

7. Landscape Effects

7.1. Introduction

- 7.1.1. This section of the report outlines the assessment undertaken of the potential impacts on the landscape of the study area and on the visual impacts of the Scheme.
- 7.1.2. The objective of this section is to identify the potential impacts of the scheme on the character and individual elements of the landscape within the route corridor, and on the quality of the views. It will also assess the visual impacts on identified “receptors” – mainly residents in this case.
- 7.1.3. The technique of landscape and visual impact assessment (LVIA) is used to assess the impact of change on the landscape. It is used to help locate and integrate the proposed scheme, such that negative landscape impacts are avoided, reduced or offset. The two aspects of the assessment - landscape and visual impacts - are independent but related.

7.2. Methodology

- 7.2.1. The assessment of landscape impact was carried out in accordance with Design Manual for Roads and Bridges (DMRB) (Volume 11, Section 3, Part 5) – Landscape Effects¹³. However, additional reference was also made to the Guidelines for Landscape and Visual Impact Assessment (2013)¹⁴ (GLVIA). Determination of landscape and visual sensitivity, magnitude of impact and impact significance was assessed in accordance with Tables 1 - 6 within Appendix E1.
- 7.2.2. Landscape assessment in relation to road proposals consists initially of the collection of baseline data relating to the components, and quality of the landscape of the study area, followed by an assessment of the likely impact of the proposals and of the significance of these impacts. In addition, an assessment of the impact of the proposals should be made of the visual impact on local people in their homes, at work or when using community facilities. The visual impact assessment should always be integrated as far as possible with the landscape assessment, as information from one assessment can often be used in the other.
- 7.2.3. The landscape and visual survey was carried out mainly within 1 kilometre from the centreline of the proposed scheme, as beyond this distance the impacts would be insignificant. The attributes of the detailed landscape character areas are summarised in Table 7 (Appendix E1) and the detailed landscape character areas shown on Drawing No. 25000182/ENV/7.1. The existing landscape features have been identified and shown on Drawing No. 25000182/ENV/7.2 and the landscape impacts are summarised in Table 8 (Appendix E1).

¹³ Design Manual for Roads and Bridges (2007) Volume 11, Section 3, Part 5 *Landscape Effects*. Available at: <http://www.dft.gov.uk/ha/standards/dmr/vol11/section3/11s3p05.pdf> [Accessed 21/07/2013].

¹⁴ Guidelines for Landscape and Visual Impact Assessment (2013). 3rd Edition. Landscape Institute and Institute of Environmental Management & Assessment.

- 7.2.4. Visual assessments took place from the centreline of the proposed scheme, although where possible, access to properties of the identified visual receptors was carried out to clarify views of the proposed road alignment. There were a few properties beyond the study area that were included as they had clearer, elevated views of the proposed road alignment.
- 7.2.5. A Visual Envelope Map (VEM) outlines the area of land from which there is a view of any part of the proposed scheme, its structures, or the traffic which will use it. A plan showing the visual envelope can be found in Drawing No. 25000182/ENV/7.3. The VEM also highlights landscape and cultural heritage features as well as relevant landscape designations.
- 7.2.6. The landscape character of the study area is described to identify the distinct pattern that occurs in the landscape reflecting geology, landform, soils, vegetation and man's impact. The assessment of visual receptors was carried out on site at the same time as the landscape assessment. For local landscape, the detailed character areas have been separated into specific landscape attributes.
- 7.2.7. Existing visual resources have been established along with sensitive residential and commercial receptors, scenic viewpoints and visitor amenity areas. A number of visual receptors, although they did not have views of the construction of the road, are likely to have views of the traffic management and queuing traffic associated with the works and therefore have been included in the list of visual receptors. A list of visual receptors is provided in Table 9 Summary of Visual Receptor Impacts (Appendix E1) and Table 10 Visual Impact Schedule (Appendix E1).
- 7.2.8. The locations with impacts of the visual receptors and the impacts are shown in Drawing No. 25000182/ENV/7.4.
- 7.2.9. The assessment was carried out in accordance with the EIA regulations and as described in Chapter 2 of this Environmental Statement.

Planning Policy, Legislative Context and Standards

- 7.2.10. The Scottish Government's planning policies are set out in the National Planning Framework 2 (NPF2), Scottish Planning Policy (SPP), Planning Policy Statement (PPS): Designing Places, PPS: Designing Streets and Circulars. The following policies are applicable to the proposed scheme.

National Policies

- 7.2.11. The Scottish National Planning Framework (NPF2)¹⁵ was published in June 2009. It sets the spatial strategy for Scotland's development to 2030, and designates 14 national developments of strategic importance to Scotland.
- 7.2.12. The SPP Scottish Planning Policy¹⁶ is a statement of the Scottish Government's policy on nationally important land use planning matters.

¹⁵ National Planning Framework 2. Available at: <http://www.scotland.gov.uk/Topics/Built-Environment/planning/National-Planning-Policy/npf>
Accessed 03/06/2013

¹⁶ Scottish Planning Policy (2010). Available at: <http://www.scotland.gov.uk/Publications/2010/02/03132605/8> [Accessed 11/06/13].

7.2.13. The following policies and Planning Advice Notes (PAN) are applicable to the proposed scheme:

- Rural Development Policy;
- Historic Environment Policy;
- Landscape & Natural Heritage Policy; and
- Open Space and Recreation Policy;
- PAN 1/2013: Environmental Impact Assessment (EIA) (2013)¹⁷;
- PAN 60: Planning for Natural Heritage (2000)¹⁸;
- PAN 65: Planning and Open Space (PAN 65)¹⁹.

Regional Policies

7.2.14. The Ayrshire Joint Structure Plan 2025 (AJSP)²⁰ recognises the need to regenerate rural communities by encouraging them to adapt to new opportunities and enhance environmental quality.

7.2.15. The Ayrshire Green Network (AGN)²¹ aims to enhance the quality of the manmade and natural environment for the benefit of the economy, society and nature. The background to the AGN is the National Planning Framework 2 which designates a swathe of the Central Belt of Scotland from Ayrshire to Fife as the “Central Scotland Green Network”. The aim of the Central Scotland Green Network is to make “a significant contribution to Scotland’s sustainable economic development” through restoring and improving the rural and urban landscape of the area.

Local Policies

7.2.16. The site is located within South Ayrshire Council, a local council in southern part of Ayrshire, Scotland. It borders onto Dumfries and Galloway, East Ayrshire and North Ayrshire.

7.2.17. Section 25 of the Town and Country Planning (Scotland) Act, 1997 requires that planning applications shall be determined in accordance with the development plan unless material considerations indicate otherwise. The development plan comprises of the approved Ayrshire Joint Structure Plan (AJSP) and the adopted South Ayrshire Local Plan (SALP).

7.2.18. The new Local Development Plan (LDP) covering this area is being prepared. This new strategic land use document, when complete, will replace the SALP and the AJSP as part of the wider modernisation of planning. The new LDP is intended to be adopted in 2014.

7.2.19. At present the adopted plan is the South Ayrshire Local Plan 2007 (SALP).

¹⁷ PAN 1/ 2013 Environmental Impact Assessment. Available at: <http://www.scotland.gov.uk/Publications/2013/08/6471> [Accessed 14/10/13].

¹⁸ PAN 60 Planning for Natural Heritage. Available at: <http://www.scotland.gov.uk/Publications/2000/08/pan60-root/pan60> [Accessed 27/06/13].

¹⁹ PAN 65 Planning and Open Space. Available at: <http://www.scotland.gov.uk/Publications/2008/05/30100623/0> [Accessed 20.07.13].

²⁰ Ayrshire Joint Structure Plan (2025). Available at: <http://maps.ayrshire.gov.uk/mapsAJP/mapAyrshire.htm> [Accessed 27/06/13].

²¹ The Ayrshire Green Network. Available at: http://www.ayrshire-jsu.gov.uk/ayrshire_green_network.html [Accessed 04/08/13].

- 7.2.20. The SALP²² sets out the policies, proposals and recommendations of South Ayrshire Council as the local planning authority, for the development and other use of land, the protection of environmental resources and for the management of transport and traffic within the administrative area of South Ayrshire Council.
- 7.2.21. The SALP includes the countryside around Maybole which is designated as Rural Protection Area (RPA) which offers a lower level of protection than Greenbelt. Policy STRAT3 states that justification is needed for development in RPA. RPA recognises that “whilst the Greenbelt covers closely defined areas and protects sensitive environments susceptible to development pressure, some areas outside the Greenbelt are also under pressure for development, especially those areas within a short travel time from major towns. The designation of RPA is recognition of these pressures and the need to protect the area from inappropriate non rural based uses or sporadic development”.
- 7.2.22. The SALP also includes the following relevant policies:
- Policy BE2 – Protects listed buildings and their settings;
 - Policy ENV1 – Protects Ayrshire’s Landscapes and its distinctive characteristics;
 - Policy ENV2 – Protects designated sites of natural heritage value;
 - Policy ENV3 - Protects sites recognised of natural heritage interest;
 - Policy ENV4 - Development proposals which directly assist in the promotion/interpretation of natural resources for educational or recreational purposes will be encouraged;
 - Policy ENV5 – Safeguards amenity and recreational green space;
 - Policy ENV8 – Protection of scenic areas;
 - Policy ENV10 - Protects Historic Gardens & Designed Landscapes²³;
 - Policy ENV11 – Encourages woodland planting; and
 - Policy ENV12 - Protection of important trees.
- 7.2.23. South Ayrshire Council has prepared an Open Space Strategy²⁴, which sets out a vision, for the provision, management and maintenance of open spaces in South Ayrshire. The Strategy is designed to improve the quality, management, accessibility and usage of parks and other open spaces and identify the need for new or improved facilities where there are deficits in provision. The Open Space Strategy assists with the delivery of the Council’s Community Plan, and, in particular promoting improved health and wellbeing, social inclusion, a more sustainable environment and sustainable economic growth.

²² South Ayrshire Local Plan (2007) Available at: <http://www.south-ayrshire.gov.uk/local-plan/document.aspx> [Accessed 11/06/13].

²³ Ayrshire Gardens and Designed Landscapes (Historic Scotland) Inventory. Available at: <http://data.historic-scotland.gov.uk/pls/html/db/f?p=2400:10:0> [Accessed 28/07/13]

²⁴ South Ayrshire Council Open Space Strategy. Available at: <http://www.south-ayrshire.gov.uk/policies/openspacestrategy.aspx> [Accessed 03/08/13].

- 7.2.24. PPS Designing Places: A Policy Statement for Scotland²⁵ sets out the Scottish Government's aspirations for higher design standards and re-emphasises that design is a material consideration in determining planning applications.
- 7.2.25. In addition, sportscotland's Planning Policy for the Protection of Playing Field²⁶, sets out policy which sportscotland has adopted for the protection and improvement of playing fields. The assessment of landscape policies and plans can be found in Chapter 14.

Consultation

- 7.2.26. Previous statutory consultation was undertaken in January 2005 as part of the A77 Maybole Transport Study²⁷. A number of statutory consultees including South Ayrshire Council, Scotways, Sustrans and SNH have been previously consulted during 2005 and 2007.
- 7.2.27. Consultation took place with South Ayrshire Council Planning Department in July 2006 as part of the Stage 1 Assessment to gain baseline data and preliminary advice on designated sites, impacts and design. This was repeated in January 2007 to confirm the currency of the baseline data and whether any new landscape areas had been designated in the meantime, and in April 2013 for this stage of the assessment.
- 7.2.28. In accordance with DMRB, full consultations were undertaken mainly in May 2013 for the relevant consultees for the proposed scheme. A list of all the statutory and non-statutory consultees and details of these consultations can be found in Chapter 3, Consultations and within Appendix B.
- 7.2.29. Environmental Health, SEPA and Scotways responded in May 2013 and Scotways confirmed that no rights of way exist around Maybole.
- 7.2.30. During site visits for this assessment, several farmers raised queries in relation to the alignment of the proposed scheme, reduction of field fragmentation and the timescales associated with surveys.
- 7.2.31. Discussions with land owners and occupiers have been undertaken throughout the current design development. There was also a public exhibition that took place on 18th January 2013.

