

## **8. Land Use**

### **8.1. Introduction**

8.1.1. This chapter examines the potential impacts which may arise from the proposed scheme. The objective of the chapter is to identify any potential constraints associated with the predicted land take described in Chapter 1, Introduction.

8.1.2. The assessment focuses on the direct and indirect impacts of the proposed scheme on agricultural, community or designated development land that may be lost and also of residential and commercial buildings that may be demolished. Possible mitigation to prevent, reduce or compensate for adverse effects is also identified.

### **8.2. Methodology**

8.2.1. The assessment of land use was carried out in accordance with Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3 Part 6: Environmental Assessment Techniques – Land Use<sup>38</sup>.

8.2.2. The aim of this assessment is to identify the baseline conditions and the impacts associated with the proposed scheme. This includes:

- Identification of the type and number of private or commercial properties where demolition or land take may be required, including the likely impact on business viability;
- Identification of the location of community land that could be lost,
- Identification of land which falls within the local planning authority development designations;
- Identification of the value of agricultural land and the effects upon it; and
- Determination of the likely impact of the design on abandoned waterways or new waterway development proposals.

8.2.3. The four main areas covered in the assessment of the effects of a development on agricultural land are specified as:

- Land take in relation to quality and quantity of agricultural land lost;
- Type of husbandry;
- Severance; and,
- Major accommodation works.

<sup>38</sup>Design Manual for Roads and Bridges (2007) Volume 11, Section 3, Part 6 *Land Use*. Available at:<http://www.dft.gov.uk/ha/standards/dmr/vol11/section3/11s3p06.pdf> [Accessed 21/07/2013].

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### **Planning Policy, Legislative Context and Standards**

- 8.2.4. The Scottish Government's planning policies for land use are set out in the National Planning Framework 2 (NPF2), Scottish Planning Policy (SPP), Planning Policy Statement (PPS): Designing Places, and PPS: Designing Streets and Circulars. Policies and plans from these documents relevant to land use are listed below.

#### National Policies

- 8.2.5. The Scottish National Planning Framework (NPF2)<sup>39</sup> was published in June 2009. It sets out the spatial strategy for Scotland's development to 2030, and designates 14 national developments of strategic importance to Scotland.

- 8.2.6. The key aims of the strategy for Scotland's spatial development to 2030 are:

- to contribute to a wealthier and fairer Scotland by supporting sustainable economic growth and improved competitiveness and connectivity;
- to promote a greener Scotland by contributing to the achievement of climate change targets and protecting and enhancing the quality of the natural and built environments;
- to help build safer, stronger and healthier communities, by promoting improved opportunities and a better quality of life; and
- to contribute to a smarter Scotland by supporting the development of the knowledge economy.

- 8.2.7. The Scottish Planning Policy is a statement of Scottish Government policy on nationally important land use which was first published in February 2010. It is currently under review, with consultation on the new draft SPP completed in July 2013. A summary of relevant subject policies from the existing SPP are outlined below:

- Rural Development Policy: states that the strategy for rural development set out in the development plan should respond to the specific circumstances in an area whilst reflecting the overall aim of supporting diversification and growth of the rural economy.
- Historic Environment Policy: states that development plans should provide the framework for the protection, conservation and enhancement of all elements of the historic environment to allow the assessment of the impact of proposed development on the historic environment and its setting.
- Landscape & Natural Heritage Policy: states that planning authorities should take a broader approach to landscape and natural heritage than just conserving designated or protected sites and species, and should take the ecosystems and natural processes in their area into account.

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<sup>39</sup>National Planning Framework 2. Available at: <http://www.scotland.gov.uk/Topics/Built-Environment/planning/National-Planning-Policy/npf> [Accessed 03/06/2013].

- Open Space and Recreation Policy: states that planning authorities should consider access issues and should protect core and other important routes and access rights when preparing development plans and making decisions on planning applications.

8.2.8. Other relevant national policies include:

- The Scottish Executive Development Department's (SEDD)<sup>40</sup> Development involving Agricultural Land. Circular 18/1987, as amended by 29/1988 and 25/1994;
- PAN 33: Development of Contaminated Land (2000)<sup>41</sup>;
- PAN 1/2013: Environmental Impact Assessment<sup>42</sup> and;
- PAN 60: Planning for Natural Heritage (2000)<sup>43</sup>.

### **Regional Policies**

8.2.9. The Ayrshire Joint Structure Plan 2025 (AJSP)<sup>44</sup> recognises the need to regenerate rural communities by encouraging them to adapt to new opportunities and enhance environmental quality. The key objectives of the plan are as follows:

- To stabilise the population in 2025 at current levels;
- To support measures that encourage economic development underpinned by a sustainable population;
- To seek improved accessibility both within and opportunities outside, Ayrshire;
- To develop strong and vibrant communities by realising their potential for regeneration and growth and through the promotion of appropriate development for rural areas;
- To safeguard and enhance the quality of the environment.

### Local Policies

8.2.10. The South Ayrshire Local Plan 2007 (SALP)<sup>45</sup> – sets out the policies, proposals and recommendations for the development or other use of land together with a reasoned justification.

<sup>40</sup>SEDD Circular 18/1987 Development Involving Agricultural Land (Amended Circular 25/1994). Available at: <http://www.scotland.gov.uk/Publications/1987/10/circular-18-1987> [Accessed 27/06/13].

<sup>41</sup>PAN 33 Contaminated Land (2000). Available at: <http://www.scotland.gov.uk/Publications/2000/10/pan33> [Accessed 24/06/13].

<sup>42</sup>PAN 1/2013 Environmental Impact Assessment. Available at <http://www.scotland.gov.uk/Resource/0043/00432581.pdf>

<sup>43</sup>PAN 60 Planning for Natural Heritage (2000). Available at: <http://www.scotland.gov.uk/Publications/2000/08/pan60-root/pan60> [Accessed 27/06/13].

<sup>44</sup>Ayrshire Joint Structure Plan (2025). Available at: <http://www.ayrshire-jsu.gov.uk/download/Approved%20AJSP%20Nov%202007.pdf> [Accessed 27/06/13].

<sup>45</sup>South Ayrshire Local Plan (2007) Available at: <http://www.south-ayrshire.gov.uk/local-plan/document.aspx> [Accessed 11/06/13].

8.2.11. 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 STRAT 3 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”. There is also land locally designated as Sensitive Landscape Character Areas within the Ayrshire Green Network<sup>46</sup>, located approximately 600m north of the town.

8.2.12. Within the SALP the A77 trunk bypass route for Maybole is stated as a priority scheme.

8.2.13. The SALP also includes the following relevant policies:

- Policy SERV4 - The Council will 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.
- Policy SERV7 – The Council will seek to ensure that land in operational public transport use is retained and will resist proposals for their loss to an alternative use unless it demonstrate that the loss of the facility would not impact on the quality of public transport within the area.
- Policy SERV8 – Provides and maintains footpaths, cycle ways and cycle parking facilities;
- Policy BE1 - Ensures a consistent high standard of development within the plan area, proposals will be considered in terms of compliance with the design criteria;
- Policy BE2 – Protects listed buildings and their settings;
- Policy ENV1 – Protects Ayrshire’s Landscapes and its distinctive characteristics, with a strong emphasis on Special Areas of Conservation (SAC) and Special Protection Areas (SPA) unless there are imperative reasons of over-riding public interest and there is no alternative solution; and Sites of Special Scientific Interest unless any adverse effects are out weighted by social or economic benefits of national importance.
- Policy ENV2 – Protects designated sites of natural heritage value with priority given to: Local nature reserves; and Sites containing species protected by the Habitats Directive, Wildlife and Countryside Act 1981 or the Badgers Act 1992; and Wildlife sites and provisional wildlife sites; and Ornithological sites.

<sup>46</sup>Ayrshire Green Network via Ayrshire Joint Planning Steering Group. Available at: <http://maps.ayrshire.gov.uk/mapsAJP/mapAyrshire.htm> [Accessed 04/08/13].

