

7. Landscape and Visual Impacts

7.1. Scope of the Study

This section of the ES presents the assessment of impacts of the preferred route on the landscape resource and visual amenity of the study area.

As initially identified in the Scoping Study, proposed principal changes between Paisley St. James Station and Glasgow Central station will consist of the following elements:

7.1.1. Increased train frequency in operation

Sensitivity of receptors and the magnitude of change are key determinants of the impact on views. In this instance, however, the issue is one of an increase in rail vehicles along an already busy rail corridor. The scoping appraisal was founded upon a fundamental assumption that rail traffic is generally considered to be a detrimental visual influence. However, the degree of change and the nature of the existing outlook from receptors vary according to location and context of the receptor. Everyday experience of a quiet single track rural railway compared with a major multi-track urban rail corridor readily reinforces differences in the role of rail vehicles as a determinant, or partial determinant, of visual experience and quality.

There will clearly be differences between railways in a remote part of the countryside where receptors will have a greater awareness of change at lower levels of flow than in a typical urban location where there will be a higher degree of tolerance by virtue of expectancy and acceptance of rail traffic in such a situation. The main line clearly falls into the latter category, as, despite an hourly increase of 8 up to four-car trains per hour, there are already currently 20 to 24 such trains per hour in addition to a minimum of 2 freight trains per hour operating on this line. As stated in the GARL Environmental Scoping Report, therefore, the current visual perception of existing receptors is of an existing, busy railway corridor. The receptors, even residential receptors, are therefore already used to this context and their sensitivity to the change envisaged is therefore likely to be low, especially to the low or moderate magnitude of change envisaged. The visual impact resulting from this change is therefore also likely to be minor, or negligible, depending on the type of receptor.

7.1.2. Placement and/or Replacement of Overhead Line Equipment (OLE) and Signalling Equipment

The proposals will result in the replacement of existing cantilevered gantries with portal frame gantries and the relocation/ configuration of some signalling equipment. However, no additional landtake is required for this and, on bridges/viaducts, localised impacts will be minimised by the re-use of existing portal frame gantries. These changes will result in minor, localised long-term visual and landscape impacts which are likely to be negligible. Construction works will be temporary and short-term and consistent with current ongoing railway maintenance works such as signal/OLE repairs and replacement and are therefore likely to result in negligible or minor adverse effects.

7.1.3. Track Work

An additional railway line is proposed within the existing rail corridor boundary and in some cases, along the line of former tracks; also, at-grade reconfiguration of Wallneuk Junction and various other more minor track reconfigurations; specifically;

- Wallneuk Junction; junction moved sufficiently away from Paisley Gilmour Street Station to provide a full signalling overlap to allow higher speeds through the junction for 4 tracks, with additional OLE for siding;
- Wallneuk Junction to Arkleston Junction; additional line inserted within existing boundaries;
- Arkleston Junction; conversion to high speed junction with five crossovers;
- Arkleston to Shields Junction; additional line inserted between two existing;
- Cardonald and Shields Junctions; New crossovers/tie-ins;
- Elderslie Loop; reconfiguration within existing boundaries to accommodate freight trains.

All the foregoing changes will result in localised long-term visual and landscape impacts which are likely to be negligible. Construction works will be temporary and short-term and generally consistent with current railway maintenance works such as track re-laying and ballast replacement and are therefore likely to result in negligible or minor adverse effects.

7.1.4. Locations where bridges/structures may need to be altered

The following main line works involving bridges will be required:

- Hillington Bridge at Sandwood Road; bridge deck works

All the foregoing changes will result in minor, localised long-term visual and landscape impacts which are likely to be negligible. Construction works will be temporary and short-term and consistent with current structural and track maintenance works.

7.1.5. Platform Reconfiguration and Other Changes Within Glasgow Central Station

These changes and construction impacts will be internal to the existing station envelope and are not likely to impact upon local landscape character or visual amenity.

7.1.6. Scope of the Landscape and Visual Assessment

As an existing, busy rail corridor, the receptors will be of low landscape and visual sensitivity to the type of changes proposed above and the magnitude of the changes, which will also be low, will be taking place entirely within the existing rail corridor boundary. Under the criteria listed in section 7.1.1, it is concluded that landscape character and visual impacts are likely to be minor along this section of the route and subsequently, not significant and should therefore not be considered further within this Environmental Statement.

7.1.7. The Study Area

The assessment therefore concentrates on the proposed branch line between Paisley St James' Station and Glasgow Airport and includes the land within 2km of the centre of the proposed branch line route, as this is the area within which all likely significant landscape and visual impacts will occur. This area is hereinafter referred to as the study area.