Determination of Baseline Conditions

- 7.2.32. A desk study was undertaken which comprised of a review of relevant plans, policies and previous assessments including:
- The previous Stage 2 Environmental Assessment, October 2007 and Position Paper June 2012.
 - Cost Effective Landscapes: Learning from Nature (CEL: LfN)²⁸. Cost Effective Landscapes: Learning from Nature (CEL:LfN) policy is currently being refreshed;

²⁵ Designing Places: A Policy Statement for Scotland. Available at: <http://www.scotland.gov.uk/Resource/Doc/212607/0099824.pdf> [Accessed 20/07/13].

²⁶ sportscotland Planning Policy for the Protection of Playing Field
<http://www.sportscotland.org.uk/sportscotland/Documents/Resources/protectionofplayingfields.pdf> [Accessed 20/07/13]

²⁷ Atkins, 2005

- South Ayrshire Council Planning (SALP) Interactive Mapping²⁹
- Ayrshire Local Biodiversity Action Plan (LBAP)³⁰;
- Scottish Natural Heritage, Review Series: No. 111 Ayrshire Landscape Assessment³¹;
- Ancient Woodland Inventory & Semi-Natural Woodland Distribution³²;
- The Soil Survey of Scotland – Land Capability for Agriculture – Sheets 70 – Ayr & Kilmarnock and 76 – Girvan (The Macaulay Institute for Soil Research, Aberdeen, 1986)³³;
- Photography and Photomontage in Landscape and Visual Impact Assessment³⁴, and,
- Ordnance Survey Map: Explorer 326, Ayr & Troon (Girvan & Maybole), Scale 1:25,000.

7.2.33. Walkover site surveys were undertaken on the dates 9-11th & 16th April 2013, aimed primarily at verifying and updating information collected during the desk study but also to examine landscape and visual impacts associated with the proposed road scheme.

Determination of Impact Significance

7.2.34. To assess the potential impacts on landscape associated with the proposed scheme, the sensitivity of both landscape resources and visual receptors and the degree of change that any impact will have on the proposed development must be determined.

7.2.35. The sensitivity of landscape resources is assessed in accordance with Table 1 and Determination of Impact Magnitude for landscape is assessed in accordance with Table 2. The sensitivity for visual receptors is assessed in accordance with Table 3 and the Determination of Visual Impact Magnitude with Table 4. These tables can be found in Appendix E1.

7.2.36. The Determination of Impact Significance for both landscape resources and visual receptors is assessed in accordance with Table 5 (Appendix E1). Assigning each impact to one of five significance categories enables different topic issues to be placed within the same scale, to facilitate the decision-making process. The five significance categories are illustrated in Table 6 (Appendix E1) Impact Significance Categories.

²⁸ Cost Effective Landscape: Learning from Nature. Available at: <http://www.transportscotland.gov.uk/files/documents/reports/Cost-Effective-Landscape-Learning-from-Nature.pdf> [Accessed 21/07/13].

²⁹ South Ayrshire Local Plan. Available at: <http://www.south-ayrshire.gov.uk/local-plan/document.aspx> [Accessed 21/07/13].

³⁰ Ayrshire Local Biodiversity Action Plan. Available at: <http://www.south-ayrshire.gov.uk/sustainable-development/lbap.aspx> [Accessed 26/07/13].

³¹ Scottish Natural Heritage, Review Series: No. 111 Ayrshire Landscape Assessment. Available at: <http://www.snh.org.uk/pdfs/publications/review/111.pdf> [Accessed 26/07/13].

³² Ancient Woodland Inventory & Semi-Natural Woodland Distribution. Available at: <http://www.forestry.gov.uk/website/forestry.nsf/byunique/infd-8g5btk> [Accessed 21/07/13]

³³ Land Capability Classification for Agriculture (Macaulay Land Use Research Institute). Sheets 70 - Ayr & Kilmarnock & 76 - Girvan.

³⁴ Photography and Photomontage in Landscape and Visual Impact Assessment. Landscape Institute. Available at: <http://www.landscapeinstitute.co.uk/PDF/Contribute/LIPhotographyAdviceNote01-11.pdf> [Accessed 01/08/13]

- 7.2.37. The mitigation measures incorporated into this chapter are assessed using the tables included above. Residual impacts after the year of opening and 15 years after completion of the works will also be assessed in accordance with the above tables.

7.3. Baseline Conditions

Landscape

- 7.3.1. A review of the current regional landscape policies relevant to the proposed scheme revealed the following information:

- There are no Sites of Special Scientific Interest (SSSI) within the study area;
- The immediate environs of Maybole and the proposed scheme pass through Rural Protection Area (South Ayrshire Local Plan). Strategic Policy STRAT3 in the South Ayrshire Local Plan states that whilst the Greenbelt covers closely defined areas and protects sensitive environments susceptible to development pressure, some areas beyond the Greenbelt are also under pressure for development, especially those areas within a short travel time from major towns. The designation of the Rural Protection Area is recognition of these pressures and the need to protect the area from inappropriate non rural – based uses or sporadic development;
- Ayrshire Green Network (AGN) Sensitive Landscape Character Area (Ayrshire Joint Structure Plan) is located approximately 600m north of Maybole. The AGN aims to enhance the quality of the manmade and natural environment for the benefit of the economy, society and nature. The background to the AGN is the National Planning Framework 2 which designates a swathe of the Central Belt of Scotland from Ayrshire to Fife as the “Central Scotland Green Network”. The aim of the Central Scotland Green Network is to make “a significant contribution to Scotland’s sustainable economic development” through restoring and improving the rural and urban landscape of the area;
- The finest landscapes are designated by SNH as National Scenic Area’s (NSA’s) in Scotland. NSA’s were first identified in the report “Scotland’s Scenic Heritage”, published by the Countryside Commission for Scotland (CCS) in 1978, and were accepted as the practical basis for landscape conservation in Scotland. There is no NSA located within the study area however there is a Local Plan scenic area designation approximately 600m north-west of Maybole. Although the proposed road does not travel through this area. Strategic Policy ENV8 identifies the Carrick Hills and mainly upland area of South Carrick (amongst others) and has afforded them scenic area status in the plan. It should however be noted that in general, potential impacts on the environment and landscape will be considered even if the area is not specifically identified as being within a designated scenic area; and

- Chapter 3: The Environment, Section One - “Natural Environment” of the SALP recognises that natural heritage is not confined to nationally or locally designated areas and the Plan affords a mechanism to safeguard the wider natural heritage environment in accordance with national planning guidance.
- The National Cycle Route 7 runs along Gardenrose Path and is also designated as a Core Path³⁵.

Landscape Character Area

- 7.3.2. Scottish Natural Heritage (SNH) has identified broad national Landscape Character Areas (LCAs), which are used as a baseline for policy and considering forces of change in the Scottish landscape. These national LCAs are based on general characteristics, such as landform, geology and land use. Within these national landscape areas, SNH have identified Landscape Types and Landscape Units (Local Landscape Areas). These are generic areas, which exhibit a unity of character.
- 7.3.3. This information was used during the assessment to aid the identification of detailed landscape character areas at local scale with the study area. The detailed landscape character areas were assessed for their landscape quality and sensitivity of landscape.
- 7.3.4. The study area is covered by the SNH Landscape Character Area of Ayrshire, and sits within the ‘Carrick Hills and Valleys’ Regional Character Area. This is described as a complex area of hills and valleys. Forming an area of transition between the higher ground of Dumfries and Galloway, and the Lowlands of the Ayrshire Basin where valleys tend to be small scale, settled and pastoral in character, while intervening hills comprise moorland and forestry. Key landscape issues include :
- Conservation of upland character of hills and pastoral, settled character of valleys; and,
 - Appropriate balance of forestry and open land.
- 7.3.5. This Regional Character Area has been further subdivided by SNH into ‘Landscape Types’, which “are tracts of countryside which have a unity of character due to particular combinations of landform, land cover and a consistent and distinct pattern of constituent elements”. The Scheme sits within ‘Foothills’ landscape type.
- 7.3.6. Five detailed landscape character areas (local landscape units) have been identified and these are illustrated within Drawing No. 25000182/ENV/7.1. These are as follows:
- A. Maybole Townscape;
 - B. Kirklandhill Ridge;
 - C. Carrick Rolling Hills;
 - D. Hillside Woodland & Pasture; and

³⁵ South Ayrshire Council Core Paths Plan. Available at: <http://www.south-ayrshire.gov.uk/outdooraccess/corepaths.aspx> [Accessed 22/08/13].

E. Maybole Plain

Detailed Landscape Character Area A: Maybole Townscape

7.3.7. Maybole sits astride the strong linear features of the A77 and railway line on a southern facing slope. It is an historic town dating back some 900 years and contains a notable High Street with many historic buildings. Chapter 5 Cultural Heritage of the ES provides further details on the Designated Conservation Area.

7.3.8. Detailed Landscape Character Area B: Kirklandhill Ridge

7.3.9. The character area is a ridge of pastoral land sitting above Maybole and below the southern slopes of the Carrick Hills. The land is fragmented by four minor roads that radiate out from the north of Maybole at regular intervals. Vegetation is limited to hedgerows, hedgerow trees and a line of mature beech trees associated with the unnamed burn running through the area, with the majority of field boundaries being formed by post and wire fencing. Fields are irregular in shape and size, ranging from small to medium, and settlement is limited to scattered, infrequent farmsteads.

Detailed Landscape Character Area C: Carrick Rolling Hills

7.3.10. Character Area C is dominated by the southern extent of the Carrick Hills, a series of rolling hills and slopes which include Knoweside Hill and Cairn Hill. Enclosed pastures prevail on the lower slopes, with rough grazing on more exposed, higher areas. Vegetation in this area is characterised by lines of outgrown field boundary trees and pockets of semi-natural woodland on some of the more sheltered slopes. Field boundaries are predominantly post and wire fences or a combination of post and wire fence and hedgerow. Settlement is scarce, limited to a handful of white farmsteads on the hills' lower slopes.

Detailed Landscape Character Area D: Hillside Woodland and Pasture

7.3.11. Character Area D is defined by the dominant topographical feature of the study area, Mochram Hill, and is enclosed by the policies woodland (i.e. areas of woodland that form part of a Designed Landscape) of Culzean Castle, some 5km to the west. This woodland however rapidly gives way to pastoral farmland on the southern slopes of Mochram Hill, at the foot of which a number of minor valleys cut into the slopes, creating a dissected landform of incised valleys between rounded ridges and small summits such as Gallow Hill (135mAOD) and Piper's Hill (102mAOD). In addition to the policies of Culzean, further areas of mature trees are associated with the small valleys and watercourses, together with outgrown field boundary trees. Settlement is scarce, limited to a caravan site and a handful of farmsteads on the hill's lower slopes and adjacent to the A77.