- Policy ENV3 - The Council will require 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.
- Policy ENV5 – The Council will presume in favour of safeguarding from development all green spaces which are important to local amenity or recreational use. Recreational spaces include sports fields, pitches, greens and other similar open air facilities. Those green spaces which are identified on the Proposals Map make, in addition to their local importance, a valued and valuable contribution to the wider environment.
- Policy ENV10 - The Council will seek to safeguard historic gardens and designed landscapes. Proposals affecting these areas will be considered in terms of landscape impact and in relation to their history, architecture, horticulture and nature conservation qualities.
- Policy ENV13 - There will be a presumption in favour of protecting prime quality agricultural land (defined as grade 1, 2 or 3 in the Macaulay Land Classification system), where an alternative location for development may exist;
- Policy H4 – Housing land supply safeguarded for housing development;
- Policy H7 – Within areas predominantly in residential use as identified on the Proposals Map, the Council will seek to protect the character and amenity of the area concerned, especially from non-residential development with potentially adverse effects on local amenity.

8.2.14. The above policies were taken into consideration during the design of the project and if compliance was not possible then suitable mitigation was put in place. More detail can be found in Chapter 14 Policies and Plans.

#### **Consultation**

8.2.15. In accordance with DMRB, full consultations were undertaken mainly in May 2013 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 3B.

8.2.16. The responses from the consultations are discussed in greater detail within the impact section of this chapter.

8.2.17. During site visits, several farmers raised queries in relation to the alignment of the proposed scheme, reduction of field fragmentation and the timescales associated with surveys.

#### **Determination of Baseline Conditions**

8.2.18. A desk study was undertaken which comprised of a review of relevant plans, policies and previous assessments including:

- Stage 2 Environmental Assessment (Atkins, October 2007) and Position Paper (Amey, June 2012);

- The Soil Survey of Scotland Land Capability for Agriculture (Macaulay Land Use Research Institute) (MLURI)<sup>47</sup>: Sheets 70 – Ayr & Kilmarnock and 76 – Girvan; and,
- South Ayrshire Council Planning Interactive Mapping<sup>48</sup>.

8.2.19. Walkover site surveys were also 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 current land uses and management issues.

#### **Determination of Impact Significance**

8.2.20. To assess the potential effects on land use associated with the proposed scheme, the sensitivity of receptors and the degree of change that any impact will have on proposed development must be determined.

8.2.21. The sensitivity of the agricultural land within the scheme extents is assessed in accordance with Table 8.1, using the Land Capability for Agriculture classification which was developed by the Macaulay Institute to describe the agricultural potential of land based on the degree of limitation imposed by its biophysical properties. It is based primarily on climate, a number of soil properties, (for example depth and stoniness), wetness, erosion risk and slope. Also included are the overall pattern, i.e. variability, and, in one of the classes (Class 6), vegetation cover is also taken into account.

8.2.22. Agricultural land is classified according to its capacity for crop production. The system provides for seven grades of land quality with a number of sub-divisions, each capable of producing specified crops to an acceptable yield standard. The defined categories can be further modified by sub-class limitations of climate, gradient, soil, wetness or erosion. Grades 1, 2 and sub-grade 3.1 are recognised as being the best and most versatile agricultural land and are collectively known as 'prime quality land'.

8.2.23. The sensitivity of the remaining land uses has been assessed qualitatively. The assessment to determine magnitude of impact is based on the anticipated land take within the scheme extents and demolition requirements. Distance from the scheme, severance and accessibility are also considered.

8.2.24. The sensitivity of land can be determined using Table 8.1. Determination of Sensitivity of Land and (using Table 8.2) determination of Impact Magnitude on Land. Once the sensitivity and magnitude of the land use is determined, the overall significance is assigned according to Table 2.4 Determination of Impact Significance.

<sup>47</sup>Land Capability Classification for Agriculture (Macaulay Land Use Research Institute). Sheets 70 Ayr & Kilmarnock & 76 Girvan.

<sup>48</sup>South Ayrshire Local Plan. Available at: <http://www.south-ayrshire.gov.uk/local-plan/document.aspx> [Accessed 21/07/13].

Table 8.1 Determination of Sensitivity of Land	
Sensitivity	Typical Criteria Descriptors
Very High	Private/commercial property or land associated with it. Property or land used by the community e.g. schools. Agricultural land classified as MLURI grade 1, 2 and 3.1. Core Path, long distance path and national cycle routes.
High	Agricultural land classified as MLURI grade 3.2. Land designated by Local Authority for future development
Medium	Other footpaths, bridleways or cycleways. Agricultural land classified as MLURI grades 4.1 and 4.2.
Low	Agricultural land classified as MLURI grades 5.1, 5.2 and 5.3. Public utilities.
Negligible	Agricultural land classified as MLURI grades 6.1, 6.2, 6.3, 7 and unclassified land.

Table 8.2 Determination of Impact Magnitude on Land	
Impact Magnitude	Typical Criteria Descriptors
Major	>75% loss of land and/or complete severance. Demolition of property.
Moderate	>50% loss of land and/or complete severance.
Minor	Loss of part of a site (between approximately 15% and 50%) and/or increased severance.
Negligible	<15% loss and/or partial severance.
No change	Very slight to no change from the baseline condition.

### 8.3. Baseline Conditions

#### Study Area

- 8.3.1. The study area for consideration of land use effects is based on the footprint of the proposed scheme. The Land Capability Classification for the scheme is illustrated on Drawing No. 2500182/ENV/8.1 while Drawing No. 25000182/ENV/8.2 - Land Use Plot Areas shows fields adjacent to the bypass that may be affected by the scheme.

#### Topography and Geology

- 8.3.2. The topography of the study area is generally undulating, reflecting the morainic nature of the local geology with slopes ranging from shallow to steep. Immediately to the west and north of Maybole are Gallow Hill and Kirklandhill respectively which range in elevation from approximately 85m Above Ordnance Datum (AOD) to 145m AOD. Moving to the north-east of Maybole two further unnamed hills are present which range in elevation from approximately 75m AOD to 120m AOD.

- 8.3.3. Altitudes range from 96m (OD) on the lowest ground west of Maybole to 144m (OD) on the ridge between East Enoch and Kirklandhill.
- 8.3.4. 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.
- 8.3.5. The superficial deposits underlying the proposed scheme route 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), the maps record the glacial till to occur as glacial moraines described as mounds or ridges of boulder clay, sand and gravel.
- 8.3.6. 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.
- 8.3.7. 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.
- 8.3.8. The climate is typical of lowland Ayrshire, being strongly influenced by the Gulf Stream and having mild winters, cool summers and an average annual rainfall of around 1100mm. Soils are typically at field capacity (i.e. replete with moisture) between early October and early March.
- 8.3.9. 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 (Figure 8.1).
- 8.3.10. There is only 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 Myrehill. Views of the land south over the railway track towards Nether Culzean is illustrated in Figure 8.2.
- 8.3.11. There are several commercial woodlands but none of these are directly affected by the proposed scheme.
- 8.3.12. Residential areas of Maybole are located to the south and western half of the study area while 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.
- 8.3.13. There is only one layby within the study area located to the western extents of Maybole, located on the A77 eastbound carriageway.



Figure 8.1 Example of farmsteads at the western extents, south towards Broomknowes



Figure 8.2 View of grazing sheep, south towards the railway track and Nether Culzean

- 8.3.14. There is a Scenic Area and a Sensitive Landscape Character Area running along the length of the bypass located approximately 600m to the north-west of the scheme as shown on Drawing No. 2500182/ENV/7.2.
- 8.3.15. There are two B listed buildings in close proximity to the scheme, East Enoch and Nether Culzean. Baltersan Castle, off the southbound carriage past Broomknowes, is a Grade A listed building, which lies within 1km north east of the proposed tie-in at Broomknowes. Kirklandhill is a C listed building as shown on Drawing No. 2500182/ENV/7.2.
- 8.3.16. The Phase 1 Habitat Survey, Drawing Nos. 25000182/PHS/001-005 (Appendix D1) also illustrate the habitats that will be affected by the proposed scheme. This is assessed in Chapter 6, Ecology & the Nature Conservation.

