NSA overlaps the northern part of the study area. Both of these designated landscapes help define the character of the Muir of Thorn/ Gelly Wood LLCA.

Urban Type – Luncarty and Bankfoot LLCAs

11.3.36 Urban areas are a feature of the landscape adding colour and texture. However, negative attributes include fragmentation of the rural landscape.

11.4 Potential Impacts

Construction Phase

11.4.1 The construction activities associated with road schemes cause generally temporary adverse landscape impacts, typically resulting from:

- vehicles moving machinery and materials to and from the site;
- machinery potentially including heavy excavators, earth moving plant, concrete batching plant, pile drivers, cranes etc;
- exposed bare earth over the extent of the proposed works;
- structures, earthworks, road surfacing and ancillary works during construction;
- temporary site compound areas including site accommodation and parking;
- temporary soil storage heaps and construction materials stockpiles;
- lighting associated with night-time working and site accommodation;
- traffic congestion and queuing during work to tie new road with existing road;
- demolition operations; and
- temporary works associated with bridge construction operations.

11.4.2 The most significant adverse landscape impacts during the construction period are likely to occur where major structures and/or earthworks are being erected or carried out. The locations where these impacts are likely to occur are as follows (from south to north):

- Pitlandie Overbridge (construction of overbridge and associated earthworks);
- Tullybelton/ Stanley Junction (construction of earthworks, and new junction);
- Hunters Lodge Overbridge (construction of earthworks, two SUDS ponds and new junction);
- Coltranie Overbridge (construction of overbridge and associated earthworks); and
- Gelly Overbridge (construction of overbridge and associated earthworks).

11.4.3 Temporary landscape impacts can also occur due to temporary construction compounds. As explained in Chapter 4 (The Proposed Scheme), 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. Mitigation is set out in Section 11.5 to guide the location of construction compounds.

Operational Phase

11.4.4 The on-line widening of the existing A9 alignment of the proposed scheme has less potential to adversely impact on the landscape than an off-line alignment would have. Utilising the existing road corridor limits the potential for impacts on important landscape features and the character of the surrounding landscape. Impacts on the landscape are limited as the proposed route of the main carriageway does not completely deviate from the existing A9 at any point and substantial earthworks are mainly located in similar locations and are generally of a similar scale to those of existing earthworks. The existing road is 8-9m wide, while the proposed route is 20-21m wide. The new road alignment is shown overlain over aerial photographs of the route corridor on Figure 4.5 (accompanying Chapter 4: The Proposed Scheme). No new lighting is proposed on the route resulting in no additional impact from lighting.

11.4.5 Potential landscape impacts may include the following:

- alteration of the local character of the landscape due to the loss of existing landscape elements as a result of the proposed scheme, such as the loss of established woodland and drystone walls along the A9 corridor;
- introduction of infrastructure elements associated with the proposed scheme, including new structures and associated earthworks and the introduction of signs;
- alteration of the landform due to the construction of embankments and cuttings; and
- change to local landscape character during construction period due to changes in landform.

11.5 Mitigation

Introduction

11.5.1 As the proposed route follows the current A9 alignment, in many areas existing earthworks and roadside planting will limit impacts across the wider landscape, thus reducing the need for acquisition of additional land for mitigation. The alignment has been developed through an iterative design process involving engineering, environmental and landscape specialists, in order to minimise landscape and visual impacts, integrate the road with the surrounding landscape and provide a pleasant experience for travellers.

11.5.2 Landscape mitigation proposals have been designed in accordance with the policy documents, 'Cost Effective Landscapes: Learning from Nature' (CEL:LfN) (Scottish Executive, 1998), 'DMRB Volume 10' (Highways Agency et al., 1993) and 'Planning Advice Note (PAN) 1/2013: Environmental Impact Assessment (Scottish Government, 2013). The principles in CEL:LfN have three central themes to be applied throughout the planning, design and implementation of a road proposal:

- use natural characteristics (such as the use of native plants species which occur locally);
- exploration of alternatives (such as the consideration of different methods of noise attenuation such as barriers or false cuttings); and
- wise use of resources (such as on-site recycling of materials arising from site clearance).