Detailed Landscape Character Area E: Maybole Plain

- 7.3.12. The Maybole Plain detailed character area mirrors Area B, the Kirklandhill Ridge, occupying a relatively low, undulating belt of land between the base of the southern facing slope on which Maybole is built and the higher, rolling land of the Southern Uplands to the south-west. Significant vegetation is generally limited to roadside trees and small areas of woodland associated with farmsteads and other buildings, and its low-lying position has contributed to various areas of water and associated wetland wildlife habitats. Settlement is scattered and varied, ranging from small holdings at the eastern end of the area, to Maybole Cemetery and the grade-A listed St. John's Cottage. Like the Kirklandhill Ridge character area, it is similarly fragmented by road and rail links which radiate out of Maybole across the area in a north-east/south-west direction.
- 7.3.13. The study area was assessed in terms of the following characteristics:
- Landform, Geology & Land Use
- 7.3.14. The study area sits within a broad valley formed by the high ground of Mochram Hill (270mAOD), Knoweside Hill (280mAOD) and Cairn Hill (163mAOD) to the north, and Kildoon Hill (175mAOD) and the Southern Uplands to the south. Maybole is located on a south facing incline, with the flattest and lowest ground (60mAOD) occupying an area to its south which then extends north east parallel with the A77 (Maybole Plain).
- 7.3.15. To the north of Maybole, beyond the crest of the slope on which the town sits, is a belt of higher undulating ground (120m – 145mAOD). This landform enables predominantly open and extensive views in all directions. The Visual Envelope Map, Drawing No. 25000182/ENV/7.3 illustrates the varied topography within the study area.
- 7.3.16. According to the British Geological Society, the proposed scheme is underlain by Devonian Swanshaw Formation sandstone covered by glacial till, hummocky glacial deposits and alluvium, they are not aware of any geological features of interest within the study area.
- 7.3.17. The superficial deposits underlying the proposed scheme are predominately glacial till. This is described as comprising brown or blue-grey clay with variable sand and gravel content and many rounded cobbles and boulders. Along the western half of the scheme (to the west of the B7024 Alloway Road), the maps record the glacial till to occur as glacial moraines described as mounds or ridges of boulder clay, sand and gravel.
- 7.3.18. A band of alluvium was recorded close to Bankend Bridge at the northern tie-in with the existing A77. The alluvium is described as mixed silt, sand and gravel.
- 7.3.19. There is a small area of made ground at the southern tie-in with the A77. This is likely to have been placed during the construction of the existing A77. Several other small areas of made ground were also recorded to the south and west of the scheme, predominately at the intersection with the B7024 Alloway Road and close to Smithston Railway Bridge, south of the northern tie in. Further information in relation to Geology & Soils can be found in Chapter 13.
- 7.3.20. The landscape of the study area is dominated by open agricultural grassland with only minor areas of woodland present and scattered livestock farms and some rural dwellings.

- 7.3.21. There is one dairy farm at East Enoch. The remaining farms produce both lamb and beef through their flocks of sheep and herds of suckler cows. Grass and cereal crops are also grown for winter fodder. A number are mixed farming with both grazing and arable land, such as Nether Culzean and Myremill.
- 7.3.22. Residential areas of Maybole are located to the south of the western half of the study area and isolated dwellings are present at a number of other locations. The study area is intersected by several local roads and the north-eastern portion is flanked on the south western side by the Ayr to Stranraer railway line.
- 7.3.23. Redbrae, an area of light industry north-east of Maybole has been highlighted as an area of redevelopment opportunity within Table 1 of the SALP.
- 7.3.24. National Cycle Route 7 runs north to south through Maybole along Gardenrose Path which is also designated as a Core Path³⁶. A77, Kirkoswald Road, B7023 Culzean Road and B7024 Alloway Road have footways and Gardenrose Path and Kirklandhill Path provide recreational facilities.
- 7.3.25. A local recreational site, currently used as playing fields, is located on the north-west corner of Maybole, to the rear of Enoch Road, Maybole. These areas are covered under Strategic Policy ENV5 of the SALP, which safeguards from development all green spaces which are important to local amenity or recreational use. Although the route does not pass through the study area it does come relatively close. A War Memorial Park and Golf Course are located to the south-east of Maybole.
- 7.3.26. Further detail on Land Use is provided in Chapter 8.
- 7.3.27. There are nine watercourses in the vicinity of the site as illustrated in Drawing No. 25000182/ENV/12.1. Three of the watercourses are crossed by the proposed scheme. These include:
- Parish March Burn (annotated No. 8). Parish March Burn is adjacent to the western tie-in flows into the Barlewan Burn (Abbeymill Burn). Parish March Burn issues from a spring close to Culzeoun Farm approximately 500m to the west of Maybole and crosses under the existing A77 via a culvert of approximately 1000mm diameter near to Broomknowes Farm. This burn is a tributary of the Water of Girvan.
 - Black Glen Burn (annotated No. 6); and,
 - Brockloch Burn (annotated No.1). Brockloch Burn receives overflow from the small loch at Laigh Grange. A section of Brockloch Burn is culverted for up to 100m between the loch and Laigh Grange Bridge. This burn is considered to flow all year round. Brockloch Burn is shown in Figure 7.1.
- 7.3.28. Black Glen Burn and Brockloch Burn flow into the Chapelton Burn which later joins with the River Doon.

³⁶ South Ayrshire Council Core Paths Plan. Available at: <http://www.south-ayrshire.gov.uk/outdooraccess/corepaths.aspx> [Accessed 22/08/13].

- 7.3.29. Further detail on watercourses can be found in Road Drainage & the Water Environment (Chapter 12).



Figure 7.1 Brockloch Burn runs north to south from Bankend Bridge towards the A77

Vegetation

- 7.3.30. In accordance with the Ayrshire Landscape Character Assessment, the land cover map highlights the area as Lowland Pastoral Agriculture. The Visual Envelope Map (Drawing 25000182/ENV/7.3) highlights the pattern of vegetation within the study area although reference should also be made to the Phase 1 Habitat Survey, see Chapter 6 Ecology and the Nature Conservation, Drawing Nos. 25000182/PHS/001-005 (Appendix D1) for more information in relation to species present. In general there is broadleaved plantation woodland, coniferous woodland, improved grassland, marshy grassland, species-poor defunct hedgerows, scattered trees, amenity grassland and introduced shrub areas within the study area.
- 7.3.31. There is evidence of giant hogweed *Heracleum mantegazzianum* as shown in Figure 7.2. The location of this invasive weed is shown on Existing Landscape Features Drawing No. 25000182/ENV/7.2.



Figure 7.2 Evidence of giant hogweed within the eastern extents field edge

Hedges

- 7.3.32. Although evident, hedgerows do not form a significant landscape component to the eastern extents of the scheme alongside the A77. Field boundary hedgerows are generally defunct between fields or overgrown, although there are a number of good intact examples that are mostly associated with roadside verges, including B7023 Culzean Road, Gardenrose Path, Kirklandhill Path and the B7024 Alloway Road and at the western extents of the scheme. Hedges, forming field boundaries are predominantly hawthorn and kept at approximately 1m in height at the roadside verges (Figure 7.8). Hedges are generally at the bottom of the slopes.

Ornamental Hedges

- 7.3.33. There are several ornamental hedges that form the boundary treatments to a number of residential properties within the study area. A number of these are coniferous, forming dense screens around the properties.

Woodlands

- 7.3.34. A small area of semi-natural Ancient Woodland is located around the remains of Brockloch Castle, south-east of East Brockloch farmstead.
- 7.3.35. Ancient Woodland is also located within the study area as follows:
- Gallowhill Plantation;
 - Black Wood;
 - Ladycross Wood;
 - St Murray's Plantation (Figure 7.18);

- Brockloch Castle (remains) - this woodland is also designated as semi-natural Ancient Woodland; and
- Further isolated areas are to be found in two small pockets at Drumellan and High Smithston.

7.3.36. In addition to the Ancient Woodland identified above, there are also scattered areas of established woodland between the B7024 Alloway Road and Lover's Lane (north-east of Maybole), Black Glen (1km east of Maybole adjacent to the A77), around Nether Culzean farm (1.6km north-east of Maybole), in the vicinity of Holmes and High Grange (2.5km north-east of Maybole), adjacent to the A77 north of Smithston Bridge; north of Myremill farm and west of High Smithston.

7.3.37. The areas of woodland described above are illustrated on Phase 1 Habitat Drawing Nos. 25000182/PHS/001-005 (Appendix D1).

Trees

7.3.38. Redbrae Tree Preservation Order (TPO) is located to the north-east edge of the town between the B7024 Alloway Road and Lover's Lane (Figure 7.3). The Redbrae TPO was confirmed on April 2008 by the local planning authority.

7.3.39. Within the study area, there are some significant specimen trees, although these are not protected by a Tree Protection Order (TPO). The more significant trees include:-

- Mature beech trees located on Gardenrose Path;
- Mature beech trees alongside Kirklandhill Farm on Kirklandhill Path; and
- One mature ash tree located along the B7024 Alloway Road (Figure 7.4).

7.3.40. There are also several mature and semi-mature trees scattered throughout the study area. These are predominantly located within field boundaries throughout the scheme extents. The location of the more predominant trees within the proposed scheme, are shown in the Visual Envelope Map (Drawing 25000182/ENV/7.3) and within the Phase 1 Habitat Drawing Nos. 25000182/PHS/001-005 (Appendix D1).



Figure 7.3 View of proposed route with the edge of Lover's Lane and Redbrae Tree Preservation Order



Figure 7.4 Mature ash tree located along the B7024 Alloway Road

- 7.3.41. Local Plan Strategic Policy ENV12 recognises that mature trees in urban areas, together with areas of ancient and semi-natural ancient woodland are particularly valuable resources. In assessing development proposals involving loss of, or works to trees, the Council will consider the extent of any adverse impact on the locality and will include as part of its assessment of such development proposals measures to safeguard trees.

Grassland

- 7.3.42. The route coincides predominantly with Grade 3.2 agricultural land with minor areas of Grade 4.2 land which is of poorer quality. There is a small parcel of 'Prime Quality Land' (3.1) north of Nether Culzean. The majority of the land is freely draining with only small areas of soils being classed as poorly drained. The grassland is designated as Rural Protection Area.
- 7.3.43. The grass verges are generally narrow, 1m or less through most of the roadside verges within the scheme. The grass verges increase substantially in width alongside the A77. Species recorded within these areas are discussed further in Chapter 6 Ecology & Nature Conservation
- 7.3.44. Beyond the verges the adjacent fields are maintained as pasture and there is evidence of soft rush where drainage is not adequate to relieve saturation particularly within the eastern extents of the scheme at Smithston tie-in (Figure 7.5).
- 7.3.45. The Local Biodiversity Action Plan and Wildlife Strategy, prepared as a requirement of the AJSP, emphasise the importance of green wildlife corridors, especially within urban areas. The Plan recognises the importance of these features generally, and has identified such areas which are of importance in maintaining a network of interrelated wildlife resources. Policy ENV3 requires development proposals to have regard to safeguarding features of nature conservation value including woodlands, hedgerows, lochs, ponds, watercourses, wetlands and wildlife corridors in accordance with the Wildlife Strategy.



Figure 7.5 Evidence of soft rush *Juncus effusus* to the base of the hill east past Smithston Bridge

Cultural Heritage

- 7.3.46. Cultural heritage is part of our awareness of landscape and includes more than ancient monuments and archaeological remains. In this study area, the pattern of large to medium-sized fields surrounded by hedges is a part of the cultural heritage of the district, with small scale farming interspersed by marginal land. The fields are used for pasture, with neatly trimmed hedges along road verges and poor overgrown and generally defunct hedges between the fields.
- 7.3.47. The settlement pattern is of scattered buildings, the traditional ones mainly whitewashed, and farm steadings. There are two milestones identified within the study area.
- 7.3.48. There are several cultural heritage sites within the study area. The following landscape designations in relation to the proposed scheme are illustrated on Drawing No. 25000182/ENV/5.1 and within Drawing No. 25000182/ENV/7.2).

National Designations

- 7.3.49. Historic Scotland and SNH maintain the Inventory of Historic Gardens and Designed Landscapes³⁷ of outstanding historic, architectural or landscape significance.
- 7.3.50. The objective is that the interest and character of these gardens and landscapes should be respected or restored if the opportunity arises.

³⁷ Ayrshire Gardens and Designed Landscapes (Historic Scotland) Inventory. Available at: <http://data.historic-scotland.gov.uk/pls/html/db/f?p=2400:10:0> [Accessed 28/07/13].

7.3.51. The local area contains one landscape, Culzean Castle Garden and Designed Landscape, of sufficient importance to have been included in the inventory. Located approximately 600m from the scheme, the South Ayrshire Local Plan recognises the value of Historic Gardens and Designed Landscapes in relation to the environment of South Ayrshire, and identifies the Culzean Castle Garden and Designed Landscape as one of eight such sites of conservation value in South Ayrshire. Policy ENV10 seeks to safeguard historic gardens and designed landscape, stating that “proposals affecting these areas will be considered in terms of landscape impact” amongst other qualities.