The landscape assessment presents the assessment of the impacts of the preferred route on the landscape resource of the study area, and considers the changes in the fabric, character and quality of the landscape that are likely to occur as a result of the implementation of the proposals.

The visual assessment will describe and evaluate the potential change in views of the existing landscape during construction and once in operation, and the extent to which these will affect residents, visitors and users of the landscape.

7.2. Landscape Character

The landscape assessment presents the assessment of impacts of the preferred route on the landscape resource and visual amenity of the study area. It describes the key components, features and characteristics that make up the various landscape types found within the study area; refers to statutory designations and consultation responses relating to landscape value and sensitivity; and provides an evaluation of the implications of the proposed development in terms of direct impacts on key landscape components and features.

It also considers the extent to which loss of features and the introduction of the proposed rail link and associated infrastructure will influence perception of the landscape types and wider character of the study area. The assessment also considers the more subtle effects on the overall pattern of elements that together determine the landscape character and regional/local distinctiveness. It is primarily concerned with:

- Direct impacts on specific landscape features and elements.
- More subtle effects on the overall pattern of elements together determine the landscape character and regional/local distinctiveness.
- Impacts on acknowledged special interests or values such as designated landscapes, conservation sites and cultural associations.

As the route runs within a built-up area the issues referred to as landscape inherently include townscape as well.

The potential to mitigate adverse impacts has been taken into account in the assessment and the residual impacts identified. It is for this reason that mitigation measures are reviewed in the text prior to the description of residual impacts.

7.3. Landscape Methods

The landscape assessment was undertaken in general accordance with the following documents:

- The Design Manual for Roads and Bridges (DMRB) (Volume 11, Section 3, Part 5) taking into account the Supplementary Guidance for Landscape & Visual Assessment (Scottish Executive, 2002) (LVASG).

- Guidelines for Landscape and Visual Impact Assessment (GLVIA) (Institute of Environmental Management and Assessment: IEMA, 2002).
- Cost Effective Landscapes: Learning from Nature (CEL:LfN) (The Scottish Office, 1998).
- Planning Advice Note (PAN) 58, Environmental Impact Assessment (Scottish Executive 1999).

The four main steps in the landscape assessment process were:

- Description;
- Classification; and
- Evaluation; leading to
- Impact assessment.

Landscape assessment consists initially of the collection of baseline data relating to the components, character and scenic quality of the landscape, and an assessment of the sensitivity of the landscape to change. In undertaking the assessment, consideration is given to the following:

- Experience of the landscape is not only visual, but involves all five senses;
- Data relating to the components of the landscape, its character and quality will include reference to baseline information presented in separate related sections (e.g. Ecology and Nature Conservation, Cultural Heritage);
- The value placed on an area is dependant not only on its inherent scenic quality but on its situation, rarity and usage;
- Historical and cultural associations may contribute to the value placed on a landscape not generally considered to be of visual or other importance; and
- Landscapes which although not of a quality to warrant national or regional designation may still be of great local value.

Data collection was by way of familiarisation (principally by foot and car from the surrounding roads), desk study and field survey. Since landscape and visual impact assessments are closely related, the data collected have been used for both as appropriate.

7.3.1. Desk Study

Structure and Local Development Plans were consulted to establish the presence of areas of statutory designation and protection, and current 1:25,000 and 1:10,000 scale and historical Ordnance Survey maps were examined to identify trends in landscape change.

Data relating to archaeology, ecology, buildings and settlements were examined to provide a thorough appreciation of conservation interest. Other human interests were established by analysing data relating to recreation, public rights of way and Zones of Visual Influence (ZVIs).

Consultations were undertaken with Renfrewshire Council (RC) to supplement the desk study data collection.

Information of relevance to the proposed development was extracted from the above sources and the following specific topics were further explored to enable draft, broadly homogeneous units of consistent and recognisable character and quality (Landscape Character Areas, or LCAs) to be identified based on:

- The pattern and scale of landform, land cover and built development;
- Special values including national and local landscape designations, Conservation Areas and historical and cultural associations; and
- Specific potential receptors of landscape and visual impact, including important parts of the landscape, residents, visitors, travellers and other groups of viewers.

A ZVI encompassing the area within 2km of the proposed route was generated manually by way of field survey, due to the complex nature of visibility within an area. The ZVI was used to identify the area from which the rail link may be visible (refer to Section 7.10.1: Visual Impacts and Figure 7.3).

