

26 Landscape

This chapter details the landscape assessment of the Southern Leg section of the proposed scheme. 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 the 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).

The landscape in this area is predominantly rural, characterised by rolling hills, areas of woodland and open farmland through which the River Dee meanders north-eastwards to the North Sea. Settlement extends along the northern bank of the Dee valley and into the rolling landscape west of Aberdeen city boundaries. The local landscape is generally assessed as being of medium sensitivity to change. However, the Dee Valley and its immediate surroundings are highly sensitive.

Mitigation measures to integrate the road into the landscape include careful alignment and grading out of cuttings and embankments to reflect the local topography and enable the land to be returned to agriculture where appropriate. Drystone walls will be reinstated as roadside boundaries in open farmland together with fencing in appropriate places. Planting will include mixed, broadleaf and coniferous woodland, scrub woodland, riparian planting and grassed areas. Woodland planting is proposed in areas where the surrounding landscape is more wooded and where integration, replacement, restoration or screening is required. Planting mitigation measures are proposed to improve the fit of the scheme within the surrounding landscape and will reduce the impact of the proposed scheme over time as vegetation matures

Fifteen years after opening, residual impacts are assessed as being of Substantial to Severe significance where the proposed scheme would cross the Dee Valley and cut through the hillsides on either side at Craingles and Milltimber. Elsewhere, the direct adverse residual impacts range from Substantial to Slight.

26.1 Introduction

26.1.1 This chapter details the assessment of landscape impacts of the AWPR Southern Leg. The Southern Leg study area runs from Charleston in the southeast of Aberdeen to Kingswells west of the city. The assessment methodologies are explained, including details of the main sources of information that were utilised. The baseline conditions are described and an assessment made of the impacts on the landscape resource that would result from the proposed scheme. This includes an assessment of the changes in the character and quality of the landscape (including settlement) which are likely to occur. Any potential impacts that may occur as a consequence of the proposed scheme are considered and mitigation measures are also developed to address potential impacts.

26.1.2 A summary of the landscape character, landscape sensitivity, magnitude and potential impacts is presented in Appendix A26.1. Background information on the landscape character assessment is contained in Appendix A11.3.

26.1.3 The landscape assessment is primarily concerned with:

- direct and indirect impacts on specific landscape features and elements;
- effects on the overall pattern of elements which together determine the landscape character and regional/local distinctiveness;
- impacts on special interests or values such as designated landscapes, conservation sites and cultural associations; and
- changes to perceptual or experiential characteristics of the landscape such as tranquillity and remoteness.

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- 26.1.4 The impact of the proposed scheme on the character of views and visual amenity, which is an important consideration in the assessment of landscape effects, is addressed in Chapter 27 (Visual). The assessment of the views from the new road as they would be experienced by vehicle travellers is contained in Chapter 32 (Vehicle Travellers).
- 26.1.5 The purpose of the landscape assessment is both to identify potential impacts of the proposed scheme and to assist in the design of appropriate mitigation measures.
- 26.1.6 The extent of the study area for the landscape assessment is illustrated by the extent of the Landscape Character areas shown on Figure 26.2a-c and occupies an area of land extending either side of the line of the proposed scheme. Based on professional judgement, it was assessed that beyond this area, due to topography and distance from the proposed scheme, landscape impacts would be imperceptible.

26.2 Approach and Methods

- 26.2.1 The landscape assessment was undertaken in accordance with the Design Manual for Roads and Bridges (DMRB), Volume 11 Section 3 Part 5, Landscape & Visual Assessment Supplementary Guidance, published by the Scottish Executive in February 2002 and Guidelines for Landscape and Visual Impact Assessment, Second Edition published in 2002 by the Landscape Institute and Institute of Environmental Management & Assessment. Further refinement of the methodology was undertaken through consultation with Scottish Natural Heritage (SNH).
- 26.2.2 The design of landscape mitigation measures was undertaken in accordance with 'Cost Effective Landscapes: Learning from Nature' (CEL:LFN) (Scottish Executive, 1998), DMRB Volume 10 (Highways Agency et al., 1993) and PAN 58: Environmental Impact Assessment (SEDD, 1998).
- 26.2.3 The four main steps in the landscape assessment process were:
- description;
 - classification; and
 - evaluation; leading to
 - impact assessment.
- 26.2.4 Landscape assessment consists initially of the collection of baseline data relating to the individual elements (e.g. hills, valleys, woodlands, hedges, buildings), character (i.e. the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and how it is perceived by people) and characteristics (elements or combinations of elements that make a particular contribution to the character of an area, including experiential characteristics such as tranquillity and wildness) of the landscape.
- 26.2.5 SNH has published separate Landscape Character Assessments of both Aberdeen City (ALCA), and South and Central Aberdeenshire (SCALCA), which were used to assist in the classification of the landscape in this assessment. These documents divide the study area into various areas (Landscape Character Areas (LCAs)) of particular Landscape Character Type (LCT). Detailed desk based and field assessment has been undertaken to allow the distribution and boundaries of Landscape Character Types and Areas to be refined and considered at a more local scale, in order to provide a level of detail to enable evaluation and impact assessment. In some cases this has meant subdivision of land identified in SNH's assessments as being of a single Landscape Type or Area into smaller scale units to better reflect local variations in character. Table 1 in Appendix A26.1 provides details of how these changes have been made.
- 26.2.6 An overview of the LLCAs is shown on Figure 26.1 and in detail on Figures 26.2a-c. Photographs of the LLCAs are shown on Figures 26.4a-r.

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- 26.2.7 In undertaking the landscape assessment, consideration was given to the following:
- an experience of the landscape is not only visual, but involves all of the senses;
 - data relating to the elements of the landscape, its character and value will include that dealt with in separate related sections of this Environmental Statement (e.g. Ecology, Cultural Heritage);
 - the value placed on an area is dependant not only on its aesthetic qualities, but also on its situation, rarity and usage;
 - historical and cultural associations or ecological importance may contribute to the value placed on landscape not generally considered to be of visual or other importance; and
 - landscapes, which although not designated, may be of great local or wider value.

26.2.8 Data collection to supplement the information provided in ALCA and SCALCA was by way of a desk study and field survey, the latter principally by car and by foot from the surrounding minor roads and tracks and undertaken by teams of at least two landscape architects. In addition baseline data contained in previous landscape and visual studies at the Stage 2 Environmental Assessment undertaken by Mouchel Consulting Ltd (2002, & 2003) were utilised, where relevant. Data related to built-up areas, identified simply as 'Settlement' in ALCA and SCALCA were gathered in order to provide a meaningful baseline against which to assess potential scheme impacts on their character and setting for example through noise and visual impacts. As landscape and visual impact assessments are closely related, the data collected were used for both, as appropriate. The visual impact assessment is provided in Chapter 27 (Visual).

Desk Study

- 26.2.9 Structure and Local Plans were consulted to establish the presence of areas of statutory designation and protection. Aerial photographs of the route corridor and current 1:25,000 (No. 406) and 1:50,000 (No. 38) scale Ordnance Survey maps were studied to help identify landscape elements and patterns.
- 26.2.10 Data relating to landscape (including baseline landscape character descriptions produced by Mouchel, 2003), archaeology, ecology, buildings and settlements were examined to provide a thorough knowledge of conservation interest. Other human interests were established by analysing data relating to recreation and public rights of way.
- 26.2.11 Consultations were undertaken with statutory and other bodies to supplement the desk study data collection as discussed in Chapter 6 (Scoping and Consultations).
- 26.2.12 Information of relevance to the proposed development 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 and visual impact, including important parts of the landscape, residents, visitors, travellers and other groups of viewers.

Field Survey

- 26.2.13 The Southern Leg 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 assessment.

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- 26.2.14 Observation of the levels of public use of open spaces, roads and footpaths was made in the field and used to assist in the assessment of value. Further information on public usage of footpaths, cycle paths and bridleways is contained in Chapter 31 (Pedestrians, Cyclists, Equestrians and Community Effects).

Evaluation of Sensitivity to Change, Magnitude of Change and Impact Significance

- 26.2.15 Two assessments of scheme impacts were undertaken. Firstly, impacts were assessed for the scheme during the winter, year of opening, taking account only mitigation measures which would have an immediate effect (e.g. grading out of slopes, noise barriers, stone walling, new planting, etc). An assessment of impacts was then made for summer 15 years after scheme opening when proposed mitigation planting will have become established.
- 26.2.16 An initial indication of impact significance was gained by combining sensitivity to change and magnitude of change. Professional judgement based on experience was then used to confirm impact significance.
- 26.2.17 In accordance with Landscape & Visual Assessment Supplementary Guidance, evaluation of sensitivity to change combines a review of 'susceptibility' (i.e. the ability to accommodate change arising from the proposed road without adverse effect) 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 evaluation, such as key features and characteristics, quality and value/importance, which together create a sense of place. The evaluation of sensitivity of landscape and settlement character areas remote from the proposed route, but where people's experience of these could be altered by the proposals, for example through visual impacts or increases in traffic noise, focuses primarily on perceptual qualities such as remoteness and tranquillity and the nature of views potentially affected by the route. Outlined below in Table 26.1 are the criteria used to define the overall evaluation of landscape sensitivity:

Table 26.1 – 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

- 26.2.18 Evaluation of the magnitude of the proposed changes upon the elements of the landscape through which the route will pass, involves the review of the nature and scale of the change together with its duration and degree of permanence, using the criteria outlined below in Table 26.2. The results of this evaluation are presented in Appendix 26.1, Table 39 and Table 26.12 within this chapter.

Table 26.2 – 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.

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Impact Assessment

- 26.2.19 The framework criteria below in Table 26.3 were used to help determine (adverse or beneficial) impact significance from the differing combinations of levels of sensitivity and magnitude. A summary framework of the criteria is outlined in Table 26.4.
- 26.2.20 It should be noted, however, that this is only a framework to aid consistency of reporting and provide an initial indication of the likely impact arising from the assessment of magnitude and sensitivity. Given that the criteria low/moderate/high represent levels on a continuum or continuous gradation, application of the framework also required judgement and awareness of the relative balance of importance between sensitivity and magnitude.
- 26.2.21 Impacts assessed as a Moderate or greater than Moderate significance are considered to represent key landscape changes and mitigation was therefore incorporated into the scheme proposals to address any such adverse impacts wherever possible.