Local Designations (Cultural Heritage)

7.3.52. There is a Conservation Area within Maybole town centre which has been given outstanding status. These areas are afforded protection through designation as conservation areas by the Council. Policy BE3 provides protection for these areas. In addition to new conservation areas, the boundaries of existing conservation areas have been reviewed to ensure that they remain appropriate. The Council are currently considering increasing the conservation area within Maybole. The extent of area to be considered is identified on the Proposals Map, within the SALP.

7.3.53. Policy BE2 of the SALP recognises the historical and architectural importance of smaller, or more modest buildings, both within, and outwith settlements. This means that small rural cottages, farm buildings and traditional agricultural or industrial properties may also be afforded status and protection.

7.3.54. The following Scheduled Ancient Monuments were identified within the study area: Crossraguel Abbey, 2.1km south-west of Maybole; Standing Stone 200m east of Maybole, opposite St John’s Cottage and St Mary’s Church / Collegiate Church, Maybole town centre. The Council recognises through Policy BE6: Protection of ancient monuments and archaeological sites, their importance and will seek to ensure that they are protected, interpreted and promoted or recorded as appropriate.

7.3.55. There are a large number of Listed Buildings within Maybole including St John’s Cottage, an A Listed building, located 200m east of Maybole, the Collegiate Church and Maybole Castle, which are both in Maybole town centre. B Listed buildings identified in the study area include:

- Enoch Lodge (B Listed), 1.6km north-west of Maybole;
- East Enoch (B Listed), 500m north-west of Maybole;
- Nether Culzean (B Listed), 1.4km north-east of Maybole;
- West Enoch (C Listed), 1.2km north-west of Maybole;
- East Brockloch (C Listed), 1.2km north of Maybole;
- Covenanter’s Memorial (C Listed), 500m north of Maybole; and,
- Kirklandhill (C Listed), 300m north of Maybole.

7.3.56. There are two milestones identified within the study area, one located each side of the scheme extents.

7.3.57. Further information on the above can be found within Cultural Heritage, Chapter 5 of this ES. Drawings illustrating the location of the above cultural heritage features can be found in Drawing No. 25000182/ENV/5.1 and within Existing Landscape Features, Drawing No. 25000182/ENV/7.2.

Built Environment

7.3.58. The town of Maybole is the only settlement in the study area. The proposed scheme sweeps from the west from Broomknowes tie-in north around the north of the town through the agricultural land to link in with the Smithston tie-in at the eastern extents. The proposed scheme passes across several minor roads as listed below in the Road in the Landscape section. Various, largely isolated farms and residential properties are located throughout the remainder of the area (Figure 7.6).

7.3.59. Redbrae, an area of light industry situated adjacent to the B7024 Alloway Road on the north-east edge of Maybole has been highlighted as an area of redevelopment opportunity within Table 1 of the SALP. However, it is effectively part of the town fabric and therefore has little impact on the visual amenity of the surrounding countryside and is unlikely to be affected by the proposed scheme.

7.3.60. The Ayr to Stranraer railway line (Figure 7.7) enters the study area from the south, travelling north to the south-west corner of Maybole before swinging east to pass through the centre of the town. It then exits Maybole in its north-east corner, before travelling through the north of the study area in a SW-NE direction, parallel to the A77.



Figure 7.6 Views of small, irregularly located farms and associated buildings in keeping with the character



Figure 7.7 Ayr to Stranraer railway line looking south from the proposed scheme

Public Utilities

- 7.3.61. The majority of public utilities are routed through Maybole and are largely unaffected by the scheme, other than requiring diversion works at the north and south roundabout tie ins.
- 7.3.62. An overhead Scottish Power overhead line runs along the route of the scheme from south of Culzean Road to north of Gardenrose Path and will require diversion. Scottish Water water pipes are also routed along the side roads serving local properties.
- 7.3.63. There is no gas apparatus or pipes along the line of the proposed scheme the location of gas apparatus being within the residential areas mostly to the north and north east of the town. The properties at Burns Wynd, Whitefaulds are fed by other suppliers, GTC Pipelines Ltd.
- 7.3.64. There are two telecommunications stations located at the edge of the town both around Kirklandhill Path.
- 7.3.65. Access to the PU's are from adjacent roads and field access points throughout the scheme extents.

The Road in the Landscape

- 7.3.66. The A77 bisects Maybole in a north/south west direction, following the contours of the general landform, and is the only major road in the study area.
- 7.3.67. The land to the north of Maybole is bisected by four roads that radiate out from the town:
- B7023 Culzean Road travels in a north-west direction;
 - Gardenrose Path travels to the north-west;

- Kirklandhill Path to the north; and,
 - B7024 Alloway Road to the north-east.
- 7.3.68. Ladycross Road runs parallel with the A77, 600m north of Maybole, in a broadly east-west direction between Enoch Lodge and Cassillis View. There are also smaller access tracks linking these roads to isolated farm and residential properties.
- 7.3.69. There are pavements located alongside the north bound carriageway on the A77. The southeast pavement on B7023 Culzean Road entering the town (Figure 7.8) and on the B7024 Alloway Road. There is also a pavement eastbound as you enter Maybole from the eastern extents adjacent to the A77.
- 7.3.70. Policy SERV4 allows the Council to review the transport network with the relevant controlling authority, to identify and implement, or encourage implementation of appropriate solutions to any problems on the transport network which may arise.
- 7.3.71. The Council strongly advocates the road improvement proposals for Maybole bypass and recommends to the relevant implementing agency that it be treated as a priority schemes. The line of the proposed scheme is stated as being protected within the SALP Map (M1: Maybole).
- 7.3.72. Future changes in land use, for which planning permission has been granted may also be relevant to the assessment of a scheme. For example, where a proposed scheme would run close to an area reserved for housing development it should be recognised that more residences could be affected by noise, visual intrusion etc. than the current assessment suggests.
- 7.3.73. The proposed scheme may limit development of the town up to the edge of the carriageway. This comment has also been made by landowners during the consultation process .Further information in relation to development land within the proposed scheme can be found in the Land Use, Chapter 8.
- 7.3.74. The roads are illustrated in the VEM, Drawing No. 25000182/ENV/7.3.



Figure 7.8 Neatly pruned hedgerows on B7023 Culzean Road travelling east into Maybole

Summary

- 7.3.75. This is a rural landscape that has the main A77 and the other lateral roads radiating north. The A77, the railway track and the settlement of Maybole are the dominant features within the study area.
- 7.3.76. The proposed scheme will be located between the townscape and just beyond the ridge crest to the north of Maybole, cutting through grazing land which is located to both sides of the proposed scheme. Small properties are located randomly throughout the surrounding countryside. There are small areas of Ancient Woodland however these woodlands are mainly to the north and beyond the study area and therefore are not assessed further within this ES.
- 7.3.77. There are extensive views to the south. There is an impression of an unspoilt area of rural tranquillity as you travel through the study area.

Visual Receptors

- 7.3.78. There are a variety of visual receptors within the study area ranging from new residential estates on the edge of Maybole, to a caravan holiday park, a golf course, memorials and farmsteads accessed via private tracks. Receptors identified within the study area have varying degrees of visibility of the existing A77 road corridor and descriptions of the receptors and associated views are outlined in Table 10 Visual Impact Schedule (Appendix E1).
- 7.3.79. For the purpose of this assessment, within farmsteads the farmhouse is used to determine impact magnitude and overall impact significance and not the farmland associated with these receptors.
- 7.3.80. Road users, such as pedestrians and cyclists have been included in the list of visual receptors for each and assessed separately along each of the roads that lie within the study area.

- 7.3.81. There are 58 separate visual receptors identified within the study area. Both derelict buildings located at Kirklandhill and Broomknowes farms are not included in the assessment in line with DMRB procedures. The visual receptor groups located to the north to north-west edge of Maybole (Groups B-H) have also been split as follows and have been assessed separately increasing the total number to 65:
- (A) - Receptors to the outer edge of the town that have clearer, generally unrestricted views of the proposed scheme; and
 - (B) - Receptors located behind the properties situated at the town edge which have generally intermittent, restricted views of the proposed scheme.
- 7.3.82. Visual receptors identified to the north east of the proposed scheme are not afforded views due to the topography and existing boundary vegetation.
- 7.3.83. From the wider area, the A77 and surrounding minor roads are currently partially screened by boundary vegetation although the hedges within the fields are deteriorating. If this continues then the views of the roads will be increased for a small number of receptors.
- 7.3.84. Each receptor was placed in a category according to the nature of their views. Four categories were chosen to include receptors that have:
- Category A - These receptors are located close to the proposed scheme with, generally clear uninterrupted views of the scheme from the properties. There are twenty-one Category A receptors, the majority of these receptors are located to the north west of the town;
 - Category B - Distant and/or restricted views of the proposed scheme. In general, the views are within 500m of the proposed scheme. Restricted views are caused by existing vegetation, topography and/or buildings. There are eighteen Category B receptors;
 - Category C - Extensive views of the surrounding countryside but generally these have very distant views of the scheme, in general beyond 500m. There are eleven Category C receptors; and
 - Category D - No views of the proposed road but likely to have views of the associated traffic management and delivery and removal of materials. These have been included in the list of visual receptors. There are seventeen Category D visual receptors.
- 7.3.85. Views of the traffic management, construction traffic and queuing traffic associated with the traffic management can also be seen from visual receptors in Categories A, B and C.
- 7.3.86. The receptors which have a view of the existing road and/or the proposed scheme and the associated construction works / traffic management are listed below from west to east. The visual receptors located closest to the proposed road, which are generally located within Category A, and road users are likely to be affected by the greatest magnitude of change and hence impact. The visual receptors are listed in Table 7.1 below.

Table 7.1 Visual Receptors			
Reference Number	Visual Receptor	Type	Category
1	Dalchomie	Farmstead	B
2	Dalchomie Cottages	Residential	D
3	Baltersan Castle	Ruin (Grade A Listed)	B
4	Baltersan Mains	Farmstead	D
5	Thornebroke	Farmstead	C
6	Broomknowes	Farmstead	A
7	War Memorial and Golf Course	Community/Leisure	C
8	Crossraguel View	Residential	B
9	Cultezeoun	Farmstead	B
10	Maybole Group A – 4 properties on Kirkoswald Road	Residential	D
11	Carrick Academy	School	B
12	Maybole Group B – Macadam Way estate; over 50 properties. Urban residential fabric; intermittent views of farmland to west through gaps between buildings. Those buildings positioned on the outer edge of the town have open views of hillside farmland to the west.	Residential – edge (A)	A
		Residential – beyond edge (B)	B
13	The Ranch Caravan Park	Residential / Commercial	A
14	Maybole Group C – Macadam Place; Gallowhill Avenue; McCrae Court; Queens Terrace; Chesney Grove, Kinraig Avenue – approximately 115no residencies. Urban residential fabric; intermittent views of farmland to the north, south & west through gaps between buildings. Those buildings positioned on the outer edge of the town have open views of hillside farmland to the west.	Residential – edge (A)	A
		Residential – beyond edge (B)	B
15	East Enoch	Farmstead/ Listed Building	A
16	Maybole Group D – Enoch Road; Glenalla Road; Minnoch Crescent – approximately 165no residencies. Urban residential fabric; intermittent views of farmland to west along streets. Playground and those buildings positioned on	Residential / Play Area – edge (A)	A
		Residential / Play Area (B)	B