The visibility of the proposals (as recorded in the ZVI) can also influence the value of the landscape through which the proposals will pass. In simple terms, the greater the number of people who have a view of a publicly appreciated and well-used landscape, the higher is its potential landscape value.

7.3.2. Field Survey

Public use of open spaces, roads and footpaths was observed during the course of the landscape and visual assessment survey. This has a direct bearing on landscape as a human resource and is taken into account in the evaluation process.

7.3.3. Assessment of Impacts

In order to assess the significance of landscape impacts, the sensitivity of receptors and the likely magnitude of change were considered, as outlined below.

7.3.3.1 Sensitivity of Receptors

Evaluation of the sensitivity to change combines a review of 'value' of the main elements, which together comprise each character area together with their 'susceptibility' to change of the type proposed.

Landscape quality may not always coincide with the LCA classification but contributes towards the assessment of both value and susceptibility and hence landscape sensitivity. The assessment of landscape quality concerns the public perception of aesthetic and visual attractiveness of the landscape, and considers the following:

- Visual factors (proportion, scale, enclosure, texture, colour, views);
- Pattern and composition of features;
- Purity of character; and
- Degree of tranquillity.

"Value" as defined by LVASG is "the importance ascribed to the landscape by public perception, value to the community or professional judgement." In this study, informal public use of open spaces, roads and footpaths as observed during the course of the landscape and visual assessment survey together with professional judgement on landscape quality (see above) was used to ascertain the value of the landscape and whether this was considered to be of local, regional or national importance.

"Susceptibility", as defined by LVASG, is "the ability to accommodate changes arising from the proposal without adverse effect." This in turn is equivalent to "vulnerability to degradation", described in DMRB as the capacity of the landscape to accept change of the type and scale proposed...through the introduction of new features or the loss of existing components." In order to arrive at this evaluation, using professional judgement, the following aspects were considered:

- Landscape character and context;
- Landscape quality;
- Current and future likely landscape trends;
- The nature and extent of landscape components and their importance and positive or negative contribution to the landscape character area within which they are situated and also to the wider landscape; and
- Rarity.

The criteria used to evaluate the overall landscape sensitivity are outlined in Table 7.1.

Table 7.1 Landscape Sensitivity Criteria

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

7.3.3.2 Magnitude of Change

An evaluation of the magnitude of the proposed changes on the elements of the landscape through which the rail link route passes, was carried out through a review of the nature and scale of the change, together with its duration and degree of permanence, using the criteria outlined in Table 7.2. Note that each magnitude band can incorporate a range of change in landscape characteristics, from negligible at the lower end to very high at the top end. For convenience in the tabulation of this evaluation, however, only the three values are listed.

Table 7.2 Landscape Magnitude of Change Criteria

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

7.3.3.3 Significance of Impact

Landscape impacts change over time as mitigation, such as planting and restoration of habitat types included as part of the proposals establish and mature, and as existing landscapes external to the development evolves. The assessment acknowledges change and impacts were assessed during construction, for winter year of opening and summer fifteen years after opening.

An initial indication of impact significance (adverse or beneficial) was gained by combining sensitivity and magnitude in accordance with the matrix provided in Table 7.3. However, it should be noted that this provides an initial framework to aid consistency of reporting and provides an indication of the likely impact arising from the assessment of magnitude and sensitivity. Given that the criteria low/medium/high represent levels on a continuum or continuous gradation, professional judgement and awareness of the relative balance of importance between sensitivity and magnitude was also required.

The matrix provided in Table 7.3 has been adapted from LVASG to accommodate a seven point scale to enable a consistent use of impact significance criteria. Impact ratings adopted comprise Substantial, Moderate, Slight or Negligible and adverse or beneficial. A rating of negligible has been applied where there is no discernible impact.

Impacts of Moderate and above are considered significant, as this is the level at which the changes to the landscape will be clearly perceived.

Table 7.3 Impact Significance Criteria for Landscape

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

7.3.4. Assumptions Made for the Assessment

A number of assumptions have been made, during both the landscape and visual assessment process, about the various scheme components, these are outlined below:

7.3.4.1 Trains

It has been assumed that trains of a scale and dimension similar to those currently using the existing mainline will operate on the GARL. It has been assumed that the trains will be in the order of four carriages long with the potential to extend to six to eight carriages in the future.

7.3.4.2 OLE

OLE will be replaced on some existing sections of track, new OLE will be required on the new spur line. It has been assumed that the OLE will take the form of portal frame structures approximately 5m in height which will span the railway and be supported by steel lattice columns on both sides of the tracks.