Table 26.3 – Impact Significance Criteria for Landscape

Impact	Criteria
Negligible	No noticeable deterioration or improvement in the existing landscape resource.
Negligible to Slight adverse	Barely perceptible variance with the landform, scale or pattern of the landscape resulting in very limited degradation or diminution of the integrity of an area of recognised character; and would change a landscape of low sensitivity.
Slight adverse	At barely perceptible variance with the landform, scale or pattern of the landscape resulting in very minor degradation or diminution of the integrity of an area of recognised character; and would change a landscape of medium sensitivity; or At minor variance with the landform, scale or pattern of the landscape resulting in limited degradation or diminution of the integrity of an area of recognised character; and would change a landscape of low sensitivity.
Slight to Moderate adverse	At barely perceptible variance with the landform, scale and pattern of the landscape resulting in permanent degradation or diminution of the integrity of valued characteristic features and/or elements and/or their settings; and would cause a landscape of high sensitivity to be permanently changed; or At minor variance with the landform, scale or pattern of the landscape resulting in very minor degradation or diminution of the integrity of an area of recognised character; and would change a landscape of medium sensitivity; or At considerable variance with the landform, scale and pattern of the landscape resulting in permanent degradation or diminution of the integrity of valued characteristic features and/or elements and/or their settings; and would cause a landscape of low sensitivity to be permanently changed.
Moderate adverse	At minor variance with the landform, scale and pattern of the landscape resulting in permanent degradation or diminution of the integrity of highly valued characteristic features and/or elements and/or their settings; and would cause a landscape of high sensitivity to be changed; At considerable variance with the landform, scale and pattern of the landscape resulting in permanent degradation or diminution of the integrity of valued characteristic features and/or elements and/or their settings; and would cause a landscape of medium sensitivity to be permanently changed; or At very considerable variance with the landform, scale and pattern of the landscape resulting in permanent degradation or diminution of the integrity of highly valued characteristic features and/or elements and/or their settings; and would cause a landscape of low sensitivity to be permanently changed.
Moderate to Substantial adverse	At considerable variance to the landform, scale and pattern of the landscape resulting in permanent degradation or diminution of the integrity of highly valued characteristic features and/or elements and/or their settings; and would cause a landscape of high sensitivity to be permanently changed. or At very considerable variance to the landform, scale and pattern of the landscape resulting in permanent degradation or diminution of the integrity of highly valued characteristic features and/or elements and/or their settings; and would cause a landscape of medium sensitivity to be permanently changed. or

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Impact	Criteria
Substantial adverse	At very considerable variance to the landform, scale and pattern of the landscape resulting in permanent degradation or diminution of the integrity of highly valued characteristic features and/or elements and/or their settings; and would cause a landscape of high sensitivity to be permanently changed; or At extreme variance with the landform, scale and pattern of the landscape resulting in permanent degradation, diminution or destruction of the integrity of highly valued characteristic features and/or elements and/or their settings; and would cause a medium sensitive landscape to be permanently changed.
Severe adverse	At extreme variance with the landform, scale and pattern of the landscape resulting in permanent degradation, diminution or destruction of the integrity of highly valued characteristic features and/or elements and/or their settings; and would cause a highly sensitive landscape to be permanently changed.
Slight beneficial	Minor improvement in the landscape character with proposals fitting in with the scale, landform and pattern of the landscape and enabling limited introduction or restoration of valued landscape characteristics which may have been diminished or lost.
Moderate beneficial	Considerable improvement in the landscape character with proposals fitting in very well with the scale, landform and pattern of the landscape and enabling significant introduction or restoration of valued landscape characteristics which may have been diminished or lost.

Table 26.4 – Summary of Impact Significance Criteria for Landscape

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

Limitations to Assessment

- 26.2.22 This assessment has been undertaken on the preliminary design of May 2007. With regard to the assessment of landscape impacts in accordance with DMRB, no limitations to this assessment were identified.

26.3 Baseline Conditions

- 26.3.1 This section provides an overview of the baseline conditions along the route of the Southern Leg and its environs and considers the regional context of the proposed scheme and features that influence the landscape including geology, soils, topography, drainage, historic context, settlement, land use and vegetation.

Regional Context

- 26.3.2 The study area is located in the North East corner of Scotland. Buchan and the Moray Firth lie to the north, the Firth of Tay to the south and the Grampian Highlands to the west. Aberdeen is the closest large centre of population.
- 26.3.3 The study area lies within the northeast Lowlands with the Grampian Highlands containing the Cairngorm Mountains and the Grampian Foothills and Uplands to the west and the Central Lowlands consisting of the Strathmore and Sidlaw Hills and the Fife Lowlands and Uplands to the south.
- 26.3.4 To the south of the northeast Lowlands region, the sub-region Skene Lowlands is a predominantly undulating agricultural landscape, degraded by infrastructure at Charleston, to the southeast of Aberdeen and influenced by suburban development on the western extremities of Aberdeen City at Milltimber and Kingswells.

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Landscape and other Statutory Designations

Green Belt – Aberdeen City

- 26.3.5 Green Belt areas, identified by Aberdeen City Council in the Finalised Aberdeen Local Plan, August 2004, 'Green Spaces: New Places' would be directly affected by the Southern Leg. These are areas of countryside around cities and towns where planning controls are applied in order to:
- maintain the identity of towns by defining their physical boundaries clearly and preventing coalescence and urban sprawl;
 - provide land for countryside recreational and other appropriate purposes; and
 - maintain the landscape setting of towns.
- 26.3.6 The Finalised Aberdeen City Local Plan states that in Green Belt areas there will be an embargo against all development unless it concerns uses for which a countryside location is essential:
- agriculture, forestry, outdoor recreation, mineral extraction or restoration and landscape renewal;
 - expansion of existing activities within existing site boundaries, which will be treated on their merits and in the context of green belt policy;
 - indoor sports and institutional uses on specific opportunity sites identified on the proposals map; and
 - infrastructure development that cannot be accommodated other than in the Green Belt and which has been identified in, and is wholly compatible with, the Development Plan.

Green Belt – Aberdeenshire Council

- 26.3.7 Aberdeenshire Council identifies areas of Green Belt in the Aberdeenshire Local Plan Adopted June 2006, which would be directly affected by the Southern Leg. The Aberdeenshire Green Belt links into the Aberdeen City Green Belt and exists to provide countryside for informal recreational purposes and to maintain the landscape setting of Aberdeen. Allowances are only made for developments considered suitable in Green Belt and which accord to structure plan and national planning policy and guidance.

Green Space Network – Aberdeen City

- 26.3.8 The Southern Leg would have direct affects upon the Green Space Network identified by Aberdeen City Council in the Finalised Aberdeen City Local Plan, 'Green Spaces: New Places'. The network covers those parts of Aberdeen that are considered the most intrinsically valuable from an ecological, landscape or especially recreational viewpoint and will provide Aberdeen with a linked and enhanced leisure, recreation and green space resource. The Green Space Network overlays other local plan policy areas such as Green Belt and Urban Green Space and adds a further layer of protection which advocates landscape, wildlife and recreational enhancement. The designation protects and enhances wildlife, recreational, landscape and access value. Development that destroys or erodes the character and function of the Green Space Network will not be permitted. The intent of this network is not to devalue or reduce other areas of Green Belt.
- 26.3.9 Where major infrastructure projects necessitate crossing the Green Space Network, such development shall take into account, as far as practicable, the coherence of the Network. In doing so measures should be taken to allow access across roads for wildlife and outdoor recreation purposes along key corridors.

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Area of Local Landscape Significance – Aberdeen City Council

- 26.3.10 Aberdeen City Council's Landscape Strategy, August 2002, identifies Areas of Local Landscape Significance. These are areas which conform to one or more of the following criteria and merit safeguarding from inappropriate forms of development:
- landscape elements which contribute to, or provide, a distinct 'sense of place' which point to being either in or around 'Aberdeen' or a particular part of it;
 - vantage points, or intermediate area which allow particular views of city landscape, townscape, landmarks or features, or offer a diversity of landscape character types and landscape elements which help to enrich the local landscape experience of residents and visitors;
 - valuable resources for recreation, wildlife habitat, the local economy and culture, including trees, forests and woodlands; or
 - green spaces, or 'buffers' of countryside, that prevent settlements with individual identities and a sense of place from merging together, and which provide opportunities for rural pursuits, 'doorstep' recreation, green linkages with other places, or for general enjoyment of the countryside.
- 26.3.11 The specific location and extent of Areas of Local Landscape Significance are not shown graphically in the Finalised Aberdeen Local Plan but virtually all of the non-urban area of the within Aberdeen City Council's administrative boundary conforms to one or more of the above criteria and as such could be identified as being of Local Landscape Significance and therefore may be directly affected by the Southern Leg.

Area of Landscape Significance (ALS) – Aberdeenshire Council

- 26.3.12 The Aberdeenshire Local Plan Adopted 2006 identifies an Area of Landscape Significance (ALS) south of the River Dee, which would be directly affected by the Southern Leg. The ALS is identified as being important not only for the physical landforms and the fauna and flora it supports, but also for the environmental assets that it represents. The Local Plan states that development within or adjacent to an ALS will not be permitted where its scale, location or design will detract from the quality or character of the landscape, either in part or as a whole. It goes on to state that where acceptable in principle, development is required to conform to various environmental and landscape design criteria set out in the appendices to the Local Plan and in all cases the highest standards of design, in terms of location, scale, siting, aesthetics and landscaping, will be required within an ALS.
- 26.3.13 The specific location and extent of the Area of Landscape Significance is shown in the Aberdeenshire Local Plan Adopted 2006 and on Figures 26.2a-b.

Tree Preservation Orders

- 26.3.14 Tree Preservation Orders at Milltimber are designated by Aberdeen City Council for an area between Culterhouse Road and the North Deeside Road.