#### Watercourses

- 8.3.17. Several minor streams flow through the study area generally towards the south-east.
- 8.3.18. 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:
- 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.
- 8.3.19. The two remaining minor water courses in the study area flow into the Chapelton Burn which subsequently joins with the River Doon.
- 8.3.20. Further detail on watercourses can be found in Road Drainage & the Water Environment (Chapter 12).

#### Access

- 8.3.21. Access to Maybole town centre and residential properties close to the scheme extents, particularly those residential properties on Kirkoswald Road (Alva, Dulna, Hazelhurst and Point Gary) are likely to be disrupted due to the scheme proposals. Outwith the town centre, there are several private accesses onto the A77. A number of these accesses are also likely to be disrupted during the construction of the proposed scheme, as well as access to residential properties and community facilities along the minor roads to the north of Maybole town centre.

- 8.3.22. In addition, there are private accesses from B7023 Culzean Road for East Enoch and The Ranch Caravan Park. Kirklandhill Path, the neighbouring cottage, Kirklandhill Cottage (via a field gate), and Cargilston have private access to Kirklandhill. Although Cargilston also has access from Ladycross Road. Access to a telecommunications station is also located on Kirklandhill Path.
- 8.3.23. On the B7024, there are private accesses to Redbrae Residential School and Viewfield, which are located on the edge of the town boundary.
- 8.3.24. The road to the eastern extents from Smithston tie-in, towards Bankend Bridge provides access to Glen Cottage and Glen Marie Cottage.
- 8.3.25. In addition to the private accesses from these roads, there are field access points. There are currently 49 field access points throughout the scheme, located either directly from the roads or between adjoining fields. There are also a total of 12 disused access points.

#### **Private and Commercial Property**

- 8.3.26. There are 11 farmed enterprises within the scheme extents. These are shown on Drawing 2500182/ENV/8.2 – Environmental Land Use, and listed in Table 8.4 Land Take Required and Table 1 Summary of Impacts (Appendix F). The distances of each of the properties can be found in Landscape Effects (Chapter 7). The farmed holdings identified which are either owned or rented by the farmers, will be assessed within the agricultural section of this chapter.
- 8.3.27. There are two properties within the scheme extents that are currently derelict.
- Kirklandhill Cottage (Figure 8.3) located approximately 15m from the scheme within Kirklandhill land, with access from Kirklandhill Path. Kirklandhill Cottage will be the only building directly impacted by the proposed scheme; and
  - Broomknowes Cottage, located 145m from the scheme, with access from the southbound carriageway on A77, exiting the town to the west.
- 8.3.28. The sensitivity for both Kirklandhill Cottage and Broomknowes Cottage is determined as very high as they are within grade 3.2 land.



Figure 8.3 Kirklandhill Cottage

### **Community Land**

- 8.3.29. In Scotland, land used by the public (community land) is defined in DMRB Volume 11 Section 3 as being 'Common', including town or village greens, and 'Open Space'. Open Space is any land laid out as public parks or used for the purpose of public recreation or which is a disused burial ground. Land in these categories which could be lost to road construction is subject to legal restrictions and may require suitable exchange land to be provided.
- 8.3.30. There are four areas under Policy SERV 18 and/or ENV 5, which are designated as community facilities within SALP Map M1: Maybole. These include land at Carrick Academy (10m from the proposals) and Gardenrose Primary School, both of which are owned by South Ayrshire Council. Another area of South Ayrshire Council land adjacent to the B7023 Culzean Road is rented and farmed by East Enoch, therefore it will be included in the assessment of East Enoch farmland within the agricultural land section. Part of this land is also designated as housing land supply and currently has a rugby pitch playing field on a small part of the land adjacent to the housing, which will be unaffected by the scheme. The remaining community facility is located to the east of Maybole, at Redbrae, previously a residential school. This is no longer a school and has planning permission for a residential development and will be assessed within development land.
- 8.3.31. There is a small area of land at the end of Lover's Lane which joins the B7024 Alloway Road, and although this is owned by Lyonston Farm, it will be assessed within this chapter as it is used frequently for recreational purposes. This is a probable right of way (see Chapter 10 Pedestrians, Cyclists, Equestrians and Community Effects for further information).
- 8.3.32. The following roads will also be assessed as they are used frequently by dog walkers, cyclists and horse riders for recreational purposes. These include
- Kirkoswald Road, A77;
  - Culzean Road, B7023;

- Gardenrose Path;
- Kirklandhill Path; and
- Alloway Road, B7024.

8.3.33. Kirkoswald Road, Culzean Road and Alloway Road all have footways.

8.3.34. The routes are not classified as rights of way but are used for recreational purposes. The National Cycle Network Route 7 travels along Gardenrose Path which is also classed as a Core Path (SA1) within the South Ayrshire Council draft Core Path Plan Interactive Map<sup>49</sup>.

8.3.35. Land used as public footpaths or for other public access is considered in greater detail within Chapter 10 (Pedestrians, Cyclists, Equestrians and Community Effects).

8.3.36. The land ownership of existing roads is often unknown therefore all of these parcels of land have been identified as road solum and are therefore assessed within the community land section of this chapter.

8.3.37. Sensitivity of community land is assessed in accordance with Table 8.1 Determination of Sensitivity of Land. The sensitivity of all identified community land can be found in Table 1 Summary of Impacts (Appendix F). The majority of these are assessed as being of medium sensitivity due to the areas being of local recreational value. Lover's Lane is assessed as high due to the land capability classification and Gardenrose Path as very high as it is designated as a Core Path and a National Cycle Route.

#### **Development Land**

8.3.38. The South Ayrshire Local Plan (April 2007) classifies the land outwith Maybole town boundary as Rural Protection Area (Chapter 14, Policies and Plans), and so any development either residential or industrial would encounter stringent criteria.

8.3.39. Land identified for development (SALP Policy H4) include:

- Land at Whitefaulds to the west of the town, adjacent to the B7023;
- Land north of McCrae Court, which is currently rented and farmed by East Enoch. (This area of land will be assessed within East Enoch land within the agricultural land section); and
- Land west of B7024 Alloway Road, north west of the industrial area.

8.3.40. There is also an area identified for residential development located at Redbrae (08/00062/COU) previously a residential school situated alongside the B7024 exiting Maybole.

8.3.41. The line of the proposed scheme is stated as being protected in the South Ayrshire Council Local Plan Map (M1: Maybole).

<sup>49</sup>South Ayrshire Council Core Paths Plan Interactive Map. Available at: <http://gis.south-ayrshire.gov.uk/map/mapEnvironment.htm> [Accessed 22/08/13].

- 8.3.42. 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 would be affected by noise, visual intrusion etc. than the current assessment suggests.
- 8.3.43. The South Ayrshire Council website<sup>50</sup> provides information on approved planning applications within or close to the proposed scheme. In addition to housing land supply (Policy H4) there are also seven sites in close proximity to the scheme proposals that have planning applications associated with them.
- 8.3.44. Approved planning applications include:
- Burns Wynd, Whitefaulds (07/01567/FUL, 08/00168/FUL & 08/00781/FUL) – Erection of residential development. Application permitted.
  - The Ranch Caravan Park (10/00012/LRB) – Erection of dwelling house. Appeal allowed 24<sup>th</sup> May 2013.
  - East Enoch (12/00875/FUL) – Erection of agricultural shed. Application received 27<sup>th</sup> July 2012 and permitted.
  - Baltersan Mains (12/00222/APP) – Erection of agricultural shed. Application received 24<sup>th</sup> February 2012 and permitted.
  - Broomknowes (13/00739/APP) – Erection of agricultural shed, to the south west corner of the farm unit. Application received 25<sup>th</sup> June 2013 and permitted.
  - 17 Elms Crescent (11/00142/APP), located east of Kirklandhill Path – Alterations & extension to dwelling house.
  - Telecommunications Station at Kirklandhill Path (10/00950/PNF) – Installation of telecommunications equipment and antenna. Application permitted 18th June 2010.
- 8.3.45. In accordance with Table 8.1 Determination of Sensitivity of Land, the sensitivity of development land at Whitefaulds and Redbrae are determined as high due to the local authority designation for future development.