11.5.3 As explained in Chapter 16 (Effects on All Travellers), the A9 is a key tourist route, and the strategy adopted for the landscape mitigation design has therefore been to take advantage of open views where possible, whilst providing planting at key locations to screen views of the road from nearby visual receptors and the wider landscape. Limited amounts of new planting are proposed on the west side of the route, and these are mainly in areas of cutting (where views would be curtailed by the earthworks) or in locations where there is existing planting alongside the A9 and there is no potential to open up more distant views.

11.5.4 Landscape mitigation is concerned primarily with mitigation of adverse impacts and as previously stated in paragraph 11.1.4, impacts assessed as being of Moderate or greater significance were

considered to represent key landscape changes where mitigation would generally be required to avoid or reduce these where practicable.

11.5.5 Mitigation of adverse impacts falls into three categories:

- Prevention: avoidance of the loss of significant landscape elements through design of proposed scheme to achieve sensitive horizontal and vertical alignment;
- Reduction: lessening of those adverse effects that cannot be eliminated by prevention (e.g. roadside mounding and planting to integrate with surrounding landform and landscape); and
- Offsetting: provision of alternative or compensatory measures where appropriate and feasible (e.g. replacing woodland where appropriate).

11.5.6 Detailed landscape mitigation proposals will subsequently be incorporated within contract documents, of which this ES will form a part. This will include a requirement that the detailed design meets the objectives of the mitigation and that the details of the landscape mitigation are agreed in consultation with SNH. Historic Scotland will also be consulted during the development of the detailed landscape mitigation design. The contractor appointed to construct the road will be required to comply with the environmental commitments, of which the landscape mitigation proposals form a part. In addition, a section specifically addressing design aesthetics will be produced within the contract documents to provide further details of how specific mitigation measures are to be implemented and how design aesthetics are to be addressed.

11.5.7 In line with the SEA Landscape Principles 1 and 2 (Appendix A11.2) the road alignment and mitigation measures have been designed to respond to the landscape qualities and key characteristics along the route, including tying in with and reflecting existing vegetation patterns and landform, using locally occurring plant species and materials. Further details are included under *'Application of Mitigation Principles'* below. In line with the SEA Landscape Principle 6, the landscape design as part of the proposed scheme has been developed to require minimal maintenance and to provide 'flexibility' to accommodate future changes in circumstances, for example to take opportunities for wildlife habitat enhancement or management of views from the road.

11.5.8 Although the landscape and visual assessments address impacts in summer after 15 years in line with DMRB guidance, the landscape mitigation has been designed for the longer term (beyond 25 years), with species selected to continue to mature and provide mitigation, in line with SEA Landscape Principle 5. The planting mixes are designed to include a range of understorey and edge species to ensure a balanced woodland structure, providing lower level screening once canopy species have matured. They include long lived and native species which are expected to naturally regenerate, hence ensuring longevity of woodland and scrub planting areas.

Construction Phase

11.5.9 The following mitigation measures are proposed to avoid or reduce landscape impacts during construction. This is particularly important in close proximity to residential receptors and in areas where the landscape is very open (**Mitigation Item L1**):

- Programming of works to minimise disruption, including keeping the construction programme to the minimum practicable time and clearing areas for construction as close as possible to works commencing.
- Careful selection of plant and machinery.
- Avoidance of night-time working where possible. Where necessary, directed lighting will be used to minimise light pollution/glare. In addition to specific approval from the relevant road authority, the contractor may be required to comply with the specific requirements of the Local Authority, which may include providing advice to potentially affected residents.
- Sensitive locating of site compounds to minimise their landscape impact. Where possible existing features such as trees should be used to screen from sensitive visual receptors.

Where this is not possible, screening can be achieved using bunds or embankments which become part of the permanent works. Alternatively, temporary screens can be erected, designed and painted to be as inconspicuous in their surroundings as possible.

- Construction sites to be kept tidy (e.g. free of litter and debris).

11.5.10 The above measures will help to reduce the landscape impacts during construction. However, due to the extensive construction works necessary, these cannot be completely mitigated.