SNH Landscape Character Assessments

- 26.3.15 SNH has published Landscape Character Assessments covering the whole of Scotland. Two assessments cover the project study area, namely, Aberdeen City (Ian Nicol, Anne Johnston, Laura Campbell, 1996) and South and Central Aberdeenshire (ERM, 1998). These documents were used as a source of information and provided a basis for the Landscape Character Assessment.

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Geology and Soils (for further details see Chapter 23: Geology, Contaminated Land & Groundwater)

- 26.3.16 Geology and soils are considered in detail in Chapter 23 (Geology, Contaminated Land and Groundwater). However, geology and soils also influence landform and in the context of the landscape assessment are briefly summarised in paragraphs 26.3.16 and 26.3.17 below.
- 26.3.17 The study area lies in an area of mainly metamorphic rock, which also contains outcrops of igneous rock such as granite. The metamorphic rocks tend to be quartz, mica, schist, grit and slate. Large igneous outcrops occur to the west of the city, extending south to the Dee valley, some of which was worked by Rubislaw Quarry and provided granite for many buildings in Aberdeen.
- 26.3.18 The majority of soils within the study corridor are derived from boulder clay and morainic drift, reflecting the underlying metamorphic geology. Alluvial soils and glacial sands and gravels are found along the Dee valley and its tributaries while peat occurs within relatively flat hollows on the plateau to the south of the Dee valley.

Topography and Drainage (for further details see Chapter 24: Water Environment)

- 26.3.19 The topography and drainage of the Southern Leg study area are illustrated on Figure 26.3a-c.
- 26.3.20 The A90 at Charleston, the land is a gently undulating basin in which Hare Moss lies. Farther west, the terrain becomes more rugged between the Hill of Blairs and Clochandighter, which form a series of distinct prominent hills with Cleanhill and Craingles to define the valley ridge to the south of the River Dee.
- 26.3.21 The River Dee meanders along a flat alluvial floodplain flanked by mounded deposits and terraces. North of the Dee, the terrain rises up fairly steeply through Milltimber to Beanshill (146m AOD) a prominent hill formed where bedrock is close to the surface. It then crosses the valley of Silver Burn before continuing to rise over the undulating terrain of Kingshill (207M AOD) and various smaller outliers. North of Kingshill the route corridor descends and crosses the minor valley running in an easterly direction, along which the A944 runs and continues over undulating terrain to Kingswells and the foot of Brimmond Hill, which at 266M AOD is the most prominent hill in the collective AWPR study area.
- 26.3.22 Within the study area, the River Dee is the dominant watercourse flowing eastwards and the topographical trend is a gradual slope from the ridge formed by Kingshill and Brimmond Hill down to sea level in the east. The River Dee meanders along a narrow floodplain bounded by steep slopes to the north and by varying steep and shallow slopes to the south.
- 26.3.23 South of the River Dee, the landform between the east coast and the river is dominated by two high points, Cran Hill (148m) and Craingles Wood (159m), which are surrounded by flat to gently undulating land. To the east of these hills the ground slopes gently towards the North Sea coastline with cliffs dropping sharply down to sea level. To the north of these hills the land slopes down relatively steeply towards Aberdeen city and the River Dee corridor. Several burns including Burn of Leggart, Burn of Ardoe, Shanna Burn and Blaikiewell Burn flow northwards, from the higher ground, to join the River Dee. The flat plateau area around Hare Moss is drained by a series of canalised ditches flowing either east towards the coast or north to the Dee.
- 26.3.24 The topography and drainage of the study area are illustrated on Figures 26.3a-c.

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Historical Context

- 26.3.25 The history of Aberdeen area is considered in Chapter 28 (Cultural Heritage). However, historical land use also influences the present landscape and in this context is briefly summarised in the paragraphs below.
- 26.3.26 Within the study area, evidence exists of settlement and farming dating back to prehistoric times in the form of remnant field systems, long mounds and burial cairns, indicating presence of late Neolithic and Bronze Age communities who farmed the land. Felling of woodland allowed long distance views towards these structures which were usually built on the skyline. Pictish symbol stones found in the Aberdeen and Aberdeenshire areas are evidence of Pictish settlement from the 1st to the 9th century.
- 26.3.27 The earliest settlement in the Aberdeen city area has been found in Mesolithic flint working sites close to mouth of River Dee and the Royal Burgh of Aberdeen, formed around the natural harbour at the mouth of the River Dee, was created a Royal Burgh during the reign of David I (1124 – 1153). The River Don was not suitable for harbour development and a religious settlement, known as Old Aberdeen, developed close to the River Don in the 12th century. This settlement was distinct from the settlement of Aberdeen, farther south at the River Dee, until the two merged in 1891.
- 26.3.28 By the late 1700's, streets such as Union Street and Victoria Bridge over the River Dee were constructed to open up access to the city, encouraging expansion of the city to the south and west.
- 26.3.29 Timber was used for building in the 12th to 14th centuries, reducing much of the surrounding native forest to pasture or open heath and the use of granite for building began around the 16th century. This medieval and post-medieval landscape, from the 11th century to the 18th century, generally consisted of castles, open farmland, small areas of woodland and small settlements built of timber and stones and boulders cleared from the land.
- 26.3.30 The agricultural revolution between the late 18th and early 19th centuries altered the landscape from the runrig system to fields enclosed with stone walls or earth bunds. As agriculture was changing, the harnessing of water power increased to enable industrial production, and more mills developed along watercourses in Aberdeenshire. These in turn encouraged the diversification and expansion of cropping systems, leading to the removal of some stone walls and boundaries, to allow larger field systems. As a result, Aberdeenshire became a major agricultural production area within the United Kingdom. During the 20th century a programme of forestry planting was undertaken by Forest Enterprise on less productive land which altered the character of the landscape within Aberdeenshire.
- 26.3.31 In the mid 19th century the railway reached Aberdeen, arriving in the south of the city, encouraging more residential and industrial development along the River Dee corridor. During the 20th century the rapid expansion of Aberdeen continued, growing from 27km² in the early 20th century to approximately 200km² in the late 20th century.
- 26.3.32 The depopulation of farming communities in Aberdeenshire due to the agricultural revolution was in some way reversed due to the oil boom of the late 20th century which encouraged the repopulation of rural areas within commuting distance of Aberdeen and the expansion of existing small settlements into the surrounding rural landscape.

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Settlement and Land use

- 26.3.33 Limited by the North Sea to the east, the settlement of Aberdeen has historically expanded inland along the river valleys of the Dee and the Don and the current pattern still reflects this with both valleys acting as transport and settlement corridors.
- 26.3.34 The main settlement areas within the study area are Milltimber and Peterculter, which are among a series of suburbs on the north side of the Dee beside the A93, and the commuter settlements of Kingswells and Westhill to the north of the A944, which have grown rapidly over recent years. Milltimber and Peterculter are characterised by low density detached and semi-detached traditional granite housing set in mature wooded grounds. Kingswells and Westhill are modern settlements of medium and low density houses and less diverse in character.
- 26.3.35 Kingswells generally has restricted views, as much of it is lower than the surrounding land. Eastern parts of Kingswells gain limited views east towards the Northfield area of Aberdeen while the western edge has rural views west to Brimmond Hill and Kingshill to the south. Westhill lies on a south facing slope and has rural views towards Kingshill and Hill of Ord. It is visually separate from Kingswells due to undulating ground between the two settlements. The settlements located along the Dee corridor, including Milltimber, face south and have views across the low lying River Dee valley to the higher ground of Cran Hill and Craingles Wood in the southern part of the study area. The settlement of Cove Bay, east of Charleston junction and the study area, has generally inward-looking views, with views west towards the study area only possible from houses on the western edge of the settlement.
- 26.3.36 Outside the main settlement areas, the countryside has numerous dwellings and farmsteads, becoming sparser on the higher ground, served by minor roads and tracks. A number of the older stone buildings are listed and associated with former estates. These include grand houses, such as Kingcausie, or are public buildings such as the Kirkton of Maryculter church. Camphill Village Trust has a therapeutic community estate at Milltimber.
- 26.3.37 There are relatively few intact traditional crofts or farm buildings, but large numbers of ruins scattered throughout, surrounded by small fields. Although much of the study corridor is capable of supporting crops, the predominant land uses are sheep and cattle grazing in fields and horse paddocks, typically divided by dry stone walls or fences. Fields are mainly small with larger fields in areas of better quality farmland or associated with former estates such as Auchlunies. In some areas, regular rectilinear patterns are apparent, for example in the east around Hare Moss.
- 26.3.38 A number of east-west routes radiate from the city of Aberdeen to cross the study area. These are the A93 to the north of the Dee, connecting Aberdeen and Braemar and passing through Milltimber, and the A944, connecting Aberdeen and Alford which provides a link to Kingswells, and is a busy alternative to the A90 (T) between Stonehaven and the western edges of Aberdeen Westhill. The B9077, south of the river Dee provides an alternative to the A93 and the well-used B979 corridor serves the scattered settlement with a network of minor roads serving the farmland between the B979 and the A90(T) and the southern slopes of the Dee valley.
- 26.3.39 Industrial areas located close to the Southern Leg study area are Altens Industrial Estate, located close to Charleston and Westhill/Elrick, southwest of Kingswells.

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Vegetation other than agricultural land (pasture and crops)

- 26.3.40 Vegetation cover is described in Chapter 25 (Ecology and Nature Conservation) and is a key component of the landscape, as discussed in the following paragraphs.
- 26.3.41 Type and extent of vegetation cover varies considerably over the study area, with the majority being extensive areas of forestry under the control of the Forestry Commission. These tend to be located on higher, more exposed hilltop areas where conditions are less suitable for agriculture.
- 26.3.42 In addition to the larger forestry areas there are a number of mature broadleaf and coniferous estate woodlands and shelterbelts scattered through the study corridor, with several of the older, extensive woodland areas such as those at Auchlunies, Cleanhill, Craingles and Kingcausie originating from designed landscapes associated with estates and dating back to the 17th and 19th centuries.
- 26.3.43 Broadleaf and mixed woodland is also common on either side of the Dee Valley, with mature wooded grounds and ornamental planting surrounding the large houses at Milltimber and mature plantation belts around Kingswells. Hare Moss supports rough birch scrub woodland and the farm steadings scattered throughout the study corridor are often sheltered by small mixed-woodland copses.
- 26.3.44 The majority of agricultural land is classified as capable of producing a moderate range of crops limited by wetness, gradient and soil quality. The peat moss only sustains very rough grazing and scrub vegetation, such as Birch scrub at Hare Moss.