Table 7.1 Visual Receptors			
Reference Number	Visual Receptor	Type	Category
	the outer edge of the town have open views of hillside farmland to the west.		
17	West Brockloch	Farmstead	D
18	Maybole Group E – Fineview; Gardenrose Primary School; Ashgrove Avenue – approximately 35no residencies. Urban residential fabric; intermittent views of farmland on the ridge crest to north through gaps between buildings. Those buildings positioned on the outer edge of the town have open views of farmland to the north as far as the ridge crest.	Residential / School – edge (A)	A
		Residential – beyond edge (B)	B
19	Kirklandhill and neighbouring cottage	Farmstead/Listed Building/Residential	A
20	Cargilston	Farmstead	B
21	Mid Brockloch	Farmstead / Residential	D
22	Maybole Group F – Kilhenzie View; Elms Crescent; Elms Drive; Cairnhill Court – approximately 25 residencies. Urban residential fabric; intermittent views of farmland on ridge crest to north and hillside northeast through gaps between buildings. Those buildings positioned on the outer edge of the town have open views of farmland to the north and east as far as the ridge crest.	Residential – edge (A)	A
		Residential – beyond edge (B)	B
23	Maybole Group G – Elms Way; Lauren Bank – approximately 8no residencies. Urban fabric and railway corridor to the south.	Residential – edge (A)	A
		Residential – beyond edge (B)	B
24	Maybole Group H – Viewfield; Redbrae School; Depot/Works. Viewfield has open views up pasture hillside to north; Redbrae School enclosed by Lover’s Lane.	Residential/Industry/School – edge (A)	A
		Residential/Industry - beyond edge (B)	B
25	East Brockloch – Brockloch House	Farmstead	D
26	Hillcrest	Residential	D

Table 7.1 Visual Receptors			
Reference Number	Visual Receptor	Type	Category
27	Cargilston Cottage	Residential	D
28	Fairfield	Residential	D
29	Cassillis View	Residential	D
30	Laigh Grange	Residential	D
31	Low Grange Bungalows	Residential	D
32	Myremill	Farmstead	C
33	Myremill Cottage	Residential	C
34	Blairbowie	Farmstead	C
35	Nether Culzean	Farmstead/ Listed Building	D
36	Nether Culzean Cottage	Residential	D
37	Laigh Woodston	Farmstead	C
38	High Smithston Cottages	Residential	B
39	Laigh Smithston	Farmstead	B
40	Glen Marie Cottage	Residential	B
41	Glen Marie	Residential	B
42	Knoweholm	Farmstead	B
43	Covenanter's Memorial	Community	D
44	B7023 Culzean Road including cyclists and pedestrians	Transport / Leisure	A
45	Gardenrose Path including cyclists and pedestrians	Transport / Leisure	A
46	Kirklandhill Path including cyclists and pedestrians	Transport / Leisure	A
47	B7024 Alloway Road including cyclists and pedestrians	Transport / Leisure	A
48	Lover's Lane	Community	A
49	Ladycross Road	Transport / Leisure	D
50	Broomknowes tie-in, A77 including cyclists and pedestrians	Transport	A
51	Smithston tie-in, A77 including cyclists and pedestrians	Transport	A
52	Bus Stop (Culzean Road)	Transport / Community	C
53	Bus Stop (Gardenrose Path)	Transport / Community	D
54	Glenside	Farmstead	C
55	Glenside Cottage	Residential	C
56	Auchenwynd Holdings	Farmstead	C

Table 7.1 Visual Receptors			
Reference Number	Visual Receptor	Type	Category
57	Property at railway track	Residential	C
58	Road Users	Transport	A

- 7.3.87. Other potential receptors within 1km of the scheme which have no view of the road or the footprint of the proposed scheme due to intervening landform or to vegetation close to the property are scoped out and not assessed further.
- 7.3.88. There are distant properties, south and north of the proposed scheme, although these are located to the top of a ridge their views were too far to be considered within the list of receptors. In a number of cases their views are also restricted by boundary vegetation and these were not included in the list of visual receptors.
- 7.3.89. A Visual Envelope Map is shown in Drawing No. 25000182/ENV/7.3. This map illustrates the extent of the landscape visible from the proposed scheme. The map identifies the area from which the road can be seen and shows if views are restricted by landform as well as by vegetation.
- 7.3.90. The following figures (7.9 to 7.23) show views of the visual receptors taken along the centreline of the proposed scheme from west to east.



Figure 7.9 Looking south to the Broomknowes tie-in. To the right handside Baltersan Mains, with Broomknowes to the left adjacent to the A77 Kirkoswald Road and Thornbroke in the distance



Figure 7.10 The Ranch Caravan Holiday Park with Mochram Hill in the distance looking northwest



Figure 7.11 Looking northeast across B7023 Culzean Road to the residential areas showing groups C & D



Figure 7.12 Looking east towards the visual receptors within Group C



Figure 7.13 Looking east towards the visual receptors within Group C



Figure 7.14 Visual receptors Group D looking south east from Gardenrose Path



Figure 7.15 Looking west past Kirklandhill Road along the proposed scheme with Kirklandhill Cottage & Mochram Hill in the distance



Figure 7.16 Looking south towards Maybole with partial views of the properties within Group H visual receptors



Figure 7.17 Looking north west to scattered farmsteads of Kirklandhill, Cargilston, East Brockloch, Mid Brockloch and West Brockloch



Figure 7.18 Mature ash tree on B7024 Alloway Road with Cassillis View in the distance and area of Ancient Woodland, St Murray's Plantation behind the property



Figure 7.19 Views to the south over the A77 to outlying farms



Figure 7.20 Views south-east to High Smithston Cottages located alongside the A77, with Blairbowie and Laigh Woodston in the distance



Figure 7.21 View south east to Laigh Smithston past railway track and the A77



Figure 7.22 View of traffic heading north on A77 on approach to Smithston railway bridge



Figure 7.23 Looking north-east to the Smithston tie-in at the eastern scheme extents

Development Land

- 7.3.91. There is currently a planning application to continue with the residential housing development at Burns Wynd, Whitefaulds, Maybole. The site has been acquired through the affordable housing policy of South Ayrshire Council and is part of a larger development carried out by Lauderdale Homes. A total of thirteen properties will be built, four 4-Bed apartments and nine 3-Bed apartments.
- 7.3.92. Development land, including permitted planning applications relevant to the site, are detailed in the Land Use section of the report (Chapter 8).

7.4. Value (Sensitivity) of Resource (Receptor)

Landscape

- 7.4.1. The sensitivity for both regional and local level is determined using Table 1 (Appendix E1) in accordance with DMRB.
- 7.4.2. The landscape character at regional level is assessed as medium sensitivity with high or medium importance and rarity on a regional scale. The Foothills Landscape Character Type has generally limited potential for substitution.
- 7.4.3. Due to the medium importance and rarity and limited potential for substitution, landscape character at local level is assessed as medium sensitivity for all detailed landscape character areas, with the exception of detailed landscape character area D – Hillside, Woodland & Pasture. This Detailed landscape character area D – Hillside, Woodland & Pasture is classed as having high sensitivity, as it has high importance and rarity on a national scale and limited potential for substitution.
- 7.4.4. The separate landscape characteristics including geology, landform and land use, specimen hedgerow trees, grasslands and cultural heritage are all given medium sensitivity. This is due to their high or medium importance on a regional scale with limited potential for substitution.
- 7.4.5. The remainder of the landscape characteristics are assessed as having a low sensitivity due to their low or medium importance on a local scale.
- 7.4.6. A summary of the landscape resources sensitivity is provided in Table 8 (Appendix E3).

Visual Receptors

- 7.4.7. With reference to Table 3 in Appendix E1 all residential receptors and those using the road are judged to be very highly sensitive to changes to the views.
- 7.4.8. The War Memorial, golf course, Covenanters Memorial, Lover's Lane and the roads (A77 tie-in locations, B7023 Culzean Road, Gardenrose Path, Kirklandhill Path and the B7024 Alloway Road) are assessed as having high sensitivity as the landscape and view are of high value and importance and any changes are noticeable.
- 7.4.9. The users of the bus stop and road users are assessed as having medium sensitivity as the landscape and view are of average value and importance to the receptor and any changes are less obtrusive.

- 7.4.10. The sensitivity of the visual receptors is summarised in Table 9 Summary of Visual Receptors (Appendix E4) and also in Table 10 and Visual Impact Schedule (Appendix E5).

7.5. Impact Assessment

7.5.1. The route begins at the A77 Broomknowes tie-in and heads north to B7023 Culzean Road, where a new roundabout will be located, and runs north-east to the Smithston tie-in. The route passes Whitefaulds which is located to the west side of Maybole, passing under Gardenrose Path and Kirklandhill Path and over the B7024 Alloway Road.

7.5.2. The proposed scheme involves the construction of a new section of road through a number of pastoral fields, and will involve cutting into existing slopes containing a large amount of rock, and partial removal of the existing hedgerows, specimen trees and roadside vegetation. A number of embankments and cuttings will be required to accommodate the proposals, as well as structures over the existing minor roads, some of which will result in the road becoming a significant visual intrusion to the receptors located along the scheme.

Landscape (Construction Phase)

7.5.3. The magnitude of impact of the proposed scheme was assessed using Table 2: Determination of Landscape Impact Magnitude and the significance of impact determined in accordance with Table 5: Determination of Impact Significance (Appendix E1). Both the magnitude of impacts and significance of impacts for the construction phase are summarised in Table 8 (Appendix E3).

7.5.4. Impacts on the landscape due to the contractor's operations will be temporary and it is important that as far as possible no impacts continue after the duration of the contract.

7.5.5. Impacts due to the construction phase are likely to occur due to:

- Visual intrusion of the works, both the machinery, the disruption of the construction itself and traffic management and queuing traffic associated with these operations;
- The use of off-site contractor's compounds, which may be visually intrusive and also lead to damage to underlying soils and vegetation;
- The use of haul roads, which is visually intrusive and leads to damage to underlying soils and vegetation;
- Earthworks and stockpiling of material which may be visually intrusive and damage trees, grass and soils and foul water courses;
- Use of security and traffic management lighting at night, which may be visually intrusive in a rural area;
- Damage to adjacent vegetation due to contamination from materials or fuels;
- Removal and retention of the milestone located at the Broomknowes tie-in section;

- The access to several roads, properties, schools and bus stops will be affected; and
 - Disruption to the peaceful and rural character of the landscape.
- 7.5.6. A moderate impact magnitude is determined for the regional landscape, resulting in moderate impact significance during the construction phase due to loss of resource, but not affecting integrity and partial loss of and/or damage to key characteristics.
- 7.5.7. The impact on the local landscape differs for the detailed landscape character areas due to their sensitivity. There are also indirect impacts on the Sensitive Landscape Character Area, Scenic Area and the landscape settings for the listed buildings which are all in close proximity to the bypass. Detailed landscape character areas B and C have medium sensitivity and are determined as having a major impact magnitude due to the loss of resource and/or quality and integrity of the resource. This results in large impact significance for Detailed landscape character areas B and C. Detailed character area D has a high sensitivity, as there are more designations within this area such as higher grades of listed buildings. This area will be affected by major impact magnitude, which in combination with high sensitivity results in very large impact significance.
- 7.5.8. Geology, landform and land use are affected by an impact of major magnitude which results in a large impact significance. This is due to a loss of resource and partial loss of/damage to key characteristics, features or elements as a result of the proposed scheme. The associated impacts include the construction of the embankment, removal and relocation of soil and rock and associated stock piles.
- 7.5.9. Landscape resources that are affected by an impact of moderate magnitude, resulting in moderate impact significance, include grasslands, cultural heritage, built environment & the road in the landscape. The milestones will not be impacted as they are located beyond the scheme extents.
- 7.5.10. Hedges and watercourses have low sensitivity and trees medium sensitivity. The impact on these landscape resources result in slight impact significance as they are affected by minor impact magnitude. This is due to some measurable change in attributes, quality or vulnerability, minor loss of or alteration to one (possibly more) key characteristics, features or elements.
- 7.5.11. There is no change impact magnitude for both the ornamental hedges and woodlands as there is no loss of these resources as a result of the proposed scheme. Their impact significance is determined as neutral during the construction phase.

Visual (Construction Phase)

- 7.5.12. The magnitude of impact of the proposed scheme was assessed using Table 4: Determination of Visual Impact Magnitude and the significance of impact determined in accordance with Table 5: Determination of Impact Significance (Appendix E1). Both the magnitude of impacts and significance of impacts during the construction phase are summarised in Table 9 (Appendix E1).