#### **Agricultural Land**

- 8.3.46. The predominant land use within the scheme extents is agricultural.

<sup>50</sup>South Ayrshire Council Planning Services. Available at <http://www.south-ayrshire.gov.uk/planning> [Accessed 23/05/13].

- 8.3.47. The Macaulay Institute's Land Capability Sheets for Agriculture 70 and 76 provided the following information. The majority of the agricultural land is classified as Grade 3.2 on the MLURI Land Capability Classification Drawing No. 25000182/ENV/8.1 - Land Capability Classification. The gradient and the soil are the principal limitations to the west and wetness to the east resulting in land capable of producing a moderate range of crops. According to the land capability map 'It is capable of average production but high yields of barley, oats and grass are often obtained. Other crops are limited to potatoes and forage crops. Grass leys are common and reflect the increasing growth limitations for arable crops and degree of risk involved in their production'. There is also a small area of prime quality land (3.1), capable of producing high yields of a narrow range of crops and/or moderate yields of a wider range, but this area has climatic limitations.
- 8.3.48. There are pockets of wet, low lying ground which are in Class 4.2 throughout the scheme extents and also mainly towards the eastern extents at the Smithston tie-in (Figure 8.4) which is land capable of producing a narrow range of crops. As stated in the MLURI, 'The land is primarily grassland with some limited potential for other crops. Grass yields can be high but difficulties of conservation or utilisation may be severe, especially in areas of poor climate or on very wet soils. Some forage cropping is possible and, when the extra risks involved can be accepted, an occasional cereal crop'.
- 8.3.49. Most of the scheme footprint is under grass, with some forage crops and fields of barley grown for animal feed. There is one dairy farm (East Enoch) with the remaining farms in the area producing sheep and beef. There is a small area of woodland at Kirklandhill. There are also a number of boundary treatments comprised of hedges with intermittent tree planting. The majority of these between fields are in poor condition.
- 8.3.50. Based on information gathered to date there is no contaminated land within the scheme extents.



Figure 8.4 Grade 4 land to the eastern extents of the scheme at Smithston tie-in

- 8.3.51. There are no designated sites within the scheme extents apart from the regional designation of Rural Protection Area. Other designated sites within the study area include listed buildings four of which are within close proximity of the scheme, a Scenic Area and Sensitive Landscape Character Area with several other designated sites close to Maybole but outwith the study area as illustrated on Drawing No. 25000182/ENV/7.2.
- 8.3.52. Table 8.4 Land Take Required provides the land capability classification for each farm. There are parcels of land owned or rented by the identified landowners, which will be impacted by the proposals, several of which have a number of different classifications and principal limitations. Due to the importance and capability of prime agricultural land, sensitivity of the small parcel of land north of Nether Culzean Farm is assigned as very high in accordance with Table 8.1 Determination of Sensitivity of Land. The remaining land which is mainly 3.2 is assigned as high. There are areas of land where there is a combination of both Grade 3.2 and 4.2. In this instance, the land will be assessed in accordance with the highest grade of land present. Table 1 (Appendix F) summarises the sensitivity for agricultural land.

**Public Utilities**

- 8.3.53. 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.
- 8.3.54. 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 pipes are also routed along the side roads serving local properties.



Figure 8.5 Overhead lines between B7023 Culzean Road and Gardenrose Path

- 8.3.55. 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.
- 8.3.56. There are two telecommunications stations located at the edge of the town both around Kirklandhill Path.
- 8.3.57. Access to the PU's are from adjacent roads and field access points throughout the scheme extents.
- 8.3.58. Public Utilities can be assigned a value of low sensitivity as they provide a local service.

**Waterway Development or Restoration Projects**

- 8.3.59. There are no waterway projects within the scheme extents therefore no further assessment is required.

**8.4. Impact Assessment**

**Construction**

- 8.4.1. For all land resource receptors, the impact magnitude is assessed in accordance with Table 8.2 (Determination of Impact Magnitude on Land) and the impact significance is determined in accordance with Table 2.4. A summary of the impacts during construction can be found in Table 1 (Appendix F).
- 8.4.2. In relation to landowner consultations, it was explained that the route corridor is fixed but the position of the mainline will be considered to mitigate loss of land. The design has progressed following consultations and this has led to the preferred scheme design following farm boundaries where possible in balancing all factors affecting the scheme, but small parcels of land remain isolated on either side.
- 8.4.3. According to consultation received from South Ayrshire Council (SAC) Development & Environment, indirect and direct impacts can occur upon heritage resources and their settings. Heritage resources include scheduled monuments, unscheduled monuments, archaeological sites, listed buildings, conservation areas, gardens & designed landscapes.
- 8.4.4. The development will affect a large amount of the Rural Protection Area. This will reduce the landscape quality of the area. Further assessment in relation to landscape quality can be found within the Landscape Effects, Chapter 7.

Access

- 8.4.5. The scheme will result in the access to a number of residential properties (particularly four residential properties on Kirkoswald Road, south of Carrick Academy) close to the construction works being disrupted, as well as access to the town centre.
- 8.4.6. The proposed works are located close to Carrick Academy and Gardenrose Primary School and if the scheme is constructed during term time then there will have a negative impact for the users accessing the schools during construction works.

- 8.4.7. There will be an impact on the Ranch Caravan Park, although there is no land take at this area, on the accessibility to the caravan park caused by traffic management operations and traffic associated with the construction works. The access to the town centre from users of the park will be disrupted.
- 8.4.8. As well as disruption to access for the community facilities and residential properties, farm units will have their access disrupted. Disruption to farm accesses will be experienced by several farm units, as well as access to their fields. Some farm and field accesses will be closed and new accesses formed. Assessment of farm units including their access to the farms and the field access points is included in the agricultural land section below.
- 8.4.9. The construction works are predominantly offline and are therefore anticipated to have minimal effect on local businesses within Maybole as well as access to the town centre.
- 8.4.10. Road users will also be disrupted due to traffic management operations during construction works to accommodate new accesses and field access. Chapter 11 Vehicle Travellers assesses their impacts in greater detail.
- 8.4.11. The total land area required for construction of the scheme is 45ha. All land take will be permanently utilised for the new road. Total amounts for land take required on a permanent basis from private and commercial property, agricultural land; non-agricultural land and road solum are provided in Table 8.4.
- 8.4.12. The largest impact on land use during the construction phase will be the creation of cuttings and embankments. Details of this are provided in Table 8.3. The total amount of excavated material will be suitable for re-use on site resulting in no requirement to import fill material.

Table 8.3 Earthwork Quantities			
Total Fill Required (m <sup>3</sup> )	Total Suitable Cut (m <sup>3</sup> )	Suitable Cut (rock cut) (m <sup>3</sup> )	Total Unsuitable Cut (m <sup>3</sup> )
450,000	475,000	175,000	70,000

**Private and Commercial Property**

- 8.4.13. There are no commercial properties within the scheme extents however there is a requirement for land take from a number of nearby farms to accommodate the scheme. The impact of land take on the farm business is discussed within the agricultural land section below.
- 8.4.14. The derelict cottage, Kirklandhill Cottage will require to be demolished as part of the proposals. Demolition can give rise to a range of other effects including loss of facilities or amenities, loss of attractive buildings or townscape and opening up of views for other properties previously screened. Also employment implications arising from the loss of all or part of a business premises.

- 8.4.15. Even though the property is derelict, is not designated and therefore has no protection status, there is no opportunity to rebuild as the scheme passes through the site. The impact magnitude is assessed as major, as the property will be demolished resulting in a very large impact significance. The removal of the cottage will not give rise to other effects as mentioned above.