SNH Landscape Character Assessments

- 26.3.45 Between Charleston and Blaikiewell, the Southern Leg study area occurs within the landscape character type identified in SCALCA as 'Agricultural Heartlands', edged by 'Coastal Strip' to the east.
- 26.3.46 SCALCA further divides the Agricultural Heartlands type into ten Landscape Character Areas (LCA), with the study area, between Charleston and Blaikiewell, passing through the 'Kincardine Plateau' LCA, immediately south of the Central Wooded Estates LCA, which encircles the City of Aberdeen to the south, west and north. 'Kincardine Cliffs' is the subdivision of 'Coastal Strip' to the east.

Landscape Character Types and Local Landscape Character Area (LLCA) Descriptions

- 26.3.47 At Cleanhill Junction, the Southern Leg is joined by the Fastlink section of the AWPR and enters Aberdeen City administrative boundary, within which ALCA identifies five collective Landscape Character Types, namely Hill, Open Farmland, Wooded Farmland, Valley and Coast. These are further divided into LCAs.
- 26.3.48 From Blaikiewell to Kingswells the study area passes through the Dee Valley, Countesswells/Milltimber/Kennerty Wooded Farmland, Gairn Hill, Maidencraig Open Farmland and Kingswells Wooded Farmland LCAs.
- 26.3.49 For the purpose of consistency within this assessment, the collective Landscape Character Types are applied throughout the proposed scheme study area, including the Fastlink and Northern Leg sections, and subdivided into Local Landscape Character Areas (LLCAs). LLCA boundaries within the Southern Leg study area are illustrated in Figures 26.2a-c. Seven Landscape Character Types have been identified within the Southern Leg study area and a description of each is provided below, with a photo illustrating typical appearance. Detailed descriptions of each of the LLCAs are contained in Appendix A26.1 and photographs are shown in Figures 26.4a-r.

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Hill Type

- 26.3.50 The Hill landscape character type comprises the highest ground in the Southern Leg study area and forms distinctive landmarks or skyline features when viewed from local roads. It is characterised by a gently rounded landform with predominantly smooth slopes. The vegetation cover on summits varies from open moorland to forestry plantations. Man-made elements, such as buildings or telecommunication masts, are limited in number but tend to be more visible due to their higher elevation (based upon extract from SNH Report No 80, Aberdeen, 1996).



Table 26.5 – Hill Type LLCAs

LLCA	Figure Number	Photograph Viewpoint	Landscape Character Type	Overall Sensitivity
Kincorth	26.2a	01	Hill	Medium to High
Green Howe	26.2a	02	Hill	Low to Medium
Lochend	26.2a	03	Hill	Medium
Craigingles	26.2b	04	Hill	High
Beanshill	26.2b	05	Hill	Medium
Fifeshill	26.2c	06	Hill	Medium
Auchlea	26.2c	07	Hill	Low to Medium
Clochandighter	26.2a	08	Hill	Low to Medium
Brimmond Hill	26.2c	09	Hill	Low

Open Farmland Type

- 26.3.51 Open Farmland is an extensive landscape character type which forms much of Aberdeen's agricultural hinterland. It has a gently rolling landform of open character with relatively few trees. Farmsteads are scattered, often associated with small clumps of trees. Fields are often bordered by drystone dykes, many of which have been replaced by post and wire fences (based upon extract from SNH Report No 80, Aberdeen, 1996).

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Table 26.6 – Open Farmland Type LLCAs

LLCA	Figure Number	Photograph Viewpoint	Landscape Character Type	Overall Sensitivity
Loirston	26.2a	10	Open Farmland	Low to Medium
Hare Moss	26.2a	11	Open Farmland	Medium to High
Merchant's Croft	26.2b	12	Open Farmland	Medium
Blaikiewell	26.2b and 41.2b	13	Open Farmland	Medium to High
Clintery/West Brimmond	26.2c	14	Open Farmland	Low to Medium
Den of Leggart	26.2a	15	Open Farmland	Medium
Craiglug	26.2b and 41.2b	16	Open Farmland	Low to Medium
Westfield	26.2b	17	Open Farmland	Low to Medium
Anguston	26.2b	18	Open Farmland	Low to Medium
Kingshill/Bogskeathy	26.2c	19	Open Farmland	Low to Medium
Maidencraig	26.2c	20	Open Farmland	Low to Medium
Greenferns	26.2c	21	Open Farmland	Low to Medium

Wooded Farmland Type

26.3.52 The Wooded Farmland landscape character type is a diverse and rural landscape which tends to be associated with more steeply undulating areas. It is mainly agricultural but contains a high proportion and variety of woodland cover either as plantations, shelterbelts or clumps of trees around the scattered, vernacular buildings (extract from SNH Report No 80, Aberdeen, 1996).



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Table 26.7 – Wooded Farmland Type LLCAs

LLCA	Figure Number	Photograph Viewpoint	Landscape Character Type	Overall Sensitivity
Duff's Hill	26.2a	22	Wooded Farmland	Low
Netherley/Altries	26.2b, 26.2a and 41.2b	23	Wooded Farmland	High
Auchlunies	26.2a	24	Wooded Farmland	Low to Medium
Craigton	26.2b	25	Wooded Farmland	Medium to High
Broomfold	26.2c	26	Wooded Farmland	Medium
Kingswells	26.2c	27	Wooded Farmland	Medium
Normandykes	26.2b	28	Wooded Farmland	Low to Medium
Murtle	26.2b	29	Wooded Farmland	Medium
Countesswells	26.2b and 26.2c	30	Wooded Farmland	Low to Medium
Hazelhead	26.2c	31	Wooded Farmland	Low to Medium

Valley Type

- 26.3.53 This character type comprises the River Dee valley where woodland vegetation contrasts with the smooth texture and undulating topography of the valley and the farmland is productive and well-managed.
- 26.3.54 The vegetation cover is broadly similar throughout, with open ground on the valley floor and mature woodland on the side slopes. Arterial roads and development follow the valley landform, which is almost exclusively residential and partially screened by woodland (extract from SNH Report No 80, Aberdeen, 1996).



Table 26.8 – Valley Type LLCAs

LLCA	Figure Number	Photograph Viewpoint	Landscape Character Type	Overall Sensitivity
Dee Valley	26.2b and 26.2a	32	Valley	High

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Coast Type

26.3.55 The Coast landscape character type is a distinctive linear and relatively narrow landscape character type, covering the rocky coastline from the south of Aberdeen to Stonehaven. Much of the coastline is marked by steep rugged slopes and cliffs, with numerous coves and bays formed by coastal erosion and small raised beaches in some of the coves above the rocky outcrops. The vegetation is primarily semi-natural with farmland generally running along its western edge. Closer to the built-up areas, the character type has a recreational emphasis (based on extract from SNH Report No 80, Aberdeen, 1996).



Table 26.9 – Coast Type LLCAs

LLCA	Figure Number	Photograph Viewpoint	Landscape Character Type	Overall Sensitivity
Kincardine Cliffs	26.2a	33	Coast	Medium

Recreational Type

26.3.56 The Recreational landscape character types are characterised by their primary use for recreation to the exclusion of other land uses, and within the Southern Leg study area, cover two golf courses. The vegetation cover is typically structure planting alongside large areas of well-maintained grass. Man-made elements such as club houses, cafés and car parks tend to be clustered together in part of the area. The recreational types are small in relation to the other landscape character types in the Southern Leg study area.



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Table 26.10 – Recreational Type LLCAs

LLCA	Figure Number	Photograph Viewpoint	Landscape Character Type	Overall Sensitivity
Hazelhead Golf Course	26.2c	34	Recreational	Low to Medium
Portlethen Golf Course	26.2a	35	Recreational	Low to Medium

Urban Area Type

26.3.57 The urban areas within the Southern Leg include the suburban settlements at Milltimber, Peterculter and the commuter settlements at Kingswells and Westhill

Table 26.11 – Urban Area Type

LLCA	Figure Number	Landscape Character Type	Overall Sensitivity
Milltimber	26.2b	Urban	Medium to High
Peterculter	26.2b	Urban	Low to Medium
Kingswells	26.2c	Urban	Medium
Westhill	26.2c	Urban	Low
Badentoy	26.2a	Urban	Low
Portlethen	26.2a	Urban	Low to Medium

26.4 Potential Impacts

26.4.1 Without the application of appropriate mitigation, landscape impacts may include the following:

- alteration of the character of the landscape due to the introduction of the road in an essentially rural landscape;
- alteration of the character of surrounding landscape and settlement areas due to the loss of arable land, improved and semi-improved grasslands, trees, woodlands, drystone walls and disruption to watercourses;
- alteration of the landform due to the introduction of new elements including road surface, noise barriers and bunds, detention ponds, bridges, underpass, culverts, signage and lighting; and
- potential increases in noise, pollution and visual impact on the surrounding landscape, properties and settlements.

26.4.2 Landscape impacts are discussed in detail within section 26.6 Residual Impacts and also in Appendix A26.1.

26.5 Mitigation

Introduction

26.5.1 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' (The Highways Agency et al., 1993) and 'Planning Advice Note (PAN) 58: Environmental Impact Assessment (Scottish Executive Development Department, 1999).