Application of Mitigation Principles

11.5.11 Prevention, reduction and offsetting approaches were applied during the proposed scheme planning/design and are described below.

11.5.12 Figure 11.2 shows the proposed landscape mitigation. This evolved from an iterative process between the environment, landscape, and design teams, with consideration given to aesthetics throughout the process. Measures include best fit with existing landform, avoidance of the loss or damage to landscape features such as walls, water features or field systems and avoidance of the loss or damage to sites of ecological or archaeological interest, as identified in Chapter 10 (Ecology and Nature Conservation) and Chapter 13 (Cultural Heritage).

11.5.13 Measures designed to reduce and offset adverse impacts, are summarised below. Location specific measures are described in Tables 11.5, 11.6 and 11.7 and are illustrated on Figure 11.2.

Earthworks

11.5.14 Earthworks proposals aim to minimise the impact of cuttings and embankment slopes and to allow integration of the road with surrounding land (**Mitigation Item L2**), through:

- modification of embankment and cutting slopes to tie smoothly into existing landform and to allow as much land as possible to be returned to agriculture;
- softening changes in slope at junctions and overbridges by smoothing out transitions;
- rounding off top and bottom of cuttings and embankments;
- modification of SUDS basin earthworks in order to improve integration with surrounding landform; and
- utilisation of existing cuttings and embankments and placement of proposed new earthworks predominantly in locations of existing earthworks.

Planting

11.5.15 Proposals relating to existing and new planting comprise of the following:

- retention of existing trees and vegetation wherever possible and incorporation with new planting proposals (**Mitigation Item L3**);
- enhancement of biodiversity through use of predominantly native species, providing new wildlife habitats and complementing existing adjacent habitats (**Mitigation Item L4**);
- planting to replace trees lost to the construction of the proposed scheme (**Mitigation Item L5**);
- planting at junctions and bridges to help assimilate the new structures into the surrounding landscape (**Mitigation Item L6**);
- planting to provide screening to reduce visual impacts of the road and structures (**Mitigation Item L7**);
- planting severed field corners and landlocked areas as appropriate (**Mitigation Item L8**); and
- planting at focal points and junctions (**Mitigation Item L9**).

11.5.16 Young stock will generally be used because it is easier to establish. Larger plants will be included to provide an initial impact in specific locations, for example where screening is required.

11.5.17 Planting will enhance the experience of travelling along the road by creating views to a variety of woodland types (**Mitigation Item L10**). Details of the typical of the planting structure are shown on Figure 11.4. This takes account of aspects such as natural woodland characteristics typical in the locality, designed landscape features, or other requirements such as avoiding creation of tree canopies close to the road. More specific details for each type of planting are specified below.

11.5.18 In total, it is estimated that approximately 10.7ha of tree and scrub planting would be lost during construction of the proposed scheme and 11.5ha of new tree and scrub planting is proposed.

Mixed Woodland

11.5.19 Proposed 'Mixed Woodland' planting, which requires both broad-leaved and coniferous woodland for visual screening purposes, will comprise plants which range in size from feathered trees to whips and transplants. This will aim to create multi-layered woodland with a balanced mix of native deciduous and coniferous trees, including native evergreen understorey. The balance between deciduous and evergreen species will be varied to achieve year-round screening and reflect existing woodland local to the various sections of the road. Scots pine dominates the planting mix, reflecting surrounding woodlands, providing a strong evergreen framework and habitat for red squirrels. A typical species mix to be used for mixed woodland is:

- Scots pine - *Pinus sylvestris* (30%).
- Alder - *Alnus glutinosa* (15%).
- Larch - *Larix decidua* (15%).
- Holly - *Ilex aquifolium* (10%).
- Aspen - *Populus tremula* (10%).
- Silver birch - *Betula pendula* (10%).
- Rowan - *Sorbus aucuparia* (10%).