#### **Community Land**

- 8.4.16. It is proposed to take a small amount of land from the western corner of land adjacent to but outwith Carrick Academy school grounds. In accordance with Table 8.2, the impact magnitude is determined as minor due to the percentage land required being 32% of the plot area. The impact significance is therefore determined as moderate.
- 8.4.17. The edge of the path and part of the stone wall at Lover's Lane is part of the neighbouring farmland at Lyonston and will be lost and impact magnitude is assessed as negligible resulting in slight impact significance. Lover's Lane and its connection with the B7024 Alloway Road will be retained albeit tied into the realigned road.
- 8.4.18. The proposed scheme will result in disruption to recreational land from footpaths and road verges which are used by dog walkers, cyclists and horse riders including:
- Footway at A77 Broomknowes Tie-in, Kirkoswald Road;
  - Footway at B7023 Culzean Road;
  - Footway at B7024 Alloway Road; and,
  - Road/grass verge used at Gardenrose Path and Kirklandhill Path.
- 8.4.19. With reference to Chapter 10, paragraph 10.3.12 'The British Horse Society (BHS) considers the area to be used frequently by equestrians, however during their consultation period they only had one response in relation to users in the area'.
- 8.4.20. The areas of recreational land on the existing roads identified above, all of which the proposed scheme passes through, will be altered temporarily accommodate the tie-in sections and the erection of the over and under bridges. Disruption will be caused along all identified roads as listed above. The magnitude of impact is therefore assessed as negligible for all receptors due to the percentage area required during construction works resulting in slight impact significance. It is important to note that the area of each road is not provided but it would be <15% of the total plot area during construction.
- 8.4.21. A further detailed assessment of the impact on pedestrians and other recreational users is provided within Chapter 10 (Pedestrians, Cyclists, Equestrians and Community Effects).
- 8.4.22. The majority of the remaining land within the scheme extents currently identified as being road solum will not be required to accommodate the proposed scheme but disruption will be caused due to the construction works for the tie-in sections. The impact magnitude is determined as negligible resulting in slight impact significance.

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### **Development Land**

- 8.4.23. Earthworks associated with the proposed scheme will impact a very small area of land at Whitefaulds and Redbrae designated for residential development. Future changes in land use, for which planning permission has been granted may also be relevant to the assessment of a scheme e.g. where a proposed scheme would run close to an area reserved for housing development, should be recognised.
- 8.4.24. The remaining land permitted for development will not be affected as it is beyond the proposed scheme. However, there may be an adverse cumulative impact if other approved planning applications are carried out at the same time.
- 8.4.25. In accordance with Table 8.2 the impact magnitude is assessed as negligible, as there is only a small percentage of the overall plot area required to accommodate the proposals. The sensitivity of the land is assessed as high therefore the significance of impact is determined to be slight.

### **Agricultural Land**

- 8.4.26. There is a requirement for land take from a number of nearby farms to accommodate the proposed scheme. Loss of agricultural land cannot be mitigated and has an adverse effect on the rural economy. The degree of impact on individual farms depends on the proportion and quality of the land lost in relation to the whole holding. Not all land owned by the farm units are known therefore only the fields adjacent to the scheme are considered as part of this assessment as shown in Drawing No. 25000182/ENV/8.2 - Land Use Plot Areas. Table 8.4 Land Take Required details the areas of land required from each farm unit and shows this as a percentage of the total area of these fields and will therefore result in a conservative impact assessment.
- 8.4.27. It is predicted that the land take from each of the farm units will not exceed 26% of the plot areas considered.
- 8.4.28. The proposed scheme will require predominantly agricultural land. The land required is a combination of land classified at grades 3.1, 3.2 and 4.2 by MLURI. There is only a very small parcel of prime agricultural land within the scheme extents, north of Nether Culzean. The remainder of the land required permanently for the scheme is either grade 3.2 or 4.2.
- 8.4.29. A total of 45ha of land will be required as land take to construct the proposed scheme. There will be a total cut volume of 545,000m<sup>3</sup> and total fill requirement of 450,000m<sup>3</sup>, as shown in Table 8.3 Earthwork Quantities.
- 8.4.30. The impact for the agricultural land within the farm units is described in greater detail below.

### **Severance of Main Farm Access**

- 8.4.31. Severance of main farm buildings from the public road can render a farm non-viable and necessitates the provision of alternative access arrangements.

- 8.4.32. Access from all roads from the west, north and east entering Maybole town will be affected by the proposals during construction. The accesses to farm units and farm worker properties located along these roads will also be disrupted; although this may be at different times depending on the timing of the construction works. The impacts from the construction traffic and traffic management operations will be temporary and only during the construction works.
- 8.4.33. The farm units that will experience disruption to access include:
- Baltersan Mains and 2no neighbouring cottages due to construction traffic and traffic management;
  - Broomknowes requires a new access and access to the derelict Broomknowes Cottage on the A77;
  - The access road at Cultezeoun will be reduced and a new access formed;
  - East Enoch requires the access entrance to be raised to accommodate the proposals and will be constructed on embankment;
  - Kirklandhill Path will be closed for approximately 6 to 9 months during construction but there will be a requirement that access is maintained across fields; and
  - Access to the section of Lover's Lane will be disrupted where it joins the B7024 Alloway Road; this is also a field access point for land at Lyonston Farm.

#### **Severance of Farms**

- 8.4.34. Dairy farms are more adversely affected by severance than other livestock and arable farms. This is because dairy cattle have to walk twice daily from their pastures to the milking parlour. Severance of pastures from the parlour by a main road necessitates the provision of an accommodation underpass or over bridge to maintain viability of the farm.
- 8.4.35. Severance is less significant for beef and sheep farms as animals remain in fields for long periods and can be transported between fields via road. Arable machinery can likewise reach severed land by road, if alternative access arrangements are provided. As a result of the proposals, field accesses and some farm tracks would be severed necessitating the provision of alternatives.
- 8.4.36. The land will become fragmented along the scheme with several areas of land being locked from existing farms.
- 8.4.37. Manoeuvrability and utilisation of the land to continue current agricultural practices within fields due to reduction in field sizes may be a problem. The majority of agricultural land remaining may not remain suitable for cultivation and existing agricultural practices. The design has been amended in consultation with the landowners and this has resulted in relocating the proposed scheme closer to a number of the field boundaries, particularly to the eastern extents, to reduce fragmentation and improve manoeuvrability.

8.4.38. The effect of the scheme on farm units and their viability has been considered in consultation with the District Valuer and while loss of land and severance will be experienced, access arrangements have been developed that provide the ability to continue farming although some re-arrangement of field boundaries will be required.

8.4.39. Access for farmers to their fields (owned or rented), prevented as a result of field fragmentation caused by land severance include land at:

- Kirklandhill;
- St. Murray;
- Nether Culzean;
- Myrehill;
- East Brockloch; and,
- Land utilised at East Enoch;

8.4.40. The impacts for each farm unit are as follows:

Baltersan Mains

8.4.41. A small amount of landtake is required from Baltersan Mains at the margin of the farm and therefore the main farming activities are unlikely to be affected by the construction works. Access to the farm may however be disrupted due to traffic management and construction traffic.

Cultezeoun

8.4.42. The existing access off the A77 into the farm which would be located close to the south of the south roundabout, not in accordance with Design Standards, is being closed under the scheme proposals. A new access track linking via an underpass into Maybole is proposed such that access is taken from within the town's 30mph zone providing safer access and removing a direct farm access from the A77 Trunk Road.

8.4.43. The new track is aligned to utilise as far as practicable an existing track (the former, stopped part of the original A77) to avoid unnecessary use of agricultural land for the new access track. No land take is required from Cultezeoun Farm as the access off the A77 has been acquired previously by the road authority when the original A77 was realigned to its current position in this area.

8.4.44. The track will also provide access to fields owned by Broomknowes and East Enoch Farms to reduce the impact of severance to these units and in the case of Broomknowes Farm to remove and replace an existing access off the A77 Trunk Road.