7.3.4.3 Station

A new station will be required at the Airport. The assessment has assumed that the station is an enclosed structure with space for two four-carriage trains and that it will be approximately 16m in width and approximately 30m in height and will effectively screen the multi-storey car park which lies behind. It has also been assumed that the link between the proposed station and the airport terminal will be enclosed. It has been assumed that the station will be a beneficial landscape feature in relation to its context which currently includes multi story car parking, open car parking, low quality office accommodation and raised sections of the M8 motorway.

7.3.4.4 Route Alignment

The alignment upon which the assessment has been based is shown on the Final Route Alignment Plans prepared as part of the Parliamentary Bill submission. This engineering design, for the purposes of this ES, forms the basis upon which both the assessment and the indicative landscape mitigation is founded.

7.3.4.5 Temporary Construction Works

For the branch line, there will be two construction compounds. One will be located on the east of St James' Park, located between the GARL and Greenock Road. A buffer space will be maintained in order that the construction compound will not be immediately adjacent to the road. The other will be located at the playing fields immediately west of St Andrew's Crescent.

Construction works will involve the use of low mobile cranes. Such works will be similar to ongoing railway maintenance works in nature and extent, with linear safety fencing temporarily blocking local views and with temporary traffic controls where existing roads are impacted. Some activities, such as the erection of the OLE portals, will be of such short duration that specific impacts associated with them will be negligible.

Greenock Road, Clark Street and McFarlane Street may be temporarily closed during construction of the viaduct and traffic may be temporarily diverted as a result. The construction of the elevated sections of the GARL between Clark Street and the Airport will involve piling and construction of the supporting viaduct. This infrastructure may be up to 9m above ground level as it passes through St James' Park. Night working will be illuminated, but this will only be carried out on structures.

7.3.4.6 Structures

The GARL will cross over the M8 on a tied arch bridge which will be approximately 20-25m high. The section between the M8 and Clark Street, including the section crossing St James' Park and the Murray Business Area will be on an elevated viaduct which will be approximately 9m in height. Between the main line and Clark Street Bridge the GARL will be supported on a reinforced embankment. As part of the proposed mitigation it is intended to demolish the current pavilion at St James' Park and replace it with a new pavilion structure elsewhere within the park.

7.4. Landscape Baseline Situation

7.4.1. Regional Context

The study area forms part of the Glasgow and Clyde Valley, predominantly a lowland plain surrounded by hill ranges. The terraced lava cliffs and scarps of the Campsie Fells, Kilpatrick Hills and Renfrewshire Heights create a boundary to the north and west, whilst the larger scale Southern Uplands forms the boundary to the south.

The city of Glasgow is a major regional centre and the largest city within Scotland. Glasgow acts as the centre for communications, employment, shopping and services for the region. The Clyde River bisects the area and is fed by a number of tributary rivers and burns from the surrounding uplands.

Paisley is a commercial, industrial and residential satellite town on the western fringe of Glasgow. Glasgow Airport is located on the northern edge of Paisley and is the largest airport in Scotland.

7.4.1.1 Landscape Planning Policy

Within the study area, the Local Plan identifies a number of policies with the potential to affect open space and landscape character;

7.4.1.2 Greenbelt

Greenbelt within the study area is limited to two small areas to the east of the study area (see figure 7.1). The greenbelt was established to maintain the identity of towns by establishing clearly defined boundaries; to protect the countryside for recreational and institutional uses and to maintain the landscape setting of towns. No part of the Greenbelt is directly affected by the proposed rail link.

7.4.1.3 Open Space Policy

L1: there will be a presumption against the change of use of recreational buildings, active recreational areas and areas of passive amenity open space utilised for these purposes, and only proposals compatible with the existing uses will be acceptable within these areas. Proposals for the intensification of use and improvement of existing facilities will generally be favourably considered while having regard for the judged impact upon surrounding areas. St James' Park falls within this category and will be directly affected by the proposals

L2: formal and informal open space with opportunities for additional recreation and leisure development are identified in the local plan. No area covered by Policy L2 as having opportunities for additional recreation and leisure development is affected by the proposals.

7.4.2. Landscape and Other Statutory Designations

Several archaeological and heritage sites have been identified within the study area. Chapter 8 provides detailed information on the character and baseline condition of each site.

The sites include:

- 2 category "A" Listed buildings;
- 18 Category "B" Listed buildings

- 7 Category “C(s)” Listed buildings;
- 2 Outstanding Conservation Areas;
- 2 Conservation Areas; and;
- 39 undesignated sites or buildings of archaeological, architectural or historic interest.