Scrub Woodland

11.5.20 Proposed 'Scrub Woodland' planting will comprise native species of local provenance. This mix will be used in areas where a lower height plant cover is more appropriate than the taller woodland mixes. The species mix aims to create a dense medium height canopy, punctuated in selected areas by groups of taller trees. A typical species mix to be used for scrub woodland is:

- Birch - *Betula pendula* (30%).
- Hawthorn - *Crataegus monogyna* (20%).
- Holly - *Ilex aquifolium* (20%).
- Cherry - *Prunus avium* (15%).
- Willow - *Salix caprea* (15%).

11.5.21 Around Tullybelton/ Stanley and to east of Gelly, where the ground conditions are wetter, a higher percentage of willow would be used and a lower percentage of holly and hawthorn.

Deciduous Woodland

11.5.22 Proposed 'Deciduous Woodland' planting will comprise plants which range in size from feathered trees to whips and transplants. This will aim to create multi-layered woodland with a balanced mix of trees. Oak will dominate the mix, reflecting surrounding deciduous woodlands. A typical species mix to be used for mixed woodland is:

- Oak - *Quercus robur* (30%).
- Alder - *Alnus glutinosa* (20%).
- Aspen - *Populus tremula* (15%).
- Silver birch - *Betula pendula* (15%).
- Rowan - *Sorbus aucuparia* (10%).
- Larch - *Larix decidua* (10%).

Hedgerow

11.5.23 Hedgerows will be planted to tie revised boundaries into existing field boundaries. The hedge species mix aims to reflect species currently used within hedgerows in the region. The holly adds a native evergreen element. A typical species mix to be used for hedgerows is:

- Hawthorn - *Crataegus monogyna* (60%).
- Blackthorn - *Prunus spinosa* (30%).
- Holly - *Ilex aquifolium* (10%).

11.5.24 Typical hedgerow trees will include:

- Oak - *Quercus robur*.
- Rowan - *Sorbus aucuparia*.
- Cherry - *Prunus avium*.

Individual Trees and Tree Lines

11.5.25 Groups of individual trees and tree lines will comprise heavy standard trees in informal groupings and structured avenues to strengthen the landscape pattern and provide screening/ filtration of views. The tree lines reflect the character of existing mature field boundary tree lines and avenues within the area. Typical species to be used for tree lines include:

- Oak - *Quercus robur*.
- Lime - *Tilia x europaea*.
- Wych elm - *Ulmus glabra*.

Proposed Grass Seeding

11.5.26 For all disturbed soft areas and road verges (**Mitigation Item L11**), different seed mixes will be used, dependent on location and use:

- Roadside Verge Mix: suited to the road-side location being low maintenance, fast establishing and tolerant of traffic and salt spray;
- Species-rich Grassland Mix: suited for use in all other areas disturbed by construction works, consisting of a mixture of native, non-invasive grasses and wildflower species to reflect locally occurring semi-natural flora. As well as enhancing biodiversity and visual interest along the road corridor, this type of grassland will require minimal maintenance; and
- Pond and Swale Wetland Seeding suited for use in SuDS basins, designed ponds, and areas around culverts that are likely to experience wet conditions.

<u>Proposed Overbridges</u>

11.5.27 The outline design of new overbridges and structures has been informed by the SEA Landscape and Access Principles, liaison with the A9 SEA team and consultation with SNH. The assessment

has been based on the assumption that the structures will be simple and elegant with half height abutments, circular columns, either concrete or steel beams and slender decks, as explained in Chapter 4 (The Proposed Scheme). The SEA sets out the principles that should inform assessment and design enabling a consistent aesthetic for overbridges and structures along the entire route. It is anticipated that detailed design of the structures will be informed by strategic design guidance in preparation by the SEA team at the time of writing. The landscape mitigation has also been designed to help integrate proposed new structures with the surrounding landscape.

Proposed Lay-By Design

11.5.28 The number and location of lay-bys have been limited by engineering standards and junction locations. A total of three lay-bys are proposed. The most southern lay-by (ch1350-1450) is located within a cutting on both sides and has no wider views. Woodland planting has been proposed at this location in order to replace woodland lost during construction. The northern lay-bys are located at the start of the Muir of Thorn/ Gelly Wood, which marks a distinct change in landscape character. At this location mitigation has been limited to species rich grassland in order to maximise eastern and northern views towards the woodland edge and the area of Cairn Leith Moss.