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- 26.5.2 The principles in CEL:LfN have three central themes that are to be applied throughout the planning, design and implementation of a road proposal:
- use natural characteristics (e.g. such as the use of native plants species which occur naturally);
 - exploration of alternatives (e.g. such as the consideration of different methods of noise attenuation such as barriers or bunds); and
 - wise use of resources (e.g. such as the reuse of stone from walls lost to the route).
- 26.5.3 Proposed landscape mitigation measures relate to earthworks, rock cuttings, detention ponds, structures, planting, seeding and drystone walling.
- 26.5.4 Land required for landscape purposes is identified on Figures 26.5a-p (showing Landscape and Ecological Mitigation Proposals) and will be used principally to modify landform and to create or enhance habitats.
- 26.5.5 The land for landscape mitigation will be acquired as part of the Compulsory Purchase Order (CPO), although where land is assessed to be of agricultural value and has the potential to be returned to agricultural use, this may be sold back to the landowners once mitigation has been implemented. If the land is not purchased back it will remain within the ownership of the Scottish Executive and be maintained within the road corridor. For the purposes of this assessment it has been assumed that the latter will be the case so that the 'worst case scenario', is assessed. Land that is required exclusively for ecological planting will be sought to be acquired by agreement.
- 26.5.6 Landscape mitigation is concerned primarily with mitigation of adverse impacts although, in some situations, opportunities to provide enhancement of the landscape of the road corridor may be taken for which land would have to be acquired by agreement. The measures described below are those upon which the assessment of residual impacts has been based. Mitigation of adverse impacts falls into three categories:
- **Prevention:** avoidance of both the loss of significant landscape elements and visual impacts on nearby settlements through proposed scheme design; includes sensitive routing of the road alignment and consideration of the height of the road and other structures;
 - **Reduction:** lessening of those adverse effects that cannot be eliminated by prevention (e.g. roadside mounding and planting to screen visual impact from property or publicly used areas); and
 - **Offsetting:** provision of alternative or compensatory measures where appropriate and feasible (e.g. replacing drystone walls where appropriate).
- 26.5.7 Further, more detailed development of the landscape mitigation proposals will be progressed and the details incorporated within Contract Documents of which this document will form a part, along with the Employer's Requirements and specification. This will include a requirement that the Final Design meets the objectives of the mitigation and that the details are agreed in consultation with SNH. In addition a Design Guide will be produced to provide further details of how specific mitigation measures are to be implemented and how design aesthetics are to be addressed.

Application of Mitigation Principles

- 26.5.8 The following prevention, reduction and offsetting approaches have been applied during the planning and design of the proposed scheme:

Prevention

- 26.5.9 Measures applied to prevent adverse effects are described in 26.5.10. These measures will be adhered to in developing the detailed design and included in the Contract Documents.

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Alignment

- 26.5.10 The achievement of best fit with existing landform where possible; avoidance, where possible, of the loss or damage to landscape features such as walls, water features or field systems; and avoidance, where possible, of the loss or damage to sites of ecological or archaeological interest (refer to Chapters 25: Ecology and Nature Conservation and 28: Cultural Heritage respectively).

Reduce/Offset

- 26.5.11 The elements of the landscape design for the proposed scheme, which include measures designed to reduce and offset adverse impacts, and which will be included in the Employer's Requirements are summarised below.
- 26.5.12 Location specific measures are described in Appendix A26.1 (Landscape Character, Landscape Sensitivity, Magnitude and Impacts) and illustrated on Figures 26.5a-p (Landscape and Ecological Mitigation Proposals).

Earthworks

- 26.5.13 Earthworks proposals aim to minimise the impact of cuttings and embankment slopes and to allow integration of the road with surrounding land, through:
- modification of embankment and cutting slopes to tie smoothly into existing landform and allow land to be returned to agricultural use where appropriate;
 - softening changes in slope at junctions and overbridges by smoothing out transitions between slopes; and
 - rounding off top and bottom of cuttings and embankments.

Rock Cuttings

- 26.5.14 Where rock cuttings are proposed, the aim is to integrate them into the landscape as far as possible by:
- creating irregular, naturalistic looking rock faces; and
 - scattering pockets of soil and native seed onto ledges and terraces to encourage random areas of vegetation to establish, where practicable.
- 26.5.15 Where the proposed scheme passes through areas of rock cutting, appropriate measures, as detailed below, will be taken to achieve slopes which reflect the natural strata and the existing rugged terrain, providing ledges, niches and benches for the re-establishment of vegetation. All rock cut profiles shall therefore exploit the nature of the discontinuities and character of the natural rock mass so as to create a profile with a natural appearance, avoiding the creation of uniform smooth faces. Rock traps will be placed alongside the road, where these are required for safety.
- 26.5.16 Bulk blasting as well as pre-split methods may be used, followed by a variety of techniques to achieve the desired profile and surface.
- 26.5.17 Peat or topsoil will be trickled over the rock slope or placed in irregular ledges, niches and in-slope benches to soften the visual impact of the slopes and encourage the establishment of shallow rooted vegetation. The peat or topsoil will be placed so that it is stable in the short and long term and will be seeded, or hydroseeded, with shallow rooted native plant species.

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Drystone Walling

- 26.5.18 Walls are proposed along selected sections of the boundary of the road corridor to maintain and reinforce the distinctive pattern of walling, typical of Aberdeen. Whenever possible new drystone walls will tie into existing walls.
- 26.5.19 Drystone walls will be constructed to the local and traditional design, approximately 1m high and 0.5m wide. The stone used will be selected from dismantled walls severed by the road corridor. Where no stone from dismantled walls is available, the stone will be selected from local sources and, as far as possible, will reflect the characteristics in size and colour of the existing walls in the local area.

Treatment Ponds and Detention Basins

- 26.5.20 Treatment ponds and detention basins, required as part of the road drainage system, provide the opportunity to create new beneficial features within the landscape and habitat for wildlife. They will be sited within naturally low areas and designed to look as natural as possible. Surrounding earthworks will be designed with smooth flowing contours to integrate naturalistically with the surrounding landform. Abrupt changes in slope, sharp angles and steep side slopes will be avoided. Boundary fencing, where required around ponds, will be designed to be as unobtrusive as possible, with the fence type and alignment designed to minimise visual impact. Planting of native scrub species will be undertaken to help screen proposed fencing, outfall and inlet structures, enhance wildlife habitat and provide visual interest. Open ground in the areas around the treatment ponds and detention basins will be seeded with native grasses and wildflowers to provide added wildlife habitat and visual interest.

Noise Barriers

- 26.5.21 The height of the proposed noise barriers along the route will vary in relation to local conditions. Where the height requirement is above 1.2m, fencing is proposed. It has the potential to be visually intrusive when viewed from the road corridor and surrounding properties. Where possible and appropriate to the surrounding landscape character, tree and scrub planting is proposed along the roadside edge of the noise barrier fencing in order to help screen it from the road and nearby properties.
- 26.5.22 Drystone wall are proposed where the height requirement of the barrier is 1.2m or less. This will help to integrate the noise mitigation with the surrounding landscape and mitigation proposals along the route.
- 26.5.23 Barriers on top of earth bunds/false cuttings have also been proposed to reduce the impact of noise barriers in sensitive areas by decreasing the height of fences and walls without losing the mitigating effect.
- 26.5.24 Where noise mitigation is required on bridges, noise barriers of between 1.2 – 2m are proposed behind the bridge parapets.
- 26.5.25 Under the Design and Build contract proposed for the scheme, the detailed design of the noise fencing will be undertaken by the contractor responsible for the works.
- 26.5.26 The location of the proposed noise barriers is shown on Figures 26.5a-p.

Structures

- 26.5.27 The design of structures such as bridges along the length of the route has been informed by a combination of specialist aesthetic advice, design workshops and consultation with Architecture & Design Scotland.

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Planting

26.5.28 Aberdeen Airport is located close to the Northern Leg of the proposed scheme. As noted in Chapter 11 (Landscape), consultation is currently ongoing British Airports Authority (BAA) with regard to the AWPR mitigation planting proposals, to ensure that the risk of bird strikes is not increased through habitat creation/enhancement. It is currently not known whether any agreed restrictions will be applicable to the Southern Leg. However, planting species mixes will not be finalised until detailed design stage. The objective will be to achieve an acceptable solution which meets the aims of landscape and ecological mitigation without increasing bird strike risk.

Planting Proposals

26.5.29 The proposals related to existing and new planting comprise:

- retention of existing trees and vegetation wherever possible and incorporation with new planting proposals;
- planting to replace trees lost to the scheme construction;
- creation of biodiversity through use of predominantly native species, providing new wildlife habitats and complementing existing adjacent habitats. Planting proposals have been developed in consultation with ecology specialists. Refer to Chapter 25 (Ecology and Nature Conservation)
- mass planting at junctions and bridges to help assimilate the new structures into the surrounding landscape;
- planting to provide a screen to reduce visual impacts of the road, structures, lighting and noise barriers;
- use of severed field corners and landlocked areas where appropriate; and
- introduction of planting at focal points, particularly at roundabouts, junctions and in cuttings.

26.5.30 Planting mixes will be based predominantly on native species, proven by established presence within the area and adapted to local conditions. Young stock is generally easier to establish and will therefore be predominant in mixes, although larger plants will be used for initial impact in specific locations, for example where screening is required.

26.5.31 Planting will enhance the experience of travelling along the new road by creating a diverse and interesting range of woodland types.

26.5.32 Planting will assist integration with the local landscape character by using species mixes and planting patterns typical of the local landscape. National Vegetation Classification (NVC), which is used to describe and categorise the vegetation covering land in Great Britain, will inform the selection of plant species. However, non native species may also be used where they are an established and distinctive feature of the current landscape setting.

Proposed Broad-leaved Woodland Planting

26.5.33 This will comprise of a mix of sizes of plants such as feathered trees, whips and transplants to create a multi-layered woodland dominated by native deciduous trees, with Oak/Ash as the principal climax community.

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- 26.5.34 Broad-leaved woodland planting schemes are derived from canopy compositions of NVC dry-land woodlands. These woodlands are generally classified based on the acidity of the soil, with Oak/Birch woodland on acidic and mesotrophic soils (neither very acid nor very alkaline) and mixed deciduous woodland on more base-rich (calcium-rich) and free-draining soils. The NVC classification for these types of woodlands is often derived from differences in the ground and shrub layer rather than the canopy composition, therefore the planting proposals are designed to develop into broad types of broad-leaved woodland, rather than distinct NVC communities.

Proposed Coniferous Woodland Planting

- 26.5.35 Coniferous woodland refers to woodland where the majority of species present are coniferous and the minority are deciduous. The planting mix for coniferous woodland should replicate the NVC W18 Scots pine woodland characteristic of Caledonian pinewoods in Scotland. This woodland has Scots pine as the most abundant species, with smaller percentages of Birch, Rowan and Aspen.