- 7.5.13. Category A receptors (21 in total) will be most affected, as the works will be in close proximity to their properties. The majority of these visual receptors (17 in total) are assessed as having a moderate magnitude of impact, as the work will dominate their view and fundamentally change its character and components, albeit temporarily.
- 7.5.14. The use of traffic lights if sited outside properties will be intrusive as will be any queuing traffic and construction traffic delivering and removing materials from the site.
- 7.5.15. The vehicle travellers (Receptor No. 58) are assessed as having moderate impact magnitude, as the proposals also dominate their view resulting in moderate impact significance.
- 7.5.16. Broomknowes Farm is the only category A receptor that although located in close proximity to the proposed scheme has an easterly aspect from the farmhouse which does not afford views of the proposed scheme or associated construction works. The surrounding farm buildings further restrict views. It is assessed as having no change impact magnitude and therefore neutral impact significance.
- 7.5.17. Category B receptors (18 in total) have varied, generally more distant views throughout the study area. They have restricted views of the works, due to either the existing topography and/or vegetation and are generally located further away from the proposals. The position of their property in relation to the views of the construction works may result in oblique or intermittent views being afforded. However, traffic management and queuing traffic may extend to the road in front of the houses. The use of traffic lights if sited outside properties will be intrusive.
- 7.5.18. The magnitude of impact on these receptors also varies for this category, ranging from moderate to minor. The majority have been assessed as having minor impact significance, as the proposals will be noticeable in the view, affecting their character and altering some of their components and features. The following Category B receptor results are as follows:
- A moderate magnitude resulting in a large significance impact for receptor nos: 38 – 42.
 - Receptor Nos: 1, 3 & 14 have been assessed as having a minor magnitude of impact therefore determined as having a large impact significance;
 - A minor magnitude of impact resulting in a moderate impact significance for receptor Nos: 8, 9, 12, 16, 18, 20, 22 - 24; and
 - Receptor No. 11 has a minor magnitude of impact resulting in slight impact significance.
- 7.5.19. Category C receptors (11 in total) are located further away, generally beyond 500m and generally have extensive views of the surrounding countryside and/or restricted views. The majority of the receptors have a minor impact magnitude however depending on the nature of the views and the sensitivity of the receptors the results vary for determining the impact significance. The following Category C receptor results are as follows:

- Receptors 5, 7, 32-34, 37 & 54 - 57 are assessed as having a minor impact significance resulting in a moderate impact significance;
- The bus stop at Kirkoswald Road, A77 also has a minor impact magnitude although it has a lower sensitivity resulting in a slight impact significance; and
- Receptor No. 37 Laigh Woodston is assessed as negligible impact magnitude where the impact significance is determined as being slight. This receptor is located further from the proposed scheme and also enclosed by woodland however, it is afforded restricted views through the woodland during winter once the leaves have fallen from the trees.

7.5.20. Category D receptors (17 in total) are generally only able to view the traffic management and associated operations where queuing traffic and construction traffic carrying materials to and from the site can be viewed. No views of the construction works are afforded from these receptors.

7.5.21. The magnitude of impact on the majority of residents (4, 17, 21, 25, 26, 30 & 31, 35 & 36, 43 & 49) is assessed as negligible magnitude impact significance as the proposals are noticeable in the view, resulting in moderate impact significance. Three receptors (10, 28 & 29) are also assessed as having minor impact magnitude as the proposals will be noticeable in the view, affecting its character and altering some of its components and features. However, due to their sensitivity they have an increased impact significance of moderate as the construction works dominate their views.

7.5.22. The users of the bus stop at Gardenrose Path are likely to view the associated traffic during construction and have been assessed as having minor impact magnitude resulting in slight impact significance.

7.5.23. There is no change impact magnitude for Cargilston Cottage during construction as it is not located close to the proposed construction works or will be affected by construction traffic or traffic management operations. Their views are also restricted due to the vegetation from St. Murray's Plantation surrounding the property. This results in neutral impact significance.

Landscape (Post Construction)

7.5.24. The magnitude of impact of the proposals was assessed using Table 2: Determination of Landscape Impact Magnitude and the significance of impact determined in accordance with Table 5: Determination of Impact Significance (Appendix E1). Both the magnitude of impacts and significance of impacts post construction without mitigation are summarised in Table 8 (Appendix E1).

7.5.25. Cross sections along the proposed scheme and photomontages at different locations within the study area were prepared to provide visualisation and used in the assessment process. The cross sections can be found in Drawing 25000182/ENV/7.5 and 25000182/ENV/7.6 and Drawing No. 25000182/ENV/7.1 highlights the location of the viewpoints used within the study area. Appendix E2 contains the photomontages.

- 7.5.26. The majority of the proposed scheme is off the line of the existing road, with the exception of the tie-in locations at the scheme extents and the new roundabout at the B7023 Culzean Road.
- 7.5.27. The proposed road, inclusion of roundabouts at the B7023 Culzean Road and the tie-in sections of the proposed scheme, and the structures that pass over or under the existing minor roads will increase the visual impact of the scheme within the landscape. This will be particularly evident in the immediate vicinity by virtue of the increase in land take and associated traffic movement, signage, lighting etc.
- 7.5.28. The Rural Protection Area will be directly impacted due to loss of this regionally designated land, the majority of which is used for farming. Approximately 15% of the total road area passes through detailed landscape character areas (D) which is classed as very attractive, approximately 45% through Category B which is classed as ordinary and 40% through Category C which is classed as good. The detailed landscape character areas are illustrated in Appendix E1.
- 7.5.29. Embankments will be reformed to different lines and levels. The area of the road will be wider, straighter and exposed to view on wider embankments. New embankment will be formed to the west between the B7023 Culzean Road and Gardenrose Path which will be prominent in the landscape and be visually intrusive and impact the local landscape area;
- 7.5.30. Small sections of field boundary vegetation will be lost along the length of the scheme extents. Sections of the field boundaries will be lost as the proposed scheme causes severance of the majority of the fields along the whole route. The fields become fragmented along the scheme with some small portions landlocked from current farming units. The proposed scheme will adversely impact the overall field pattern of the study area. The linearity of the proposed road, the movement of vehicles and the vertical elements including lighting (although only proposed at the tie-in sections) and signage will contrast with the character of the landscape;
- 7.5.31. The removal of a number of hedgerow trees and specimen trees throughout the scheme extents, including the beech trees at Gardenrose Path and the large, mature ash located alongside the B7024 Alloway Road. The remainder of the trees lost are generally located within field boundaries and range in species, maturity and condition;
- 7.5.32. Small sections of the roadside grass verges throughout the scheme extents due to tying into the existing road will be lost, as well as the grass verges at the crossover points for the additional roads radiating from the town centre;
- 7.5.33. The farm and residential access routes that cross the proposed scheme at grade will be severed or re-routed via new access routes and new bridges, with dedicated parallel cattle access that will impact the existing landscape structure. Further detail on access can be found in Chapter 8 Land Use.

- 7.5.34. The proposed scheme involves the construction of bridge crossings over or under the minor roads Gardenrose Path, Kirklandhill Path and B7024 Alloway Road. All these roads will be restored and improved post construction including the National Cycle Route 7 / Core Path which runs along Gardenrose Path. There will be additional shared footpaths/cycleways constructed as part of the proposed scheme. There will be no permanent impacts in relation to access for road or recreational users.
- 7.5.35. East Enoch and Kirklandhill will be indirectly impacted as these are listed buildings in close proximity to the proposed scheme, which will affect their setting in the landscape. Scenic Area and Sensitive Landscape Areas are also within close proximity to the proposed scheme which will indirectly affect their designation.
- 7.5.36. No woodland (Ancient, semi-natural or those not included on inventories) will be impacted. However, the proposed scheme is located to the northern extents of Redbrae Tree Preservation Order and will result in partial removal of the stone wall boundary and a small area of land within this area. No trees within the TPO will be affected by the scheme and the small section of stone wall will be re-built along the line of the new boundary. There will be a significant direct impact upon the landform at his location where an embankment is required at Lover's Lane.
- 7.5.37. Several watercourses exist alongside the existing road and within the areas of the proposed scheme. Diversion and culverting of the watercourses crossing the proposed scheme will be required.
- 7.5.38. The proposed scheme will impact the small area of land designated for housing development at Whitefaulds and land safeguarded for amenity and recreational green space south of Gardenrose Path.
- 7.5.39. The reduction in traffic through the town centre should benefit the environment in general.
- 7.5.40. The impacts post construction for landscape are assessed as :
- Moderate impact significance on Regional landscape as there remains a loss of resource but not affecting integrity.
 - The local landscape remains affected by major impact magnitude for detailed character areas (B & C) resulting in large impact significance and detailed character area D remains affected by major impact magnitude resulting in very large impact significance.
 - Loss of Rural Protection Area is one of the factors relating to impacts on the regional and local landscape along with indirect impact on the Scenic Area, Sensitive Landscape Character Area and the listed buildings within the study area. However, within the SAC Local Plan, the Council strongly advocates the A77 trunk bypass route for Maybole and recommends that it is treated as a priority scheme due to the high volumes of traffic passing through the town.

- The magnitude of impact and the significance of impact for the majority of the landscape resources remain the same post construction as assessed during construction with the exception of watercourses and geology, landform and land use. Geology, landform and land use is affected by moderate impact magnitude resulting in moderate impact significance due mainly to the removal of stock piles and careful attention to marrying the land with the existing landform.
- Watercourses are affected by a negligible magnitude of impact resulting in neutral impact significance. There are some localised flooding issues associated with both ends of the scheme extents. This is particularly evident at the northern scheme extents where soft rush is prevalent. The inclusion of the SuDS attenuation ponds and the culverting of several watercourses should prevent or at least reduce this problem.

Visual (Post Construction)

- 7.5.41. The magnitude of impact of the proposed scheme was assessed using Table 4: Determination of Visual Impact Magnitude and the significance of impact determined in accordance with Table 5: Determination of Impact Significance (Appendix E1). Both the magnitude of impacts and significance of impacts of the construction phase are summarised in Table 9 (Appendix E4).
- 7.5.42. The proposed scheme winds through the countryside from Broomknowes tie-in at the southern extents, running north of the town, with glimpses being afforded from properties located in close proximity. Properties further away are afforded distant and/or restricted views of the road and the associated traffic due to the topography and surrounding vegetation.
- 7.5.43. The visual impacts associated with the proposed scheme post construction include;
- The removal of farmland;
 - The removal of existing vegetation;
 - The road itself;
 - The formation of cuttings, embankments and bridge structures;
 - The movement of vehicles to the north and north-west of the town;
 - The addition of landscaping features to aid screening;
 - Boundary fencing and gates will be erected to secure new field boundaries and will be visible from adjacent properties; and
 - Vertical elements including signage and lighting.
- 7.5.44. The extent of the visual impact of the proposed scheme on Maybole is largely dictated by the topography of the study area and the location of the proposed road within the southern facing slope.

- 7.5.45. As a direct consequence of this topography, the town has a predominantly southerly outlook over the extensive open, rural landscape. The proposed scheme travels around the north of Maybole and will be largely screened by the landform and the town's prevailing outlook. The proposed scheme passes in close proximity to one or more of the individual farm and residential properties scattered across the rural landscape surrounding Maybole.
- 7.5.46. In general, the road itself, the formation of embankments and cuttings including substantial rock cuts to the south of the proposed scheme, will increase the negative visual amenity. New bridge structures will also increase the visual impact as will the roundabout junctions and the associated lighting and signage.
- 7.5.47. The topography is undulating with the majority of the road located below the crest of the surrounding hills, except the section north-west of the town. From the wider area the proposed scheme is partially screened by field boundary vegetation and topography. The road almost disappears into the landscape due to a large proportion of the scheme being within cutting reducing the overall impact from surrounding properties.
- 7.5.48. Properties that will experience improved visual amenity will be those in close proximity to the existing A77.
- 7.5.49. The properties that will be impacted most are located in close proximity to the section of embankment to the north-west of the town near the B7023 Culzean Road. They are highly sensitive receptors with clear, open views of the bypass which is elevated and more prominent in the landscape at this section. There is a substantial increase in the area of road surface viewed from receptors at this location. However, adjacent sections of the route are in cutting which limits the extent of the negative visual amenity.
- 7.5.50. North of Maybole, a section of the proposed scheme and the associated traffic will be seen from a small number of visual receptors, particularly from south of Smithston Bridge to the entrance to Maybole, as the road sits higher on the ridge than the surrounding fields to the south. The majority of these receptors are afforded only distant and/or restricted views with the proposed scheme located further away than the existing A77.
- 7.5.51. The existing boundary hedges are deteriorating and if this continues then the visibility of the road will be increased slightly for a small number of receptors.
- 7.5.52. The impacts after construction are reduced greatly for a number of receptors (20 in total) as a large number only have views of the construction works. These include receptor nos. 2, 4, 6, 10, 17, 21, 25-31, 35, 36, 43, 49, 52 and 53 resulting in a no change impact magnitude as the proposals are virtually undetectable and therefore determined as neutral impact significance. None of the Category D receptors have a view of the scheme.
- 7.5.53. Those properties with clear, close views, Category A receptors (6, 12, 15, 16 & 19) are the worst affected and located mainly within the eastern extents of the proposals, in particular where a substantial embankment will be formed and interrupt views west across the adjacent land for the receptors of Maybole Groups C and D.