Proposed Habitat Creation for Ecological Mitigation

11.5.29 In addition to following the general objective of enhancing biodiversity through the landscape mitigation, more detailed habitat creation proposals are provided in Chapter 10 (Ecology and Nature Conservation).

Deer Fencing

11.5.30 Any deer fencing damaged or removed during the construction of the proposed scheme will be repaired or replaced to maintain existing protection. The appointed contractor will also be required to undertake a risk assessment, taking account of Transport Scotland's strategic deer management planning and the operating company deer management plan which is currently in preparation. The contractor will be required to take appropriate measures so as to avoid increasing the risk of deer collisions on the highway and to protect new planting areas from browsing (**Mitigation Item L12**).

Location-specific Mitigation

11.5.31 Details of site-specific landscape mitigation for each LLCA are listed below in Table 11.5 (**Mitigation Item L13 to L17**), and are also referred to in Section 11.6 (Residual Impacts).

11.5.32 As noted in Chapter 3 (Baseline Conditions), the outcomes and guidance of the SEA have been reviewed and taken into account in the design and mitigation for the proposed scheme. Further details of how the design and assessment addresses each of the specific Landscape and Access Environmental Design Principles are provided in Appendix A11.2.

Table 11.5: Summary of Specific Mitigation Proposals for each LLCA

Landscape Character Type & Area	Mitigation Item	Summary of Mitigation Proposals
Wooded Farmland LCT - Moneydie to Harrietfield LLCA	L13 (Figures 11.1 and 11.2a-b)	Replacement of mixed and scrub woodland on embankments and cuttings along road corridor.
Open Farmland LCT - Bankfoot LLCA	L14 (Figures 11.1 and 11.2a-e)	Replacement of mixed and scrub woodland on embankments and cuttings along road corridor; Mixed and scrub woodland planting around revised junction and new structures. Grading out of embankment slopes for new bridge embankments and Luncarty link road; Introduction of species rich grassland on embankments and SUDS ponds; and Introduction of specimen trees to reinstate field structure, particularly north of Rosevale House and along Stanley Link Road.

Landscape Character Type & Area	Mitigation Item	Summary of Mitigation Proposals
Woodland LCT – Muir of Thorn/ Gelly Wood LLCA	L15 (Figures 11.1 and 11.2e-g)	Replacement of mixed and scrub woodland on embankments and cuttings along road corridor.
Urban LCT – Luncarty LLCA	L16 (Figures 11.1 and 11.2a)	Replacement of mixed and scrub woodland on embankments and cuttings along road corridor.
Urban LCT – Bankfoot LLCA	L17 (Figures 11.1 and 11.2a)	Replacement of mixed and scrub woodland on embankments and cuttings along road corridor.

11.6 Residual Impacts

Construction Phase

11.6.1 The key landscape impacts due to construction, as identified in Section 11.4 (Potential Impacts), are temporary in nature and are not considered to be significant. The proposed mitigation measures described in Section 11.5 (Mitigation) will help to reduce the landscape impacts during construction. However, due to the extensive construction works necessary, these cannot be completely mitigated.

Operational Phase

11.6.2 The residual impacts of the proposed scheme have been assessed taking into account the proposed landscape mitigation.

11.6.3 Direct impacts on LLCAs are described below, and summarised in Table 11.6. Indirect effects are summarised in Table 11.7. Impacts reported in this assessment are considered adverse unless otherwise stated.

11.6.4 Stills from the VRM prepared for the project are provided in Figure 11.3, alongside photographs showing the existing views. These provide indicative views of the completed scheme once planting has become established.