Proposed Mixed Woodland Planting

- 26.5.36 Mixed woodland refers to woodland where the planting requires a mixture of broad-leaved and coniferous woodland for visual screening purposes and will comprise a mix of sizes of plants such as feathered trees, whips and transplants. This will aim to create multi-layered woodland with a balanced mix of native deciduous and coniferous trees and including native evergreen understorey. The balance between deciduous and evergreen species will be varied to suit desirable density for year-round screening and reflect established planting local to the various sections of the road. As in the Coniferous Woodland mix, the coniferous species within the Mixed Woodland should be dominated by the native species Scot's Pine, with non-native species limited to Larch and Norway Spruce.

Proposed Scrub Woodland Planting

- 26.5.37 This will comprise small to medium sized native species such as Hawthorn, Hazel, Blackthorn, Elder, Dog Rose and Honeysuckle. This mix is used in areas where a lower height plant cover is more appropriate than the taller woodland mixes.

Proposed Riparian Woodland Planting

- 26.5.38 Riparian woodland is to be planted close to ponds and watercourses and in other areas along flood plains or elsewhere with moist, peaty soil conditions. It will comprise a mix of sizes of plants such as feathered trees, whips and transplants using species such as Willow, Birch, Alder, Ash, Rowan, Hazel, Hawthorn, Holly, Wych Elm, Aspen and Scot's Pine.

Proposed Feathered Tree Planting

- 26.5.39 Feathered trees will be introduced in areas where scrubby groups of trees are a feature of the landscape. They will be planted in groups to reflect the existing landscape character and provide impact at an early stage.

Proposed Standard Tree Planting

- 26.5.40 Standard trees will be planted at appropriate spacing in areas where individual trees are a feature of the landscape.

Proposed Extra heavy Standard Tree Planting

- 26.5.41 Extra Heavy Standard trees will be planted in appropriate areas where immediate effective mitigation is required.

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Proposed Rock Cut Seeding

- 26.5.42 This will comprise native grass and wildflower species which are able to establish in small areas of thin soil on the cut rock face. The objective is to create pockets of vegetation which look naturally established.

Proposed Grass Seeding

- 26.5.43 Three different seed mixes will be used, dependant on location and use of the area:
- Roadside Verge Mix: This mix is suited to the road-side location being low maintenance, fast establishing and tolerant of traffic and salt spray.
 - Species Rich Grassland Mix: This mix is suited for use in all other areas disturbed by construction works. It consists of a mixture of native, non-invasive grasses and wildflower species to reflect locally occurring semi-natural flora.
 - Agricultural Mix: This mix is used in all areas to be returned to agriculture and will consist of a mix specified by consultation with the landowner.

Proposed Habitat Creation for Ecological Mitigation

- 26.5.44 In addition to following the general objective of enhancing biodiversity through the landscape mitigation, specific proposals for wildlife habitat creation are described in more detail in Chapter 25 (Ecology and Nature Conservation).

Future Potential Design of Focal Points/Gateways

- 26.5.45 A number of locations along the Southern Leg have been identified where the specific location and the number of design features which occur or link together create combined impacts. These have been considered as focal points or gateways where mitigation proposals are required to address the specific combinations of issues arising and meet landscape mitigation objectives. The following locations on the Southern Leg have been identified:
- Charleston Junction;
 - Cleanhill Junction;
 - Dee Crossing;
 - A93 Corridor;
 - Milltimber; and
 - South Kingswells Junction.

26.6 Residual Impacts

- 26.6.1 The landscape impacts of the proposed scheme have been assessed taking the landscape mitigation proposals into account. Appendix A26.1 provides a detailed description of the landscape character, sensitivity, the magnitude of change and impacts on each LLCAs with mitigation. In this section, Table 26.12 shows the residual impacts (those impacts remaining after mitigation) for the directly affected LLCAs, presented in the order that the proposed scheme passes through them from south to north. Residual impacts for LLCAs which are indirectly affected are also provided in Table 26.13 in the order that the LLCAs occur from south to north.
- 26.6.2 Photographs from a number of key viewpoints and key receptor locations as shown in Figure 26. 7 are also shown in the photomontages and wire line representations provided in Figures 26.8a-l. These illustrate both the existing view and the proposed scheme and were used to inform the assessment of the impacts.

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- 26.6.3 In the Southern Leg, the most significant impacts occur in the Dee Valley, Milltimber and Craigingles LLCAs. The impacts on these character areas would be severe and adverse in the winter year of opening, reducing to substantial to severe adverse in the summer 15 years after opening in the Dee Valley and Milltimber LLCAs and substantial adverse in Craigingles LLCA.
- 26.6.4 The existing Dee Valley LLCA comprises a valley surrounding the River Dee which meanders through a broad, shallow floodplain. This area was designated an 'Area of Landscape Significance' by Aberdeenshire Council in 2002 due to its scenic value and the valley remains relatively tranquil despite busy roads to the north (A93) and to the south (B9077) as well as the B979 crossing. The introduction of the Southern Leg in this area would include the introduction of a viaduct bridge spanning the river (adjacent to the B979 bridge) and a large embankment crossing the floodplain and northern slope of the valley to support the road. The viaduct bridge has been selected from a range of options and has been designed to create a focal point to mark the crossing of the River Dee. The area would be further impacted by the creation of drainage treatment ponds and detention basins on the northern bank adjacent to the new road. This would have a permanent adverse effect on the scenic quality of the area and on views into and along the valley. Mitigation measures, such as planting of mixed woodland, broadleaf woodland and scrub woodland, together with grading out embankment slopes where possible between the Southern leg and the existing B979 will help integrate and/or screen elements. Carefully designed ponds with riparian planting and mixed woodland planting in suitable locations will also help to reduce the adverse impacts of these elements. This LLCA would also be indirectly affected by views of the route as it rises up the southern side of the Dee Valley through the Netherly/Altries and Craigingles LCAs, particularly where it cuts through mature woodland on higher ground.
- 26.6.5 The Milltimber LLCA lies immediately north of the Dee Valley LLCA and is an urban/suburban landscape with large, generally detached dwellings, care homes and a private school all set in extensive mature wooded gardens/grounds. Topographically the area is a continuation of the south facing slope north of the Dee Valley. The introduction of the Southern Leg and Milltimber Junction link road would lead to the creation of a large cutting through the landscape and the loss of the school buildings and surrounding grounds culminating in severe adverse impacts. Mitigation measures include planting mixed woodland to replace lost garden and woodland trees and screen views. Additionally, groups of standard trees will be planted to integrate with existing vegetation patterns, reducing the adverse impacts to substantial to severe. The landscape setting of parts of this LLCA would also be indirectly affected by views of the route as it crosses the Dee and rises up the southern side of the Dee Valley through the Netherley/Altries and Craigingles LCAs.
- 26.6.6 Craigingles LLCA consists of a densely wooded hill south of the Dee valley. The introduction of the Southern Leg in this area would result in the loss of mature mixed woodland and semi-natural broadleaved planting and the creation of a deep cutting plus sections where the road is on a shallow embankment. It is anticipated that this cutting may be into rock, across the western side of the hill. Mitigation measures will include new mixed woodland planting above the rock cut and a scrub woodland edge planting to the east and the western side of the road. Extra heavy standard trees are proposed to the east and the west of AWPR around the Blaikiewell/Maryculter Road underbridge to integrate the structure and associated earthworks with the existing landscape. In winter year of opening, the impact is assessed as severe adverse, which will reduce to substantial adverse by the summer 15 years after opening.
- 26.6.7 Significant impacts would also occur in Blaikiewell LLCA, an area of open farmland lying to the south of the River Dee. The introduction of a junction with the Fastlink, drainage treatment ponds and detention basins and the realignment of minor roads would result in direct, adverse, large scale impacts. The design incorporates eased gradients on the Fastlink embankments which are visible from the Southern Leg. In addition, areas of riparian and scrub woodland planting are proposed to screen views and integrate the road corridor, ponds and junction. In winter year of opening, the impact is assessed as substantial to severe adverse, however, in the summer 15 years after opening, as planting matures, the impact will reduce to moderate-substantial adverse.

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- 26.6.8 Netherley/Altries LLCA, a wooded farmland area immediately south of the Dee valley, would also be significantly impacted. The introduction of the Southern Leg in this area (designated an Area of Landscape Significance) would include the creation of an embankment on the approach to the River Dee crossing and the loss of mature woodland. This would adversely affect the mature woodland and pastoral setting of Kingcausie House. Mitigation measures will include the introduction of mixed woodland, broadleaved woodland and lines of extra heavy standard trees to integrate with the surrounding mature woodland. The area is assessed as being affected by substantial-severe adverse impact in winter year of opening reducing to moderate-substantial adverse in the summer 15 years after opening as planting matures.
- 26.6.9 Other LLCAs in the Southern Leg which would be affected by significant residual impacts are Beanshill, Fifeshill, Hare Moss and Clinterty/West Brimmond. The introduction of cuttings, embankments, realigned side roads, overbridges, detention ponds and junctions cause direct, adverse, and small to large scale impacts in all these areas. Mitigation proposals include the introduction of drystone walls alongside the road and on bridge aprons to integrate with surrounding landscape patterns, the grading out of embankments to allow for the potential return to agriculture, false cuttings and the use of planting at junctions and where appropriate to screen and integrate. Due to the naturally exposed character of these areas, the Southern Leg will remain a dominant feature in the landscape, therefore the overall impact remains unchanged from winter year of opening to summer 15 years after opening. Thus Beanshill and Fifeshill are assessed as substantially adversely impacted and the impacts at Hare Moss and Clinterty/West Brimmond are assessed as moderately to substantially adverse.
- 26.6.10 The LLCAs of Auchlea, Merchant's Croft, Craigton, Broomfold, and Kingswells will also experience significant residual impacts from the Southern Leg. Direct, adverse, small to large scale impacts in all these areas would result from the introduction of cuttings, embankments, realigned side roads, overbridges, detention ponds and junctions with associated street lighting. Mitigation proposals built into the design include an easing of embankment slopes to improve integration of the road into the surroundings, as well as allowing potential return to agriculture. These LLCAs are all assessed as being affected by a moderate to substantial adverse impact in the winter at year of opening which will reduce to a moderate adverse impact in the summer 15 years after opening as the planting matures.
- 26.6.11 Although Loirston LLCA contains a new junction with structures and street lighting, connecting the Southern Leg to the A90 and A956 at its southern most point, the impact in this area is assessed as moderate adverse in the winter year of opening reducing to a slight adverse impact in the summer 15 years later. This reflects the fact that a large junction with street lighting already exists at this point which will be remodelled to accommodate the new road. Adverse impacts in this area would also arise from the introduction of a cutting through agricultural land west of the existing A90. However there is also a beneficial impact through the realignment of roads at the new junction and the potential return to agriculture of slip roads and cuttings from the old junction. Other proposed mitigation includes the introduction of planting to screen and integrate the junction and new drystone dykes to reinforce the field pattern.
- 26.6.12 Duff's Hill LLCA would be affected by the lowest impact of those areas directly affected by the introduction of the Southern Leg. This is an area of dense plantation woodland and an area of recently felled woodland through which the road would pass both on embankment and in cutting. Proposed mitigation includes the planting of mixed woodland and scrub planting to replace lost woodland and increase biodiversity. This area is assessed as having a moderate to slight adverse impact in the winter year of opening reducing to a slight adverse impact in the summer 15 years later.
- 26.6.13 Kingswells, Den of Legart, Stranog, Lochend, Auchlunies, Anguston, Brimmond Hill, Clochandighter and Kincorth Hill LLCAs would all be indirectly affected and impacts will all reduce to slight or negligible levels in summer 15 years after opening.
- 26.6.14 The other LLCAs which are indirectly affected will not be affected by significant residual impacts.