Broomknowes

8.4.45. Land at Broomknowes will be reduced as part of the proposals. Broomknowes access will be relocated from the 60 mph zone to a 30mph zone linking to the Maybole side of the south roundabout.

- 8.4.46. Access to fields owned by Broomknowes Farm on the opposite side of the A77 from the farm, which is currently taken directly across the trunk road will be also be relocated to the Maybole side of the south roundabout and the underpass at the south end of the scheme.
- 8.4.47. The construction works will disrupt access to the farm, Broomknowes Cottage and the neighbouring fields. In addition, construction traffic and traffic management will disrupt access.

East Enoch

- 8.4.48. In addition to the land owned by East Enoch, the area of land owned South Ayrshire Council is rented and farmed by East Enoch. These include areas designated for housing land supply and green spaces safeguarded from development which are important to the local amenity as shown in the SAC Local Plan. Land privately owned adjacent to the B7023 Culzean Road is also currently farmed by East Enoch. These areas will be included in the assessment of East Enoch farmland.
- 8.4.49. The land take required for the scheme will reduce the agricultural land currently utilised by the farm, increase severance and affect current access arrangements including the main access to the farm.
- 8.4.50. The proposed scheme will also sever land preventing a clear passage to the milking parlour from the grazing pastures. The movement of livestock is currently unrestricted between fields and the field accesses adjacent to East Enoch farm road are utilised to cross the B7023 Culzean Road. There is a significant impact for the farm as the scheme severs both sides of the B7023 Culzean Road. There is a requirement to alter the scheme to the milking parlour as the proposed scheme severs land used to hold the farms cattle.
- 8.4.51. New field accesses will be formed onto Gardenrose Path each side of the overbridge to allow the bridge to be utilised for access between fields across the bypass. Given the small area of field remaining on the Maybole side of the bypass, it is not proposed that the bridge should be widened to provide an additional segregated track with access between the fields being taken directly via Gardenrose Path.
- 8.4.52. The main farm access will require adjustment to tie into the realigned B7023 Culzean Road which at this location is realigned locally to tie into Culzean Road Roundabout. This will be localised work, short duration work but will cause some disruption during construction although there will be a requirement within the construction contract to allow access at all times.
- 8.4.53. New or adjusted access to fields each side of Culzean Road Roundabout will be provided with access between the fields across the bypass being taken directly via the B7023 Culzean Road and roundabout. These new access will also provide access to the fields both north and south of the B7023 Culzean Road.
- 8.4.54. Within the fields to the south of the B7023 Culzean Road, there is a steep slope at the southern extents.
- 8.4.55. Manoeuvrability in the south-western section during and post construction with machinery will not be possible given the reduction in space available for turning on the steep gradient.

- 8.4.56. The proposed scheme therefore includes an underpass, shared with Cultezeon and Broomknowes Farms, and will also provide new access from the south end of the fields to Maybole and the A77 via the south roundabout, which is not available from these fields currently.
- 8.4.57. An overview of the current water supply to their fields confirmed the eastern fields will be severed as a result of the proposed scheme with a new water supply to these fields required. The possibility of potential screening was also considered during design development and consultation with the landowner but has not been included as this would result in further loss of agricultural land.
- 8.4.58. East Enoch is a B Listed building and the farm has open, elevated views of the construction works and is in close proximity to the proposed scheme. The proposals will have an indirect detrimental influence on B listed buildings. B listed buildings are of regional importance and the landscape quality surrounding these will be affected. The Cultural Heritage section (Chapter 5) provides greater detail on listed buildings.

#### Kirklandhill

- 8.4.59. Part of the agricultural land within the outlying fields of Kirklandhill will be reduced. Severance to Kirklandhill, is applicable on both sides of Kirklandhill Path to the boundaries of Gardenrose Path and the B7024 Alloway Road.
- 8.4.60. Movement of livestock at Kirklandhill Farm is currently unrestricted between fields. Kirklandhill Path should not be utilised to move livestock between fields severed by the proposed scheme for safety reasons. The overbridge proposed at Kirklandhill Path is therefore widened to include a segregated access track running at the edge of the field adjacent to the north side of Kirklandhill Path. This provides direct, segregated access across the bypass for the fields towards the B7024 Alloway Road without the need to take livestock along Kirklandhill Path. Field gates off Kirklandhill Path then provide access across Kirklandhill Path to the fields on the south side of Kirklandhill Path.
- 8.4.61. There are no field drainage issues with the land as it is self-draining, although the current water supply to their fields confirmed the location of a water trough adjacent to the B7024 Alloway Road and a water tank directly west of Kirklandhill Path. Both will be severed as a result of the proposed scheme; and a water supply to these fields will be required.
- 8.4.62. Kirklandhill is a C listed building and the proposed works to accommodate the scheme will have an indirect temporary effect on the buildings designation.

#### St Murray

- 8.4.63. Land will be reduced at St. Murray and there will be areas of land locked due to severance. There will be no disruption to the main farm access or field accesses not affected by severance due to the works being at the margin of the farm boundary.

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Lyonston

- 8.4.64. Detailed extents of Lyonston Farm consist of land on both sides of the railway and the A77 which will be reduced as a result of the scheme. There is severance of the three fields directly affected by the proposed scheme. These fields are currently accessed via two railway underpasses and side road access from the B7024 Alloway Road at Lover's Lane.
- 8.4.65. The access at Lover's Lane to provide access to the fields to the Maybole side of the bypass will be retained with an additional access to be provided from the B7024 Alloway Road to provide access to those on the opposite side of the bypass. Access via the railway will be unaffected.
- 8.4.66. There will be no implications in relation to existing water supply to this farm unit although additional water supply will be provided under the bypass as part of the scheme proposals.

Myremill

- 8.4.67. Detailed extents of Myrehill farm consist of land on both sides of the railway and the existing A77 and will be reduced as a result of the scheme including an area land locked due to severance. There will be no disruption to the main farm access or field accesses due to the works being at the margin of the farm boundary.

Nether Culzean

- 8.4.68. Nether Culzean is a B listed building however the farm buildings are not in close proximity to the proposed scheme as they are located on the opposite side of the railway track and the scheme should therefore should not have any impact on the building's designation.
- 8.4.69. There will be land take required as the proposed scheme severs the land. The only parcel of prime agricultural land is located within this farm unit. The route of the bypass has been adjusted as far as practicable to align it close to the farm boundary but there will some small parcels of land locked due to the proposals.
- 8.4.70. There will be no disruption to the main farm access or field accesses due to the works being at the margin of the farm boundary.

East Brockloch

- 8.4.71. There will be land take required from this farm unit. New field accesses will be provided off the re-aligned Laigh Grange Road at the north roundabout but otherwise, there will be no disruption to the main farm access or field accesses due to the works being at the margin of the farm boundary.

Glenside

- 8.4.72. There will be a small area of land lost from fields owned by this farm. There will be no disruption to the main farm access or field accesses due to the works being at the margin of the farm boundary.

Mid-Brockloch

- 8.4.73. There will be a very small area of land taken from Mid-Brockloch Farm to accommodate the B7024 Alloway Road realignment.

**Water**

- 8.4.74. Watercourses will require being redirected and/or culverted and SuDS ponds constructed.
- 8.4.75. There are no issues associated with the position of the proposed scheme from the Ayrshire Rivers Trust. However, where works fall near a watercourse then the necessary precautions are advised to ensure the risk of pollution is minimised and nearby fish populations are monitored.
- 8.4.76. In response to the consultation, SAC's Environmental Health Officer states the route of the proposed scheme does not affect any private water supplies and does not pass through any areas of potentially contaminated land. Chapter 3 provides further detail on Consultation.
- 8.4.77. The construction impacts are summarised in Table 1 (Appendix F). As shown in Table 8.5 the magnitude of impact varies between the farmed units due to the percentage of land take required. The majority of farms are assessed as having negligible impact magnitude resulting in slight impact significance. East Enoch having slight impact significance due to negligible impact magnitude. Kirklandhill is assessed as having negligible impact magnitude which determines the impact significance as slight. Nether Culzean contains the only area of prime quality land within the scheme extents. The impact magnitude is assessed as moderate with the impact significance is determined as very large.