- 7.5.54. Two visual receptors (14a & 16a) are assessed as having moderate impact magnitude resulting in large impact significance while 12 visual receptors are assessed as having a minor impact magnitude giving rise to moderate impact significance. These include numbers: 12a, 13, 19a, 24, 44 – 48, 50, 51 and Kirklandhill (No 19), a listed building, which has extensive views of the proposals to both south-east and south-west.
- 7.5.55. Receptor No 58, road users, is assessed as having minor impact magnitude resulting in slight impact significance. The remaining Category A receptors are assessed as having negligible impact significance resulting in slight impact significance include: 18a, 22a and 23a.
- 7.5.56. Category B visual receptors are split evenly, with numbers 1, 3, 14b, 16b, 38 – 42 are assessed as having minor impact magnitude resulting in moderate impact significance. The remaining Category B receptors (8 – 10, 12, 18b, 20, 22, and 24) assessed as negligible impact magnitude and determined as having slight impact significance.
- 7.5.57. The remainder of the receptors within Category C are determined as having a slight significance impact as they are assessed as having negligible impact magnitude. These include receptors: 5, 7, 32 – 34, 37, 54 – 57.

7.6. Mitigation

Landscape (Construction)

- 7.6.1. While there are no mitigation measures that will remove the adverse impacts of the construction phase, the following measures will reduce them and ensure that they do not give rise to permanent impacts.
- The site of the contractor's compound should be chosen to avoid undue visual intrusion or damage to fragile soils or vegetation;
 - Construction vehicles will be parked off landscaped areas when not in use and not left in places where soils or vegetation will be damaged;
 - Haul roads should be sited and constructed with regard to visual intrusion and damage to vegetation and fragile soils. There will be a requirement to restrict the construction traffic from the side roads;
 - Security and traffic management lighting will be designed to minimise light spillage into adjacent areas. Efficient traffic management operations will reduce the negative impact on the landscape during the construction works;
 - Prior to use, wherever possible, materials will be stockpiled in the contractor's compound or preferably delivered to site when required removing the need for stockpiling. Works should be programmed to avoid stockpiling of fill material and to encourage its use on site as and when transported;

- Where significant specimen trees are to be retained within the scheme extents in close proximity to the construction works, such as within the Redbrae TPO, it is recommended that Root Protection Areas (RPA) are calculated and established in accordance with BS5837: 2012 Trees in relation to design, demolition and construction - Recommendations. This will be carried out by a competent arboriculturist. Signs should also be erected and tool box talks to include a briefing to workers working in close proximity to the trees.
- Stout protective fencing will be used to protect the area around trees from compaction or damage. Fencing should be placed outside the canopy of trees and be suitable to prevent incursion into the area;
- The disposal of any ash *Fraxinus sp.* trees will be in accordance with guidance produced to prevent the spread of ash dieback *Charlara fraxinea*. The Forestry Commission provides clear guidance on the proper disposal of ash wood;
- Careful consideration should be given in relation to soil around areas close to invasive weeds. These should be cordoned off and no vehicles or soils disturbed from this location. Contractor should ensure workers are notified during construction works of the risks involved in relation to invasive weeds;
- Monitoring of the landscape features during construction to ensure they are not damaged and monitoring of associated earthworks will be carried out by a qualified landscape architect during the duration of the works; and,
- Any incidents of spillage will require to be cleaned. If necessary the area will be excavated to a minimum of 1m and the contaminated material removed to an appropriate landfill, the area being filled with clean soil or stone and topped to a minimum of 100mm deep with soil.

7.6.2. Although the mitigation will be of benefit, the magnitude and therefore significance of the impact will not change from that as assessed without the mitigation.

Landscape (Post Construction)

7.6.3. The design of this scheme is constrained by the need to tie into the existing alignment with suitable forward visibility. For this reason there is no scope to move the new alignment north or south. Thus the consequential felling of the existing vegetation such as mature tree planting at Gardenrose Path and sections of existing boundary hedgerow at the roadside cannot be avoided.

7.6.4. The mitigation measures aim to:

- Reduce where possible the impacts of field fragmentation and landlocked areas. Landscaping can help mitigate the fragmentation and visual impacts caused by land severance.

- Maximise the positive aspects of the scheme and surroundings through creative design and use of local materials, including plants. This will enhance the local sense of place and landscape character, with emphasis on the environmental quality and sustainability;
- Replace areas of lost landscape, such as degraded hedgerows or vegetation lost through the construction of the new alignment;
- Avoid, retain, protect and make best use of existing landscape features, such as designated areas and areas of landscape value such as existing woodland; and
- Provide a pleasant environment for the road user, including the retention of an attractive journey with pleasant views from the road where possible.

7.6.5. Mitigation therefore focuses mainly on remediation using the following measures:

- The Local Plan Strategic Policy ENV11 supports tree planting/greening and woodland planting schemes which will improve the landscape and provide ecological benefit. Therefore, loss of mature trees will be remedied by replacement planting using at least standard trees, both as specimen trees and also within the hedge line to reduce both direct and indirect impacts. There will also be some small areas of woodland planting, hedging and an understorey of native shrubs as part of the landscape proposals. This in turn will reduce the negative impact caused by field fragmentation and areas that have been landlocked. For example, the addition of woodland at the northern extents will link the existing woodland at Smithston Bridge and along the rail corridor to that at Black Glen, helping to both screen and integrate the road as well as providing biodiversity benefits. This will require additional sympathetic re-grading of adjacent land to disguise the cutting and to follow the characteristics of the existing ridge landform to integrate the mitigation into the landscape;
- Field fragmentation throughout the scheme will require to be mitigated with fencing. Fencing and gates should be in keeping with the similar boundary treatment in the area and agreed with the adjacent landowners. Alteration of access arrangements to reduce the negative impact on field pattern and allow better use and manoeuvrability within fields for farming practices.
- Similar tree and shrub species found in the wider landscape will be used to assist in the assimilation and integration of the development in the wider context. Opportunities will be created to add visual interest and quality whilst improving biodiversity. All planting will be native and of local provenance to ensure successful establishment;
- Loss of any mature trees in the study area will be remedied by planting semi-mature trees on at least a 2:1 basis. Woodland planting will comprise of whip planting, transplants, cell grown and/or container grown plants. A mix of species common to the area will be chosen for replacement and new woodland planting;

- The strategic planting of the trees will allow views from the road into the surrounding countryside and help reduce driver stress as well as creating a soft screen. Extended lengths of linear planting will be avoided in order to maintain views from the road to the wider landscape;
- Landscape proposals have excluded the replanting of ash trees, a common species throughout the study area, due to ash dieback and the restrictions associated with planting ash trees. Other species such as beech *Fagus sylvatica*, oak *Quercus robur* and Scot's pine *Pinus sylvestris* should be chosen that are currently growing within this location to create continuity with the local landscape character;
- The ground surface will be made good with a similar ground surface treatment, such as grass seeding. The area of new grass verges will be planted with native species to increase biodiversity; Indigenous seed will be sourced locally to allow embankments to be vegetated. Wildflower seeds will be incorporated within the seed mix;
- Loss of hedges will be remedied by replanting new field boundaries with a more varied range of native species to encourage biodiversity. The existing hedgerows will be gapped up with a range of species, native and similar to the existing to create continuity and reduce visual impact;
- New hedgerows will be planted in addition to the erection of new field boundaries to protect the new fencing, create stockproof field boundaries, improve biodiversity and visual amenity as well as adding to the local landscape character of the area. Any new planting will be located to ensure no management or visibility issues are created in the future;
- The proposed planting is in accordance with the guidance contained within Cost Effective Landscaping: Learning from Nature;
- The impact on soils due to compaction during spreading on new embankments will be reduced by careful handling; separate stripping of topsoil and sub-soil and separate stacking;
- The impact of the proposed road on the view of the road within the landscape will be reduced through careful attention to marrying in new contours to adjacent land. The proposed slopes of the embankment will be married in to the adjacent landform;
- Re-instatement of the stonewall at Redbrae;
- Where rock cutting is to be carried out the rock slopes will be as natural as possible and graded and shaped appropriately;

- The area used as a site compound will be made good following the works and where possible to increase the biodiversity and positive visual amenity of the site. The site will be remediated to relieve any compaction and consideration will be given to tree, hedge and/or shrub planting and providing a suitable ground surface;
- An A to Bee Initiative to increase pollinators using the scheme as a pilot will be considered. Within the scheme, appropriate planting should be included as an opportunity to utilise landscaping to increase pollinators for the benefit of biodiversity and the environment. As part of this initiative, landowners will be approached to discuss the option of placing additional hives on neighbouring land extending the land available for pollinators;

Visual (Construction)

7.6.6. Most of the mitigation measures proposed for the identified adverse impacts on the landscape will also mitigate against the adverse visual impacts on the receptors. In addition:

- During construction operations, the site compound should be located where the least environmental impact will occur and will avoid the excessive removal of vegetation. Where vegetation is to be removed, it should be replaced with similar species following completion;
- Haul roads should be sited and constructed with regard to visual intrusion and damage to vegetation and fragile soils. There will be a requirement to restrict the construction traffic from the side roads;
- Traffic lights should be placed to avoid being directly visible from adjacent houses;
- Security and traffic management lighting will be designed to minimise light spillage into adjacent areas. Efficient traffic management operations will reduce the negative impact on the landscape during the construction works;
- Any accidental damage beyond the works area to grass, hedges or trees will be made good at the contractor's expense; and,
- Residents will be advised of the duration of the works and a clear line of contact be established so that concerns may be addressed.

Visual (Post Construction)

7.6.7. The same mitigation measures apply to the avoidance of impacts on the key identified receptors as apply to the avoidance of impacts on the landscape. The mitigation measures aim to:

- Enhance the local sense of place and landscape character through creative design and the use of local material and indigenous planting with emphasis on environmental quality and sustainability;

- Replace areas of lost landscape with mitigation measures in line with the character of the surrounding areas;
 - Create opportunities to add visual interest and quality whilst improving biodiversity;
 - Avoid, retain, protect and make best use of existing landscape features, such as designated areas and areas of landscape value such as existing woodland, including Ancient Woodlands;
 - Minimising the footprint of the proposed road including construction works to avoid both direct and indirect impacts;
 - Provide a pleasant environment for the road user, where possible to include views from the road out to the surrounding countryside.
- 7.6.8. The mitigation is achieved through the landscape design which is illustrated in Drawing No. 25000182/ENV/7.7, 7.8, 7.9 & 7.10.
- 7.6.9. Tree and shrub planting will be carried out to screen views of the proposed road and associated infrastructure. A high percentage of quick growing and evergreen tree species will be used as 'nurse' species and to establish a dense screen, particularly at the embankment between the B7023 Culzean Road and Gardenrose Path. Trees such as beech *Fagus sylvatica*, Scot's Pine *Pinus sylvestris* and birch *Betula pendula* will be planted to integrate with existing tree planting in the area;
- 7.6.10. Materials for the construction of the new junctions and accommodation works will be selected to integrate with existing materials in the area. In addition, locally sourced materials will aid integration into the landscape and promote sustainability;
- 7.6.11. Cuttings and embankments will be created as naturally as possible through appropriate grading and shaping particularly the roundabout at the southern tie in where earthworks screening will be implemented to screen the roundabout from Broomknowes Farm.
- 7.6.12. The new road alignment cuts through existing field boundaries and grassland, creating field fragmentation and landlocked areas. Consideration should be given in consultation with landowners to remove redundant or reduced field boundaries to improve the visual amenity of the field pattern post construction.
- 7.6.13. It has not been possible to avoid felling trees and partial removal of the hedgerows and grassland throughout the proposed scheme. The mitigation measures proposed in the landscape design will reduce the long-term impact of the scheme.
- 7.6.14. Many of the mitigation measures agreed for the remediation of the adverse impacts on the landscape will also reduce the scheme's long-term impact on the residents of the properties which overlook the road and the associated traffic. However, in the short term these measures will not reduce the impact of the proposed scheme on the views from the most significant receptors within Category A.