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Table 26.12 – Residual Impacts on Landscape Character: Directly Affected Areas

Overall Sensitivity	Landscape Component	Magnitude of Change		Summary of Mitigation Proposals	Summary of Residual Impacts	Impact Significance on Landscape Character Area	
		Winter Year of Opening	Summer, 15 years after opening			Winter, year of opening	Summer, 15 years after opening
Open Farmland : Loirston (ch206300-207200)							
Low to Medium	A90 / A956 Corridors	Low	Low	<ul style="list-style-type: none"> - Scrub planting - Sensitive rock cutting - Mixed woodland planting - Broadleaf woodland planting - Ease slopes for potential return to agriculture - Infill existing cutting for potential return to agriculture - Drystone walls - Extra heavy standard trees within junction - Standard trees at overbridges ch206350 and ch 206950 	<ul style="list-style-type: none"> - direct adverse impacts on A90 / A956 corridors due to new junction, lighting, cuttings and road realignment; large scale; long term - indirect adverse impacts on Loirston Loch due to visual and aural impacts; medium scale; long term - direct adverse impacts on local settlements and access routes due to visual impact of new link road; severance of existing roads; and visual and aural impact of AWPR; medium scale; long term; permanent - direct beneficial impact of reduced traffic on local roads; medium scale; long term; permanent - direct adverse impact on farmland due to severance of fields; large scale; long term; permanent - direct beneficial impact on farmland due to potential return to agriculture of old junction slip road; medium scale; long term; permanent 	Moderate adverse	Slight adverse
	Loirston Loch	Low	Low				
	Scattered settlement and local access routes	Medium	Medium				
	Farmland	Medium to High	Medium				
Wooded Farmland : Duff's Hill (ch205200-206300)							
Medium to Low	Woodlands	High to Medium	Medium	<ul style="list-style-type: none"> - mixed woodland - riparian woodland - pond relocation 	<ul style="list-style-type: none"> - direct adverse impact on coniferous plantation and felled plantation areas; medium scale; long term; permanent 	Moderate to Slight adverse	Slight adverse

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Overall Sensitivity	Landscape Component	Magnitude of Change		Summary of Mitigation Proposals	Summary of Residual Impacts	Impact Significance on Landscape Character Area	
		Winter Year of Opening	Summer, 15 years after opening			Winter, year of opening	Summer, 15 years after opening
Open Farmland : Hare Moss (ch202200-205200)							
Medium to High	Hare Moss	Medium	Medium	<ul style="list-style-type: none"> - drystone walls - drystone aprons on overbridges - grading out with potential return to agriculture - mixed woodland - grading out of embankments to accommodate planting - scrub woodland - feathered woodland - standard trees at overbridge at ch 203290 - broadleaved woodland 	<ul style="list-style-type: none"> - direct adverse impacts on Hare Moss due to visual and aural impacts; large scale; long term - direct adverse impact on open rural landscape; large scale; long term - visual and aural impact of AWPR in scattered dwellings and farms; large scale; long term; permanent - direct adverse impact on open landscape due to the introduction of detention basins and treatment ponds; medium scale, long term; permanent - direct adverse impact on landscape due to the introduction of overbridges at Bishopston and north of Hare Moss cottage; medium scale, long term; decreasing over time. 	Substantial adverse	Moderate to Substantial adverse
	Open rural landscape	Medium	Medium				
	Scattered dwellings and farms	High	High				
Open Farmland : Merchant's Croft (ch201100-202200)							
Medium	All areas	Medium to High	Medium	<ul style="list-style-type: none"> - scrub woodland - drystone walls - drystone aprons on overbridge - mixed woodland - standard trees 	<ul style="list-style-type: none"> - direct adverse impact on farmland and settlements; large scale; permanent - direct adverse impact on landscape due to the introduction of a C30K overbridge at Burken Braes; medium scale, long term; decreasing over time 	Moderate to Substantial adverse	Moderate adverse

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Overall Sensitivity	Landscape Component	Magnitude of Change		Summary of Mitigation Proposals	Summary of Residual Impacts	Impact Significance on Landscape Character Area	
		Winter Year of Opening	Summer, 15 years after opening			Winter, year of opening	Summer, 15 years after opening
Open Farmland : Blaikiewell (ch200000-201100 and 100000-100100)							
Medium to High	All areas	High	High to Medium	<ul style="list-style-type: none"> - drystone aprons on overbridge - drystone walls - grading out slopes - mixed woodland - scrub woodland - riparian woodland next to Blaikiewell Burn and proposed detention basins and treatment ponds - extra heavy standard trees around the junction - standard trees between ch 200600 and 201100 - false cutting at ch 200780-200980 	<ul style="list-style-type: none"> - direct adverse impact on farmland and settlements; large scale; long term; permanent. - direct adverse impact due to the introduction of detention basins and treatment ponds; medium scale, long term, decreasing over time. - direct adverse impact due to the introduction of a false cutting; medium scale, long term, decreasing over time. - direct adverse impact due to the introduction of Cleanhill Junction, associated lighting introducing a light source into the area and earthworks, large scale, long term, permanent. - direct adverse impact on landscape due to the introduction of detention basins and treatment ponds; medium scale, long term; decreasing over time. - direct adverse impact on landscape due to the introduction of an overbridge at Burnhead. Medium scale, long term; decreasing over time. 	Substantial to Severe adverse	Moderate to Substantial adverse
Hill: Craingles : (ch100100-101400)							
High	All areas	High	Medium	<ul style="list-style-type: none"> - scrub woodland - mixed woodland - broadleaved woodland - extra heavy standard trees to integrate with existing tree planting and provide screening. - standard trees - riparian woodland adjacent to the re-diverted Blaikiewell Burn 	<ul style="list-style-type: none"> - direct adverse impact of deep cutting and loss of woodland; large- scale; long-term; permanent - indirect impact of lighting at Cleanhill Junction - direct adverse impacts on path network within woodland; medium scale; long-term; permanent - direct adverse impact on adjacent dwellings due to road on embankment on introduction of over bridge; large- scale; long-term; permanent 	Severe adverse	Substantial adverse

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Overall Sensitivity	Landscape Component	Magnitude of Change		Summary of Mitigation Proposals	Summary of Residual Impacts	Impact Significance on Landscape Character Area	
		Winter Year of Opening	Summer, 15 years after opening			Winter, year of opening	Summer, 15 years after opening
Wooded Farmland : Netherley / Altries (ch101400-101900)							
High	All areas	Medium to High	Medium	<ul style="list-style-type: none"> - mixed / broadleaved woodland - standard trees - extra heavy standard trees 	<ul style="list-style-type: none"> - direct adverse impacts on woodland; large scale; long-term; permanent. - direct adverse impacts on estate landscape due to road AWPR on embankment and in cutting; large scape, long-term; permanent. 	Substantial to Severe adverse	Moderate to Substantial adverse
Valley : Dee Valley (ch101900-102800)							
High	All areas	High	High to Medium	<ul style="list-style-type: none"> - riparian woodland - scrub woodland - upfill area between B979 and AWPR - mixed woodland between B979 and AWPR - broadleaved woodland 	<ul style="list-style-type: none"> - direct adverse impact due to large scale embankment and road cutting across Dee Valley floor; large-scale; long-term; permanent - visual impact of new bridge across the Dee; large-scale; long-term; permanent - indirect adverse impact from view of the route rising up the valley side to the south - direct adverse impact on field patterns and farm access; medium scale, long term, permanent. - direct adverse impact due to the introduction of detention basins and treatment ponds; medium scale, long term decreasing over time. 	Severe adverse	Substantial to Severe adverse

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Overall Sensitivity	Landscape Component	Magnitude of Change		Summary of Mitigation Proposals	Summary of Residual Impacts	Impact Significance on Landscape Character Area	
		Winter Year of Opening	Summer, 15 years after opening			Winter, year of opening	Summer, 15 years after opening
Urban Area : Milltimber (ch102800- 103600)							
Medium to High	All areas	High	High to Medium	<ul style="list-style-type: none"> - upfill area between B979 and AWPR - drystone aprons on overbridges - mixed and broadleaved woodland - groups of extra heavy standard trees to integrate with existing tree lines. 	<ul style="list-style-type: none"> - direct adverse impacts on Milltimber, school buildings, mature trees, gardens and fields; large scale; long-term - direct adverse impact from deep cutting, new junction and overbridges and associated street lighting - indirect adverse impact from view of the route rising up the valley side to the south. - visual and aural impact of AWPR on nearby dwellings; large scale; long term; permanent 	Severe adverse	Substantial to Severe adverse
Wooded Farmland : Craigton (ch103600-104400)							
Medium to High	All areas	High	High to Medium	<ul style="list-style-type: none"> - mixed woodland - groups of standard/extra heavy standard trees - stone on bridge aprons - scrub woodland - broadleaf woodland - feathered trees - sensitive rock cutting in areas of possible rock (east and west side of AWPR between ch 103,600-104,4000) 	<ul style="list-style-type: none"> - direct adverse impacts on woodlands, fields and rural setting; large-scale; long term. - direct adverse impacts from Milltimber Junction, deep cutting and associated street lighting; large-scale; long-term; permanent - direct adverse impact on farmland due to severance of fields and re-routing of accesses; large scale; long term; permanent. - visual and aural impact of AWPR on scattered dwellings and farms; large scale; long term; permanent 	Moderate to Substantial adverse	Moderate adverse