**Public Utilities**

- 8.4.78. Public utilities will require being diverted as part of the construction works. The majority of the utilities affected are localised diversions to distribution services to the local community which will be maintained until the diversion works are completed.
- 8.4.79. The telecommunications station at Kirklandhill Path has been completed and the proposals should not affect the station, however the access to the station may be disrupted during the construction phase of the proposals.
- 8.4.80. Given the limited nature of the works to public utilities and the effect on land use, the impact magnitude is assessed as negligible resulting in slight impact significance as summarised in Table 1 (Appendix F).

Table 8.4 Landtake Quantities				
Resource Number	Location (Owner)	Plot Area (m2)	Land Take Required (m2)	% of Plot Required
<b>Private &amp; Commercial Property</b>				
1.	Kirklandhill Cottage (Grade 3.2)	100	100	100%
<b>Community Land</b>				
1.	Land adjacent to Carrick Academy (Grade 3.2)	Not Required		
2-6	Roads including A77, B7023, Gardenrose Path, Kirklandhill Path and B7024	This land will not be permanently lost but restored and improved post construction.		
7.	Lover's Lane	397,924	112	<1%
8.	Road Solum	This land will not be permanently lost but restored and improved post construction.		
<b>Development Land</b>				
1.	Land at Whitefaulds Residential Development (Grade 3.2)	21,300	73	<1%
2.	Redbrae Residential Development	25,761	53	<1%
<b>Agricultural Land</b>				
1.	Baltersan Mains - Culzean Estates (Grade 3.2)	199,915	5,696	2.8%
2.	Broomknowes (Grade 3.2)	155,467	25,012	17.6%
3.	East Enoch (Majority Grade 3.2 + 4.2)	556,146	64,494 [15,017 - 4.2] [49,477 - 3.2]	11.6%
4.	Kirklandhill (Grade 3.2)	576,085	78,392	13.6%
5.	St. Murray (Majority Grade 3.2 + 4.2)	219,127	22,602 [7,553 - 4.2]	10.3%

Table 8.4 Landtake Quantities				
Resource Number	Location (Owner)	Plot Area (m2)	Land Take Required (m2)	% of Plot Required
			[15,049 – 3.2]	
6.	Lyonston (Grade 3.2)	397,722	41,061	10.3%
7.	Myrehill (Grade 3.2)	60,657	6,818	11.2%
8.	Nether Culzean (Majority Grade 3.2 + 4.2 + 3.1)	294,804	76,731 [5,554 – 4.2] [1,503 – 3.1] [69,674 – 3.2]	26%
9.	East Brockloch (Majority Grade 4.2 + small area 3.2)	738,845	60920 [52,209 – 4.2] [87,11 – 3.2]	8.2%
10.	Glenside (Grade 3.2 + 4.2)	170,528	5,291 [3,562 – 4.2] [1,729 – 3.2]	3.1%
11	Mid-Brockloch (Grade 3.2)	129,029	614	<1%
	<b>Total Land Take</b>			
	Agricultural Land grades 3.1, 3.2 & 4.2		399,031	
	Agricultural Land – Woodland & scrub		53	
	Non-agricultural (Housing site)		73	
	Road Solum		28,456	
	Servitude		20,691	
	<b>Total Land Take</b>		<b>448,304</b>	

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### **Post Construction**

- 8.4.81. For all land resource receptors, the impact magnitude is assessed in accordance with Table 8.2 (Determination of Impact Magnitude on Land) and the impact significance is determined in accordance with Table 2.4. A summary of the post construction impacts can be found in Table 1 (Appendix F). Photomontages showing the impacts of the proposals can be found within Landscape Effects (Chapter 7).

#### Private and Community Property

- 8.4.82. One derelict property will be demolished.

#### Community Land

- 8.4.83. The land currently identified as used for recreational purposes within the scheme will be restored to include upgraded footpaths for A77, B7023 and the B7024, and improvements for recreational users on Gardenrose Path and Kirklandhill Path. There will be provision of overbridges at Kirklandhill Path and Gardenrose Path and an under bridge at B7024 Alloway Road. Inclusion of combined dedicated cycle and footways will be provided at the tie-in sections at A77 Smithston and Broomknowes.

- 8.4.84. Recreational routes off the minor roads at Lover's Lane will require minimal land take and the link from this path joining the B7024 Alloway Road will be restored as will access to Lyonston farm land.

- 8.4.85. Any affected road solum will be realigned as part of the proposals and improved to allow recreational users safer passage.

- 8.4.86. Some types of publicly used land have been entailed, which means that there are legal restrictions on changes in their use and particular administrative procedures to be followed when acquiring them. When land in one of these categories is taken for a road scheme, it will generally be necessary to provide exchange land which must be equally advantageous to the users of the land required by the road.

- 8.4.87. No land is available for use as exchange land with respect to community land; however the NCR Route 7 and the Core Path at Gardenrose Path will be accessible after construction, as will all other recreational routes identified within the community land section. This is discussed further in Chapter 12 (Pedestrians, Cyclists, Equestrians and Community Effects).

#### Public Access

- 8.4.88. A Non-Motorised User survey (NMU) was carried out on the B7023 Culzean Road and A77 Kirkoswald Road on Friday 2nd August 2013 between 11:00-17:30. The purpose of the survey was to determine the level of pedestrian, equestrian and pedal cycle usage along these roads and associated footways. The results of the survey will be used to establish the level of NMU facilities.

- 8.4.89. The following roads are located within the study area and are of importance to pedestrians:
- Kirkoswald Road - The NMU survey highlighted only three pedestrians travelled along this route during an 6.5 hour period. Therefore this route is determined to have low sensitivity.
  - Culzean Road (B7023) - The NMU survey highlighted the following usage over an 6.5 hour period: 28 pedestrians, 6 Cyclists (on carriageway), and 1 Equestrian (on carriageway).
- 8.4.90. An NMU survey was not undertaken for the other side roads as the linkage is being maintained by the provision of bridges; however the usage is estimated to be low.
- 8.4.91. It is unlikely that the presence of roundabouts and crossing point will deter any users of public land. Further information is located within Chapter 10: Pedestrians, Cyclists, Equestrians and Community Effects and Drawing No. 25000182/ENV/10.1.

#### Development Land

- 8.4.92. Minimal land take is required at Whitefaulds and Redbrae residential development.
- 8.4.93. There are seven sites in close proximity to the proposed scheme that have current planning applications associated with residential and commercial properties, some of which have already been completed. If the remaining applications were to be constructed at the same time as the proposed scheme then this would result in a cumulative impact.

#### Agricultural Land

- 8.4.94. A total area of 400,000m<sup>2</sup> agricultural land will be lost due to the proposals.
- 8.4.95. Table 8.4 details the areas of land required from each individual farm. Ten individual farm units will be affected by the proposals. The total area of each whole farm unit is unknown therefore the assessment of impact magnitude for each farm unit is based on the total area of the fields affected by the proposals. The impact magnitude on the farm units post construction remains the same as for construction due to the amount of land take required.
- 8.4.96. The magnitude of impact due to the loss of agricultural land on each farm unit is detailed in Table 1 Summary of Impacts (Appendix F).

#### Public Utilities

- 8.4.97. During operation of the scheme there will be no perceivable change to public utilities. In accordance with Table 2.4 the impact magnitude is assessed as no change. The impact significance is therefore determined as neutral.

## **8.5. Mitigation**

- 8.5.1. Key issues which are addressed in the scheme design are protection of any prime land and mitigation of impacts related to land take, severance and disruption to farm infrastructure such as buildings, water supplies and drains. The date of construction is not known at this stage.