There are no Scheduled Ancient Monuments, inventory status Historic Gardens or Designed Landscapes within the study area. No section of the route falls within an area designated for its landscape quality although within the study area there are three conservation areas, two located within the historic core of Paisley and a third located in the Castlehead residential area of Paisley.

Four non inventory designed landscapes, which SNH advises should be regarded as ‘candidate’ inventory sites, lie within the study area and can be found at Walkinshaw House, Ferguslie House, Woodside House and Cemetery and Paisley Fountain Gardens.

There are no other statutory or other landscape designations within the study area covered by this chapter, although a number of designations exist within the wider study area.

Within the study area and adjacent to the GARL corridor there are various areas of open space identified and protected under local plan policy as active recreational open space, formal open space, informal open space and allotments. St James’ Park, designated as active recreational open space, will be bisected by the GARL proposed rail link.

The landscape and cultural heritage sensitivities indicated by these designations have been taken into account in the assessment but none of these areas will be directly or indirectly impacted by the proposals. Their locations are identified on Figure 7.1.

7.4.3. SNH Landscape Character Assessment

SNH, in conjunction with partner Councils, has undertaken detailed review and classification of the various landscape areas and types of Scotland. The study area is covered by the Glasgow and the Clyde Valley Character Assessment, dated 1999 (Review Number 116). Chapter 5 of the Glasgow and the Clyde Valley Landscape Character Assessment divides the area into eleven Regional Character Areas within which a further twenty one (excluding urban) detailed Landscape Character Areas are identified. The document provides a description of each of the Landscape Character Areas, their positive and negative attributes and key strategic aims and guidelines for each. The one Landscape Character Area included within the study area is as follows:

7.4.3.1 Alluvial Plain

The Alluvial Plain landscape type occurs only in one area within the Glasgow and Clyde Valley. This landscape type is flanked by the Black and White Cart Waters to the east, the Clyde to the north and by the farmlands of Kilmacolm to the west and south. The Alluvial Plain is typically low lying and flat and by its nature is susceptible to flooding. The soil is generally fertile with a large amount of land managed as pasture. Woodland cover is minimal and generally limited to field and boundary trees, watercourses and remnant areas of mainly birch scrub. The flat terrain and limited woodland lends the landscape type an open character. Settlement within the type is generally limited to scattered farmsteads although urban sprawl from greater Glasgow and the satellite towns combined with major infrastructure developments including the M8 motorway and Glasgow Airport have significantly modified the original rural character of the Alluvial Plain.

The positive attributes of the Alluvial Plain Landscape Character Area include:

- Predominately arable farmland character; and
- Small pockets of woodland at field boundaries and associated with watercourses.

The negative attributes include:

- Visual impact of nearby urban and industrial areas;
- Visual and noise influence of transport infrastructure (air, road & rail); and
- The presence of derelict and damaged land.

SNH identifies the key strategic aim for this character as being to reinforce the area’s rural character and pursue strategies to reduce the visual influence of existing urban developments.

7.4.4. Historical Account

The historic mapping of the area provides a better understanding of the landscape of the area by providing the historic context within which the landscape has developed.

The 1864 Ordnance Survey map show Paisley to be a thriving urban and industrial centre with ship yards, gas works, looms and textile factories, located throughout the town. The current pattern of railway lines had also been established by 1864.

The town, at this time, was smaller, extending at this time to Leigh Park in the north, Saucel Hill to the south, Auchintorlie in the east and Ferguslie to the west. Paisley was set within open countryside with a number of small country houses such as Ferguslie House and Auchintorlie House set within formal grounds located on the fringes of the settlement.

Between 1864 and the First World War, Paisley expanded in all directions. The surrounding farmland and estates were swallowed by the expanding urban areas although whilst some estates were destroyed, others, such as Ferguslie House were partially preserved as pleasure grounds.

In the inter-war years, Paisley expanded further still, with low-density residential developments spreading out from the centre.

Since World War 2, the present day Paisley has expanded further still. Over the same period the post war housing developments of Renfrew expanded into the east of the study area and significant changes in the transport network occurred, reflecting an increased dependence on roads and the development of the M8 to the immediate north of Paisley. Over the same period, much of the traditional heavy industries waned, leaving a legacy of post industrial land which is now being redeveloped as commercial, retail and residential areas. Significantly the post-war period also saw the establishment of Glasgow Airport on the site of the older Abbotsinch Airfield to the immediate north of the M8 in an area that was previously mainly farmland, with scattered farm buildings with estate houses and grounds such as Abbotsinch and Loanhead. The creation of the Airport and the M8 significantly altered the character of the area.