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Overall Sensitivity	Landscape Component	Magnitude of Change		Summary of Mitigation Proposals	Summary of Residual Impacts	Impact Significance on Landscape Character Area	
		Winter Year of Opening	Summer, 15 years after opening			Winter, year of opening	Summer, 15 years after opening
Hill : Beanshill (ch104400-106000)							
Medium	North of Beanshill	High	High	<ul style="list-style-type: none"> - drystone walls - stone on bridge aprons - mixed woodland - small area of coniferous woodland - scrub woodland - broadleaved woodland - groups of standard trees - sensitive rock cutting in areas of possible rock (at ch 105600 -105800) 	<ul style="list-style-type: none"> - direct adverse impacts north of Beanshill due to embankment and cutting; large –scale; long-term; permanent - direct adverse impact on agricultural land south of Beanshill due to deep cutting across agricultural land and hillside and severance of farmland, field pattern and access roads. - visual and aural impact of AWPR on scattered dwellings and farms; large scale; long term; permanent 	Substantial adverse	Substantial adverse
	Agricultural land south of Beanshill	High	High				
Wooded Farmland : Broomfold (ch106000-107700)							
Medium	West of Bishops Court	Low	Low	<ul style="list-style-type: none"> - mixed and broadleaved woodland - drystone walls - stone on bridge aprons - groups of standard tree planting - scrub woodland - riparian woodland 	<ul style="list-style-type: none"> - direct adverse impacts west of Bishops Court due to disruption of views east; medium-scale; medium-term decreasing over time - direct adverse impacts at Silverburn due to embankment and cutting, loss of woodland and loss of fields and boundaries; large-scale; long-term; permanent - direct adverse impact on agricultural land of due to severance of farmland, field patterns and realignment of access roads; large-scale; long-term; permanent - direct adverse impact due to the introduction of detention basins and treatment ponds; medium scale, long term decreasing over time. 	Moderate to Substantial Adverse	Moderate adverse
	Sliverburn	High	High				

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Overall Sensitivity	Landscape Component	Magnitude of Change		Summary of Mitigation Proposals	Summary of Residual Impacts	Impact Significance on Landscape Character Area	
		Winter Year of Opening	Summer, 15 years after opening			Winter, year of opening	Summer, 15 years after opening
Hill : Fifeshill (ch107700-108500)							
Medium	Kingshill wood coniferous plantation	High	High	<ul style="list-style-type: none"> - drystone walls - re-grading - groups of extra heavy standard trees - mixed woodland - scrub woodland - sensitive rock cutting in areas of possible rock (at east side of AWPR at ch 107,600 – 108,200) 	<ul style="list-style-type: none"> - direct adverse impacts at Kingshill wood due to foreground views of introduced junction with A944 with street lighting, slip roads and realigned local roads, severance of field pattern and boundaries; large-scale; long-term; permanent - direct adverse impacts at farmland on lower slopes due to introduction of junction with A944 with street lighting, slip roads and realigned local roads, severance of field pattern and boundaries; large scale; long-term; permanent 	Substantial adverse	Substantial adverse
	Farmland on lower slopes of Kingshill	High	High				
Hill : Auchlea (ch107700-108500)							
Low to Medium	All areas	High to Medium	High to Medium	<ul style="list-style-type: none"> - drystone walls - re-grading - groups of extra heavy standard tree planting 	<ul style="list-style-type: none"> - direct adverse impact due to foreground views of introduced junction with A944 and associated street lighting, slip roads and realigned local roads, severance of field pattern and boundaries; large-scale; long-term; permanent 	Substantial to moderate adverse	Substantial to moderate adverse
Open Farmland : Clinterty / West Brimmond (ch108500-109000)							
Low to Medium	All areas	High to Medium	High to Medium	<ul style="list-style-type: none"> - groups of extra heavy standard trees within South Kingswells junction - mixed woodland - standard trees - riparian planting associated with detention ponds/ treatment basins. - drystone walling -scrub woodland - sensitive rock cutting in areas of possible rock (to east side of AWPR at ch 108,800 – 109,000 	<ul style="list-style-type: none"> - direct adverse impact due to introduction of junction with A944 with street lighting, slip roads and realigned local roads, severance of field pattern and boundaries; large scale; long-term; permanent. - direct adverse impact due to the introduction of detention basins and treatment ponds; medium scale, long term decreasing over time. - visual and aural impact of AWPR on scattered dwellings and farms; large scale; long term; permanent 	Moderate to Substantial adverse	Moderate to Substantial adverse

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Overall Sensitivity	Landscape Component	Magnitude of Change		Summary of Mitigation Proposals	Summary of Residual Impacts	Impact Significance on Landscape Character Area	
		Winter Year of Opening	Summer, 15 years after opening			Winter, year of opening	Summer, 15 years after opening
Wooded Farmland : Kingswells (ch109000-111300)							
Medium	Kingswells bypass road corridor	Medium	Medium	<ul style="list-style-type: none"> - false cutting - mixed woodland - sensitive rock cutting in areas of possible rock. - scrub woodland - embankments re-graded with potential to return to agriculture - groups of extra heavy standard trees 	<ul style="list-style-type: none"> - direct adverse impact on Kingswells bypass road corridor due to visual and aural impacts; large scale; long-term; permanent - Direct adverse impact on woodland and farmland west of Kingswells bypass due to cutting and embankment, severance of field patterns and local accesses; large scale; long-term; permanent. 	Moderate to Substantial adverse	Moderate adverse
	Woodland and farmland west of Kingswells bypass	High	High				

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Table 26.13 – Residual Impacts on Landscape Character: Indirectly Affected Areas

Overall Sensitivity	Magnitude of Change		Summary of Mitigation Proposals	Summary of residual impacts	Impact Significance on Landscape Character Area	
	Winter Year of Opening	Summer, 15 years after opening			Winter, year of opening	Summer, 15 years after opening
Hill : Kincorth Hill						
Medium to High	Low	Low	- mitigation planting	- indirect adverse impacts on hill; medium scale; medium scale	Slight to Negligible adverse	Negligible adverse
Open Farmland : Den of Leggart						
Medium	Low	Low	- mitigation planting	- indirect adverse impacts on farmland; medium scale; medium term	Slight adverse	Slight to Negligible adverse
Hill : Greenhowe						
Low to Medium	No change				None	
Hill : Lochend						
Medium	Low	Low	- mitigation planting - grading out of slopes -potential return to agriculture - drystone wall	- indirect adverse impacts on hill; medium scale; medium term	Slight adverse	Negligible adverse
Coast : Kincardine Cliffs						
Medium	No change				None	
Wooded Farmland : Auchlunies						
Low to Medium	Low	Low	- mitigation planting - drystone wall - potential return to agriculture - grading out of slopes	- indirect adverse impacts on wooded farmland; medium scale; medium-term	Slight adverse	Slight to Negligible adverse

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Overall Sensitivity	Magnitude of Change		Summary of Mitigation Proposals	Summary of residual impacts	Impact Significance on Landscape Character Area	
	Winter Year of Opening	Summer, 15 years after opening			Winter, year of opening	Summer, 15 years after opening
Hill : Clochandighter						
Low to Medium	Low	Low	- mitigation planting - drystone walls	- indirect adverse impacts on hill; medium-scale; medium-term	Slight to Negligible adverse	Negligible adverse
Urban : Badentoy Park						
Low	No change				None	
Recreation : Portlethen Golf Course						
Low to Medium	No change				None	
Urban Area : Portlethen						
Low to Medium	No change				None	
Hill : Stranog						
Medium to High	Low	Low	- mitigation planting - earthworks	- indirect adverse impacts on hill; medium-scale; medium-term	Slight to Moderate adverse	Slight adverse
Open Farmland : Craiglug						
Low to Medium	No change				None	
Wooded Farmland : Normandykes						
Low to Medium	No change				None	
Urban Area : Peterculter						
Low to Medium	No change				None	
Wooded Farmland : Murtle						
Medium	No change				None	
Open Farmland : Anguston						
Low to Medium	Low	Low	- mitigation planting	- indirect adverse impacts on open farmland; medium scale; decreasing with time	Slight adverse impact	Negligible adverse impact

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Overall Sensitivity	Magnitude of Change		Summary of Mitigation Proposals	Summary of residual impacts	Impact Significance on Landscape Character Area	
	Winter Year of Opening	Summer, 15 years after opening			Winter, year of opening	Summer, 15 years after opening
Open Farmland : Westfield						
Low to Medium	No change				None	
Wooded Farmland : Countesswells						
Low to Medium	No change				None	
Wooded Farmland : Hazelhead						
Low to Medium	No change				None	
Recreation : Hazelhead Golf Course						
Low to Medium	No change				None	
Open Farmland : Kingshill / Bogskeathy						
Low to Medium	No change				None	
Open Farmland : Maidencraig						
Low to Medium	No change				None	
Urban Area : Kingswells						
Medium	Low	Low	- mitigation planting	- indirect adverse impacts on urban area; medium-scale; medium-term	Slight adverse	Slight adverse
Open Farmland : Greenferns (assessed with Northern Leg)						
Low to Medium	No change				None	
Hill : Brimmond Hill (assessed with Northern Leg)						
Medium	Low	Low	- mitigation planting	- indirect adverse impacts on hill; medium-scale; medium-term	Slight adverse	Negligible adverse

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26.7 References

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