<u>Bankfoot Farmland LLCA</u>

11.6.5 The majority of direct impacts would occur within the Bankfoot Farmland LLCA, although the on-line alignment of the proposed scheme would help to limit the magnitude of change to the LLCA. The most noticeable change would occur at the Tullybelton/Stanley Junction. The revised junction would require significant earthworks and an overbridge, which would introduce large embankments within a relatively flat agricultural landscape, particularly east of Newmill Farm. A considerable number of mature trees and a belt of scrub woodland would be lost at the junction of the A9 and the Stanley village access road as a result of the new junction layout. The new link road to Luncarty would result in the loss of further trees within the same group, the loss of farmland around Rosevale House, and the demolition of a house at Ladner. There would be additional loss of established trees along the road corridor as a result of the widening of the carriageway, which would increase visibility of the road from the surrounding area, particularly around the edge of Luncarty, the Pitlandie Overbridge, Broompark and at the southern end of Bankfoot.

11.6.6 The revised Tullybelton/ Stanley junction layout and increased visibility of the road would result in localised impacts on sections of the LLCA near the road, but for the majority of the LLCA the landscape effects would not be significant, resulting in a low overall impact. During the winter year of opening, residual effects are assessed as of Slight/Moderate significance, which would reduce to Slight significance by the summer 15 years after opening as the proposed mitigation planting becomes established to help reinstate the screening of the road and integrate the earthworks and overbridge into the surrounding landscape. Mitigation proposed at Tullybelton/ Stanley Junction includes mixed woodland and scrub/ shrub planting to help integrate junction into surrounding

landscape, reduce visual impacts, offset loss of mature trees and reduce visual impact of the overbridge approach embankments. Shrub/ scrub planting is proposed to integrate with riparian woodland along Ordie Burn. Proposed lines of mature trees would help offset loss of trees, integrate with existing landscape pattern, reduce visual impact and provide wildlife habitat connectivity.

Muir of Thorn/Gelly Wood LLCA

11.6.7 At the northern end of the proposed scheme, the Muir of Thorn/Gelly Wood LLCA would experience limited direct impacts on the landscape character as a result of the proposed scheme. The woodland is included within the designated Murthly Castle GDL. The proposed route within this area would have very limited impact upon this woodland, as it ties in with the existing A9, and it is not envisaged that any woodland or individual trees of particular significance would be lost. Within the Murthly Castle GDL the embankment of the new Gelly Overbridge would result in the loss of a small amount of immature naturally regenerated woodland on the east side of the A9, but would not affect any large trees or mature woodland.

11.6.8 South of the new Gelly Overbridge the removal of some sections of the wind firm edge of the plantation woodland may lead to the exposure of unsightly 'brown edges' in the remaining woodland and is likely to increase the potential for wind throw, which could lead to the loss or damage of additional trees. At the time of writing these woodlands were included within the Murthly and Strathbraan Phased Felling Plan and not anticipated to remain in the long term. The majority of woodland planned for felling within five years is located to the north east of the proposed Gelly Overbridge, while woodland planned for felling within the next 13 years is located to the North-west. The majority of other woodland in close proximity to the proposed route is outwith the felling plan period. Proposed new mixed woodland planting on the overbridge embankments would assist in softening any potential future impacts from opening up views from areas to the north as a result of future felling operations.

11.6.9 Residual impacts on the LLCA would be of Slight significance during the winter year of opening, reducing to Negligible significance over time as mitigation planting becomes established.

Moneydie to Harrietfield LLCA

11.6.10 The Moneydie to Harrietfield LLCA would experience very limited direct impacts as a result of the loss of the mature trees along the cuttings of the existing road, although the position of the road in cutting for much of the character area would help to limit its visibility. Initial impacts would be of Slight/Negligible significance, with residual impacts reducing to Negligible significance as the replacement planting becomes established.

Luncarty and Bankfoot Urban LLCAs

11.6.11 Indirect residual impacts on the Luncarty and Bankfoot Urban LLCAs would be limited due to the proximity of the existing road and the on-line alignment of the proposed scheme. Although the loss of established vegetation along the road corridor and the increased visibility of the road from some receptors would result in Slight/Negligible impacts during the winter year of opening, this would be reduced to Negligible significance over time as replacement mitigation planting establishes.

River Tay LLCA

11.6.12 Due to screening afforded by the Perth to Inverness railway embankment, topography and woodland, the River Tay LLCA is not intervisible with the proposed scheme and no impacts on its landscape character are predicted.