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### **During Construction**

- 8.5.2. To mitigate any potential adverse effects to land use during the construction phase, the following measures are proposed:
- Recreational users will be directed or escorted through the site. Road users will require clearly signed diversions.
  - Closure of side roads during construction and associated diversion routes was discussed with SAC. Provision of a traffic management master plan was recommended on completion of the final design to aim to reduce access implications associated with the construction of the proposed scheme. It should be noted that closure of both Gardenrose Path and Kirklandhill Path should not be carried out at the same time to ease access impacts for landowners, residents, recreational and road users.
  - Early notification to all relevant stakeholders and public notification will be provided to inform those potentially affected by the construction works.
  - It is anticipated that the contractor will require additional land take for site compound and construction purposes. The location of this will be agreed on a formal basis by the contractor to suit construction programme and activities, the location of which is not determined or prescribed and is therefore not considered within this assessment.
  - The impacts associated with the construction works are of a temporary nature however land take will be required as shown in Table 8.4.

### **Post Construction**

- 8.5.3. There is no mitigation available for the cottage at Kirklandhill. It is derelict and has no designation, and therefore has no protection status. The removal of the cottage is the best option available rather than moving the proposed scheme closer to Kirklandhill Farm or towards the northern edge of Maybole. There is no provision made for replacement building given the property is derelict and not designated.
- 8.5.4. The impact of land take itself cannot be mitigated and the effects on farming in the affected area will therefore be permanent. Therefore mitigation for the loss of land experienced as a result of the construction or operation of the scheme will take the form of compensation.
- 8.5.5. However, access arrangements to farm units, including an underpass at the south end of the scheme and widening of Kirklandhill overbridge have been included in the scheme to minimise the effects of severance, which is of particular importance to East Enoch farm, where the milking parlour is likely to be severed from grazing pastures.

- 8.5.6. The effect of severance has been mitigated further within the design by aligning the road along land boundaries insofar as has been practicable within the constraints on the design. Many of the areas of fragmentation and severance, for which it would not be economically justifiable to provide farm accommodation bridges given the area of fragmentation, are in areas adjacent to outfalls for SuDs drainage treatment and assist in fitting the road into the landscape, further details of which are provided in Chapter 7 Landscape Effects. Some fragmentation remains however although these areas would remain available for agricultural use, albeit operated by a different farm unit.
- 8.5.7. The alignment adjacent to the roundabout at the B7023 Culzean Road has been adjusted to accommodate the field access for East Enoch. This will avoid land take designated for residential development.
- 8.5.8. There are areas proposed for Sustainable Urban Drainage Systems (SuDS). Servitudes along certain areas of land are required to allow right of access in order to carry out inspections and maintenance operations. Watercourses will also be redirected or culverted as a result of the proposals. Private water supplies will be restored.

## **8.6. Residual Impacts**

- 8.6.1. Residual impacts are the proposed impacts with mitigation in place for both the construction and the post construction phases.

### **During Construction**

- 8.6.2. The proposed mitigation measures will ease access for relevant stakeholders and road and recreational users during the works however it is not considered to alter the assessment of impact.

### **Post Construction**

- 8.6.3. The scheme design has been developed to mitigate the impact on land use insofar as practicable, however land take will be required with alterations to access arrangements and cannot be mitigated further.
- 8.6.4. The residual impacts on land resource receptors are summarised in Table 8.5.

Table 8.5 Summary of Residual Impacts						
Receptor Number	Receptor	Sensitivity	Construction		Post Construction	
			Magnitude of Impact	Significance of Impact	Magnitude of Impact	Significance of Impact
<b>Private and Commercial Property</b>						
1.	Kirklandhill Cottage (Grade 3.2)	Very High	Major	Very Large	Major	Very Large
<b>Community Land</b>						
1.	Land adjacent to Carrick Academy (Grade 3.2)	Not required				
2.	A77 Kirkoswald Road	Medium	Negligible	Slight	No Change	Neutral
3.	B7023 Culzean Road	Medium	Negligible	Slight	No Change	Neutral
4.	Gardenrose Path (NCN Route 7 and Core Path)	Very High	Negligible	Slight	No Change	Neutral
5.	Kirklandhill Road	Medium	Negligible	Slight	No Change	Neutral
6.	B 7024 Alloway Road	Medium	Negligible	Slight	No Change	Neutral
7.	Lover's Lane (Grade 3.2)	High	Negligible	Slight	No Change	Neutral
8.	Road Solum	Medium	Negligible	Slight	No Change	Neutral
<b>Development Land</b>						
1.	Land at Whitefaulds Residential Development (Grade 3.2)	High	Negligible	Slight	No Change	Neutral
2.	Redbrae (Previously Residential School)	High	Negligible	Slight	Negligible	Slight
<b>Agricultural Land</b>						

Table 8.5 Summary of Residual Impacts						
Receptor Number	Receptor	Sensitivity	Construction		Post Construction	
			Magnitude of Impact	Significance of Impact	Magnitude of Impact	Significance of Impact
1.	Baltersan Mains, (Culzean Estates) (Grade 3.2)	High	Negligible	Slight	Negligible	Slight
2.	Broomknowes (Grade 3.2)	High	Minor	Slight	Minor	Slight
3.	East Enoch (Majority Grade 3.2 + 4.2)	High (Due to area of 3.2 land)	Negligible	Slight	Negligible	Slight
4.	Kirklandhill (Grade 3.2)	High	Negligible	Slight	Negligible	Slight
5.	St Murray (Majority Grade 3.2 + 4.2)	High (Due to area of 3.2 land)	Negligible	Slight	Negligible	Slight
6.	Lyonston (Grade 3.2)	High	Negligible	Slight	Negligible	Slight
7.	Myremill (Grade 3.2)	High	Negligible	Slight	Negligible	Slight
8.	Nether Culzean (Majority Grade 3.2 + 4.2 + 3.1)	Very High (Due to area of 3.1 land)	Moderate	Very Large	Moderate	Large
9.	East Brockloch (Majority Grade 4.2 + small area 3.2)	High (Due to area of 3.2 land)	Negligible	Slight	Negligible	Slight
10.	Glenside (Grade 3.2 + 4.2)	High (Due to area of 3.2 land)	Negligible	Slight	Negligible	Slight
11.	Mid-Brockloch	High (Due to area of 3.2 land)	Negligible	Slight	Negligible	Slight
<b>Public Utilities</b>		Low	Negligible	Slight	No Change	Neutral

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## **8.7. Conclusions**

- 8.7.1. The land take required for the scheme is 45ha of mainly agricultural land. This will have a permanent negative impact both on individual farms and on farming economy of the district as a whole, as some rural landowners experience significant disruption, and/or significant permanent decreases in land area.
- 8.7.2. There are 11 agricultural holdings affected. The majority of farms will have slight residual impact significance. Those significantly affected by the proposals include East Enoch, a dairy enterprise, as the proposed scheme severs its pastures from the current location of the milking parlour, and Kirklandhill both assessed as moderate residual impact significance, as they have an increased land take requirement. Nether Culzean is assessed as having large residual impact significance due to the farm having the highest percentage of land take required within the scheme from mainly Grade 3.2 land and containing a small area of prime quality land which will be partially lost.
- 8.7.3. The scheme will result in an unavoidable loss of agricultural land however, only a small parcel of prime quality agricultural land will be lost and land of similar agricultural classification will remain in the surrounding areas. The loss of land is the main long term impact.
- 8.7.4. Kirklandhill Cottage is assessed as having very large impact significance and will be significantly impacted as the building will be demolished. Kirklandhill Cottage is not listed on WoSAS Sites and Monuments Record (SMR); however it may be regarded as locally important. Considering this Policy BE2 has not been fully complied with, however suitable mitigation has been put in place. Further details of this are stated in Chapter 5: Cultural Heritage.
- 8.7.5. There may be temporary cumulative impacts as a result of permitted planning application projects being constructed at the same time as the proposed scheme.
- 8.7.6. The Council 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 scheme is broadly in line with published policies and plans and its route is protected within the South Ayrshire Local Plan.