Residual Impact

- 7.6.15. The residual impact is the anticipated impact of the scheme with the agreed mitigation in place and successful when seen in summer on the opening year (Year 1) and after 15 years. The outline landscape proposals are illustrated in Drawing No. 25000182/ENV/7.7, 7.8, 7.9, 7.10 .

Landscape (Year 1)

- 7.6.16. The residual magnitude of impact of the scheme was assessed using Table 2: Determination of Landscape Impact Magnitude and the residual significance of impact determined in accordance with Table 5: Determination of Impact Significance (Appendix E1). Both the magnitude of impacts and significance of impacts are summarised in Table 9 (Appendix E1).
- 7.6.17. The proposed planting will be immature in the first year with very little growth and do little to help mitigate the proposed scheme. New fencing will be erected along the road boundaries and be clearly visible along most of the route if not located within new hedgerows. The proposed areas of grassland and wildflowers and grass verges will have germinated however the grassed areas will not have developed sufficiently to provide a dense sward.
- 7.6.18. The impact on the regional landscape is of moderate impact significance as there remains a loss of this resource.
- 7.6.19. The local landscape also remains the same with detailed character areas (B & C) assessed as being affected by large impact significance and detailed character area D being affected by very large impact significance.
- 7.6.20. Loss of Rural Protection Area is one of the factors relating to impacts to the regional and local landscape along with indirect impact on the Scenic Area, Sensitive Landscape Character Area and the listed buildings and other landscape features within the study area. However, within the SAC Local Plan, the Council strongly advocates the A77 trunk bypass route for Maybole and recommends that it is treated as a priority scheme due to the high volumes of traffic passing through the town.
- 7.6.21. A number of the individual landscape resources remain the same as before mitigation due to the planting being immature and the inclusion of boundary fences, which will be new and clearly visible. These include the geology, landform and land use; ornamental hedges, trees, grasslands, cultural heritage, built environment and the road in the landscape.
- 7.6.22. Hedges, woodlands and watercourses are affected by negligible beneficial impact magnitude resulting in neutral impact significance. This is due to an increase in overall length of hedges in the area and an increase in species diversity.
- 7.6.23. There is an addition of woodland planting areas along the route to assist in screening of the proposed scheme however this will have little screening benefit in Year 1.
- 7.6.24. Both the hedges and woodlands provide a beneficial impact even though their growth is minimal within the proposed route, creating positive visual amenity and enhancing the local landscape character.

- 7.6.25. The growth of the vegetation adjacent to the watercourses will help to prevent the risk of soil erosion that would otherwise contaminate these.
- 7.6.26. Specimen and hedgerow trees are affected by slight impact significance. The magnitude of impact for this landscape resource remains as minor as the trees will not have matured to provide the same size as those removed to accommodate the proposed scheme. However, they will give some instant impact and structure to the overall planting, especially if semi-mature trees are planted as per mitigation measures.

Landscape (Year 15)

- 7.6.27. After 15 years hedges will be mostly mature in the landscape. The standard trees planted in hedgerows will be assuming a mature form. The woodlands will have grown and softened the road in the landscape and provided some screening in sections along the proposed scheme. However, it is expected that complete screening will take at least 20 years to achieve and reasonable maturity 30 years.
- 7.6.28. After 15 years, species diversity is expected to have increased providing a dense sward and a positive impact on the quality of grasslands. This includes new grass and wildflower areas, and reinstatement of the roadside vegetation at the tie in sections.
- 7.6.29. Whereas the components of the landscape mitigation will be beginning to achieve a semblance of maturity in 15 years, the impact on the road in the landscape will remain evident. It is expected that the mitigation planting measures will take longer to mature to reduce the impact on the local landscape character and existing landscape features.
- 7.6.30. Regional landscape, geology, landform and land use and grasslands are affected by moderate impact magnitude and impact significance, as there remains an overall loss of resource.
- 7.6.31. The wide grass verges and wildflower areas help prevent the sense of enclosure that may be experienced along the proposed scheme. It will also increase the biodiversity and positive visual amenity 15 years post construction after mitigation.
- 7.6.32. Detailed landscape character areas B and C remain affected by major impact magnitude however, the maturity of the additional planting will reduce the impact significance to moderate as there remains a loss of resource from these areas.
- 7.6.33. Detailed landscape character area D remains affected by major impact magnitude, although the impacts will be reduced resulting in large impact significance.
- 7.6.34. Those landscape resources which are affected by minor impact magnitude include cultural heritage, the built environment and the road in the landscape. The built environment and the road in the landscape have reduced from moderate impact magnitude and cultural heritage remained the same, even though the planting will have matured, as the road is close to the listed buildings and the effects of the field pattern will be altered for access arrangements. Minor impact magnitude criteria states there is some measurable change in attributes, quality or vulnerability, minor loss of or alteration to key characteristics, features or elements.

- 7.6.35. Watercourses are affected by a negligible impact magnitude resulting in neutral impact significance.
- 7.6.36. The remaining landscape resources (hedges, woodlands and trees) are affected by minor impact magnitude resulting in slight beneficial impact significance, as there is a minor benefit due to the addition of key characteristics, features, or elements, There is also some beneficial impact on attribute or a reduced risk of negative impact occurring.
- 7.6.37. The landscape features most affected include those within the detailed landscape character area D which will be affected by an impact of major magnitude resulting in large impact significance as there are higher grades of designation such as listed buildings. Regional landscape and the remaining local landscape character areas (B & C) result in moderate impact significance as there remains as loss of resource.
- 7.6.38. Table 8 (Appendix E1) provides a summary of landscape impacts.

Visual Residual Impact (Year 1)

- 7.6.39. The residual magnitude of impact of the proposals was assessed using Table 4: Determination of Visual Impact Magnitude and the residual significance of impact determined in accordance with Table 5: Determination of Impact Significance (Appendix E1). Both the magnitude of impacts and significance of impacts for visual receptors are summarised in Table 9 (Appendix E4).
- 7.6.40. The proposed planting will be immature in the first year and do little to help mitigate the visual impact for the adjacent residents. New fencing will be erected along the road boundaries and be clearly visible along most of the route from adjacent properties. There is likely to be some growth of the newly seeded grass and wildflower areas that will help in reducing the impact from the earthworks and slightly soften the ‘scarring’ of the land.
- 7.6.41. The mitigation measures, such as the replanting of hedgerows and standard trees to screen the road from adjacent receptors, will take longer to reach maturity. For this reason the change in the view from most receptors remains noticeable, with an effect on its character and an alteration to some of its components and features. Therefore, the impact magnitude and the impact significance remain the same for residual impact on visual receptors as for post construction before mitigation.

Visual Residual Impact (Year 15)

- 7.6.42. The residual impact for those receptors previously assessed in post construction as having no change impact magnitude and neutral impact significance will remain the same.
- 7.6.43. Other receptors that have also been determined as having neutral residual impact significance due to no change impact magnitude after 15 years, as the proposals are virtually undetectable include:
- Category A receptors – 18a, 22a & 23a;
 - Category B receptors – 8, 9, 11, 18b, 20, 22b, 23b & 24b; and
 - Category C receptors - 5, 7, 54 – 57.

- 7.6.44. The most affected receptors are within Category A, which generally have close, uninterrupted views of the proposals.
- 7.6.45. Those receptors (15 in total) that are assessed as having moderate residual impact significance due to minor residual impact magnitude include:
- Category A – 12a, 13, 14a, 16a, 19a, 24a, 44 – 48, 50 & 51;and
 - Category B – 15 & 38.
- 7.6.46. The remaining visual receptors within the study area (14 in total) are assessed as having negligible residual impact magnitude, as the proposals remain noticeable in the view. These receptors are determined as having a slight residual impact magnitude. These include:
- Category A – Road users, receptor - number 58;
 - Category B – 1, 3, 12b, 14b, 16b, 39 - 42;and
 - Category C – 32 – 34 and 37.

7.7. Conclusions

Landscape

- 7.7.1. In terms of landscape impact, the proposed road is located in an attractive, rural landscape whose rolling and, in places, hilly landform will not easily accommodate a transportation scheme of this type. However, the road has been designed to avoid/reduce the most significantly adverse impacts by aligning the road in cutting where possible particularly past Maybole.
- 7.7.2. The proposed route will impact the Foothills Landscape Character Area. The likely degree of impact is therefore largely dictated by:
- Relative land take and associated works which will involve removal of mainly farmland designated as Rural Protection Area and other landscape elements e.g. field pattern and boundary vegetation;
 - The indirect impact on designated sites such as Scenic Area, Sensitive Landscape Character Area and a number of listed buildings where the landscape setting for these properties will be affected; and
 - The penetration into the wider countryside around Maybole.
- 7.7.3. Those landscape features most affected due to the proposed scheme include detailed landscape character area D which is affected by large impact significance followed by the regional landscape, the remaining local landscape character areas (B & C); geology, landform and land use and grasslands which are affected by moderate impact significance, as there remains an overall loss of resource.
- 7.7.4. The mitigation measures will provide a slight beneficial impact for hedges and woodlands. The addition of the trees, woodlands and hedges also increase the biodiversity within the study area as well as providing positive visual amenity.

- 7.7.5. Cultural heritage, built environment and the road in the landscape are affected by slight impact due to the proposed scheme.

Visual

- 7.7.6. The proposed road is off the line of the existing A77 and results in a loss of vegetation and a substantial amount of agricultural land. Visual impacts during construction are largely due to the earthworks required and the route crossing through land in close proximity to a number of receptors, particularly to the west of the town.
- 7.7.7. The proposed scheme impacts more upon the greater concentration of receptors associated with Maybole causing a significant adverse change in the view for a number of receptors in particularly to the north and northwest of the town.
- 7.7.8. The majority of the identified receptors will be affected by a neutral impact, fifteen years after construction with mitigation however there is a significant, adverse change in the view for a number of the visual receptors.
- 7.7.9. Fifteen visual receptors are assessed as being affected by moderate residual impact significance; the majority of these are within Category A which generally has close, uninterrupted views of the proposals.
- 7.7.10. The remaining visual receptors within the study area, fourteen in total, are assessed as being affected by slight residual impact magnitude, as the proposals remain noticeable in the view. The majority of these were Category B receptors. The impacts on the visual receptors concentrated mainly on Category A and B receptors with only 4 Category C receptors being adversely affected.
- 7.7.11. The scale and the nature of the scheme, with the inclusion of roundabouts, bridge structures and the footprint of the proposed road creates landscape and visual impact due to the land-take required and increased number of vehicles using the road. However, the proposed mitigation measures and scheme design, with significant lengths in cutting, will reduce the impact. The proposed mitigation measures will help screen views of the road from the highest number of receptors, as well as providing attractive views out to the wider countryside for road users. The addition of planting to retain and enhance the landscape character and quality also improves the biodiversity element within the scheme. Over the following years the planting will continue to mature and reduce views further for those receptors affected.