Table 11.6: Summary of Direct Residual Impacts

Landscape Character Type & Area	Sensitivity	Description of Effects	Winter, Year of Opening		Summary of Mitigation Proposals	Summer, 15 Years after Opening		
			Magnitude of Change	Significance		Description of Residual Impacts	Magnitude of Change	Significance
Wooded Farmland LCT								
Moneydie to Harrietfield LLCA	Medium	• Widening of existing road corridor; • Loss of mature woodland due to introduction of Pitlandie Overbridge; • Loss of established roadside trees at Luncarty due to new cutting.	Low	Slight/ Negligible	• Replacement of mixed and scrub woodland on embankments and cuttings along road corridor (Mitigation Item L13).	• Reinstatement of screening of the road due to the development of the mitigation planting.	Low	Negligible
Open Farmland LCT								
Bankfoot Farmland LLCA	Low to Medium	• Widening of existing road corridor; • Loss of woodland due to introduction of Pitlandie Overbridge; • Introduction of significant earthworks, overbridge, loss of woodland and loss of farmland due to realignment of Tullybelton/ Stanley Junction. These more significant impacts would be localised to the area of the new junction; • Loss of farmland, mature deciduous trees, and demolition of dwelling at Ladner due to Luncarty link road alignment; • Introduction of Coltrannie Overbridge; and • Loss of established roadside trees at Broompark due to new cutting.	Medium	Moderate	• Replacement of mixed and scrub woodland on embankments and cuttings along road corridor; • Mixed and scrub woodland planting at revised junction and new structures to help integrate with surrounding landscape; • Grading out of embankment slopes for new bridge embankments and Luncarty link road; • Introduction of species rich grassland on embankments and SUDS ponds; and • Introduction of specimen trees to reinstate field structure, particularly north of Rosevale House and along Stanley Link Road (Mitigation Item L14).	• Reinstatement of screening of the road due to the development of the mitigation planting.	Low	Slight
Woodland LCT								
Muir of Thorn/ Gelly Wood LLCA	Medium	• Loss of woodland along the road corridor due to road widening; • Loss of trees due to earthworks for pedestrian footbridge; and • Exposure of 'brown edge' and increased risk of wind throw due to loss of trees at edge of woodland.	Low	Slight	• Replacement of mixed and scrub woodland on embankments and cuttings along road corridor (Mitigation Item L15).	• Reinstatement of woodland edge trees along road corridor.	Low	Negligible

Table 11.7: Summary of Indirect Residual Impacts

Landscape Character Type & Area	Sensitivity	Description of Effects	Winter, Year of Opening		Summary of Mitigation Proposals	Summer, 15 Years after Opening		
			Magnitude of Change	Significance		Description of Residual Impacts	Magnitude of Change	Significance
River Valley LCT								
River Tay LLCA	Medium to High	No change	None	None	None	None	None	None
Urban LCT								
Luncarty LLCA	Low to Medium	• Widening of existing road corridor; and • Loss of mature trees and established scrub woodland along road corridor.	Low	Slight/ Negligible	• Replacement of mixed and scrub woodland on embankments and cuttings along road corridor (Mitigation Item L16).	• Reinstatement of woodland edge trees along road corridor.	Low	Negligible
Bankfoot LLCA	Medium	• Widening of existing road corridor; and • Loss of mature trees and established scrub woodland along road corridor.	Low	Slight/ Negligible	• Replacement of mixed and scrub woodland on embankments and cuttings along road corridor (Mitigation Item L17).	• Reinstatement of woodland edge trees along road corridor.	Low	Negligible

Summary of Overall Residual Impacts

11.6.13 The alignment of the proposed scheme along the route of the existing A9 would help to limit the magnitude of change and significance of effects of the road widening. While the widening of the road corridor would result in the loss of several areas of established roadside planting and trees at the edge of the forestry plantations within the Murthly estate, which would increase the visibility of the road from the surrounding area, effects would be limited to landscape immediately adjacent to the road, where the character of the landscape is already influenced by the existing road.

11.6.14 None of the impacts during the winter year of opening would be significant, with all effects reducing by summer 15 years after opening as the mitigation planting becomes established.

11.7 References

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