7.4.5. Geology and Soils

The study area falls within the Scottish geological structural division of Midland Valley. The Midland Valley has the structure of an ancient rift valley in which strata between the Highland and Southern Upland Boundary faults have subsided relative to those on either side.

The soils in the area consist of a complex pattern of different associations. The majority of the study area traverses urban areas with no soil classification. Other sections of the study area traverse the soil associations of Rowanhill / Giffnock / Winton, Darvel and Alluvial. Rowanhill / Giffnock / Winton is derived from drifts of material eroded from the underlying carboniferous sandstones, shales and limestones. Darvel Association is derived from fluvio-glacial sands and gravels.

7.4.6. Landform and Drainage

The study area is primarily alluvial lowland, generally below 50m AOD. The Southern and Eastern sections (urban areas of Paisley) are in the catchment of the White Cart Water whilst the north and western parts of the route (the agricultural fringes of the city) are in the catchment of the Black Cart Water. Both rivers drain to the north east where they merge and ultimately flow into the Clyde.

In the urban area much of the topography is masked by development. The topography of the more rural western sections of the study area is flat and open, rising gently to the south and undulating to the north. This relatively flat landscape is interrupted by river valleys cut through the alluvial plain.

7.4.7. Settlement Corridor

The rail link study area reviewed in this chapter encompasses the greater part of Paisley and the southern fringes of Renfrew, with the settlements separated by the M8 corridor. Paisley evolved as a centre of textile manufacture and heavy industry in the 19th century and is virtually continuous with the conglomeration of settlements making up Greater Glasgow.

Although with city status, today Paisley is a post-industrial satellite of Glasgow. The south of the study area is concentrated on the north of Paisley, and incorporates the older inner areas of the settlement, residential developments from a range of periods from Victorian, through inter-war suburban developments, large scale post-war housing projects, to 21st century flatted and suburban housing in addition to large areas of industrial and commercial land. The proposed rail link will pass through the Murray Business Area, adjacent residential areas and St James' Park before crossing the M8 corridor and reaching Glasgow Airport.

The residential and urban areas of Paisley are contained to the north by the M8 corridor and the airport.

7.4.8. Vegetation

The study area is effectively divided into two distinct components in terms of vegetation characteristics: the section southwest of the M8 corridor is typically urban in character whilst the area to the northwest is

largely rural but bisected by road corridors and influenced by the proximity of settlements and development at the airport.

In the built up areas vegetation is urban in character typified by managed grass verges, open recreational space, ornamental and specimen landscape planting. Private garden planting contributes locally to the city's vegetation diversity as do public gardens such as the Fountain Gardens and cemeteries such as at Woodside. Occasional scattered specimen trees, remnant shelter belts and ornamental planting are evident and often associated with large areas of green open space or recent developments.

Woodland and structure planting is generally limited to the active and disused railway corridors and river corridors, which provide some pockets and corridors of planting. Scrub vegetation is occasionally established along swathes of un-maintained grass and pockets of un-developed land.

In the north and west of the study area the vegetation is predominately that of pasture farmland delineated by hedgerows and fences with shelterbelt planting associated with rural buildings. The Black Cart Water is flanked by some patches of semi natural woodland, whilst the area around the airport is more urban in character, with managed grass verges and formal structure planting predominating. Small patches of moss and scrub woodland persist as remnants of the original natural vegetation of the study area.

7.4.9. Nature Conservation

There is one international nature conservation designation in the study area; the Black Cart SPA associated with the Black Cart Water. The SPA is also a SSSI. In addition a number of local designations also exist. These include various Sites of Importance for Nature Conservation (SINC) and a Local Nature Reserve (LNR). Further details of the ecology and nature conservation characteristics of the study area are given in Chapter 9.

7.5. Landscape Character Area (LCA) Descriptions

The Character Areas fall into six categories. These in turn can be sub-divided into a number of smaller recognisable character areas, which are as follows;

- Character Area A: Recreational Greenspaces; Sub units - St James' Park;
- Character Area B: Urban Fringe Agriculture; Sub units - Candrens to East Yonderton, Nether-ton Farm, East Candren;
- Character Area C: Urban Retail and Industrial; Sub units - Murray Business Area, Phoenix Retail Park; Laigh Park; Brownfield Industrial Area; Porterfield Works; Phoenix Industrial Area.
- Character Area D: Residential Area; Sub units - Paisley; Renfrew.
- Character Area E: Paisley Historic Core; Sub units - Town centre; Cathedral.
- Character Area F Urban Fringe Transport Infrastructure; Sub units - Airport; Motorway corridor.

LCA boundaries are illustrated in Figure 7.2 and a description of the different components in each LCA and a summary table for each is provided below, with a review of the positive and negative attributes, an assessment of public perception, visibility and use, landscape sensitivity and likely landscape trends if the proposed scheme did not proceed ("do minimum scenario").

7.5.1. Landscape Character Area A: Recreational Greenspace

Significant areas of recreational greenspace within the study area are restricted to a single location at St James' Park although smaller areas of recreational land are located throughout the urban fabric of Paisley.

7.5.1.1 Sub Character A1: St James' Park

St James' Park is an expansive open area of short mown amenity grassland located between the northwestern fringe of Paisley and the M8 corridor. It contains several football pitches and changing facilities. To the south and east formal landscape defines the boundary between the park and the adjacent road. Elevated sections of the M8 motorway line the north side of the park. There is an openness to the character on account of the extent of the park, the flat terrain and the views to more distant elements of the landscape.

The access road has an asphalt carriageway and parking is generally hardstanding or red blaes.

Table 7.4 Landscape Character Summary for Area A

Landscape Attributes	Description
Positive Character	Expansive green space; Semi mature formal landscape corridor to the southern boundary; Semi-mature landscape buffer between the park and Greenock Road Distant views to upland landscapes.

Landscape Attributes	Description
Negative Character	Constant, heavy traffic; Lack of landscape structure and enclosure; Disturbance by traffic infrastructure and noise; Disturbance by airport activity and noise; Unattractive aging pavilion structure and storage facilities.
Sensitivity	Low
Quality	Ordinary/Poor.
Likely landscape trends	Increased intrusion from traffic noise from the M8 and airport activity as traffic loads for both increase.
Likely landscape trends ('do minimum')	As above.
Public Perception, Visibility & Use	Perceived as a recreational space used both formally for football and informally for a variety of uses. Visually important to bordering residential properties with views across to open space.

7.5.2. Landscape Character Area B: Urban Fringe Agriculture

The character area comprises agricultural areas mainly located in the north and west of the study area. As urban fringe agriculture the proximity of urban areas and urban infrastructure affect the predominantly rural character of these areas.

7.5.2.1 Sub Character B1 Candrens to East Yonderton

This extensive agricultural area remains predominantly rural in character with a flat, expansive pastoral and arable nature punctuated with isolated clusters of farm buildings. The development of road corridors and airport infrastructure have modified the agricultural character of the area, as have distant but visible urban and commercial areas.

7.5.2.2 Sub Character Area B2 Nethererton Farm

This area of mainly pasture land, is located between the airport and the White Cart Water. Urban forms and industrial development encroach upon the agricultural land from all sides effectively landlocking Nethererton farm as a remnant agricultural area surrounded by development. This encroachment is now a defining feature of the area's character.

7.5.2.3 Sub Character B3; East Candren

This is a small area of land severed from the wider rural hinterland of Paisley by the M8 corridor and the Phoenix Business Park. In addition, urban development in the form of Ferguslie Park encroaches from the south. This landlocked area shows the strongest urban influence, with urban fringe problems of land abandonment, vandalism and scrub invasion in addition to significant disturbance from the motorway and airport activities.

Table 7.5 Landscape Character Summary for Area B

Landscape Attributes	Description
Positive Character	Agricultural land with ongoing farming practices (B1, B2) River Valleys lending character (B1, B2) Traditional rural architecture (B1)
Negative Character	Presence of road corridors (B1, B3) Encroachment of urban forms (B1, B2) Noise and visual intrusion from airport (B1, B2, B3)
Sensitivity	Medium (B1, B2) Low (B3)
Quality	Good Landscape (B1) Ordinary Landscape (B2, B3)
Likely landscape trends	Increase in traffic and congestion Increase in disturbance from airport Increases pressure for development Further urban fringe problems of vandalism and abandonment.
Likely landscape trends ('do minimum')	As above
Public Perception, Visibility & Use	Farmland to the north and west of the airport retains a primarily rural character, areas closer to or within the urban form have lost their rural character and are rump landscapes showing the traditional issues associated with the urban fringe.

7.5.3. Landscape Character Area C: Urban Retail and Industrial

The character area comprises generally large-scale industrial and commercial units. As befits Paisley's industrial heritage some are clearly heavy industrial units (Sub Character Area C3, C4 and C5) whilst others are more recent commercial and retail units (Sub Character Areas C2 and C6) and others represent a mix of smaller scale industrial units from a range of periods.

7.5.3.1 Sub Character Area C1: Murray Business Area

This area of Paisley comprises a range of Victorian and more recent industrial units interspersed with vacant plots and yards separated by a variety of boundary treatments. The area presents a run-down and partially derelict appearance.

7.5.3.2 Sub Character Area C2: Phoenix Retail Park

This area comprises modern retail units on the periphery of the town, adjacent to the M8 corridor. The large-scale units are set in landscaped car parks.

7.5.3.3 Sub Character Area C3; Laigh Park

This industrial area comprises industrial units within sizeable sites set within the town of Paisley. The area also contains a retail park, warehousing, a sewage farm and a college and is located on the banks of the White Cart Water. Part of the area was associated with Paisley's historic industries of shipbuilding and textile manufacture.

7.5.3.4 Sub Character C4: Brownfield Industrial Area

In the north of the study area this area comprises large scale units, factories and heavy industry.

7.5.3.5 Sub Character Area C5: Porterfield Works

This heavy industrial area comprises monolithic and large scale heavy industrial units within sizeable sites set on a prominent location above the White Cart Water to the east of the airport. Some units and yard areas appear partially derelict or run down.

7.5.3.6 Sub Character Area C6: Phoenix Industrial Area

This small scale light industrial area adjacent to the M8 corridor comprises a series of industrial units, car rental facilities, car parking and hotel accommodation and is influenced in character by its proximity to the airport.

Table 7.6 Landscape Character Summary for Area C

Landscape Attributes	Description
Positive Character	Modern buildings with generous parking areas (C2) Occasional listed structures (C1) Impressive large scale structures (C5)
Negative Character	Wasteland awaiting redevelopment (C3) Modern block office developments contrasting with more traditional buildings such as at Coates (C3,C4) Incongruous architectural styles (C8,C9) Congested and chaotic layout (C5, C6, C7) Poorly maintained landscaped areas (C5, C6, C7) Declining heavy industrial area (C4,C5) Semi derelict appearance (C1, C5) Visually poor quality (C1,C3, C4, C5)
Sensitivity	Low (C1, C2, C3, C4, C5, C6)
Quality	Poor Landscape (C1, C3, C4, C5, C6) Elsewhere: Ordinary Landscape (C2)
Likely landscape trends	Retail and leisure industries are likely to continue to expand. It is likely that the pressures on the light industrial areas will continue. It is likely that the heavy industries will continue to decline and the sites will be redeveloped.
Likely landscape trends ('do minimum')	As above.
Public Perception, Visibility & Use	Perceived as low quality industrial environments (C1, C3, C4, C5) Abrupt (C4) Generally; Chaotic and crowded spaces over large areas.

7.5.4. Landscape Character Area D: Residential Areas

This character area is relatively extensive, covering the majority of the southern and eastern parts of the study area and comprises large areas of predominately post-war residential development. Although there are areas of pre-war and Victorian residential development within the area, there are also other land uses consistent with residential area: schools, libraries, parks, public open space etc., contained within the predominantly residential areas.

7.5.4.1 Sub Character Area D1: Paisley

This LCA comprises a matrix of predominantly post-war housing ranging from traditional cottage flats through larger social housing developments to modern suburban and flatted volume housing developments. Areas of older sandstone tenements are found towards the centre of Paisley with some areas of traditional villa development also contained within the town.

7.5.4.2 Sub Character Area D2: Renfrew

This is a post-war housing area on the periphery of Renfrew.

Table 7.7 Landscape Character Summary for Area D

Landscape Attributes	Description
Positive Character	Areas of traditional sandstone flatted and villa developments (D1) Small parks and greenspaces throughout (D1)
Negative Character	Some areas of low quality housing and dereliction (D1, D2) Monotonous urban forms (D2)
Sensitivity	Low (D2) Medium (D1)
Quality	Ordinary (D1) Poor Landscape (D2)
Likely landscape trends	Ongoing redevelopment of housing areas (D1) Increase in modern volume built housing in peripheral areas (D1) Encroachment of residential land into Urban fringe Agriculture Character areas (D1) and into current industrial areas (D1, D2)
Likely landscape trends ('do minimum')	As above
Public Perception, Visibility & Use	Traditional urban forms showing the range of landuses and housing styles typical of industrial areas.

7.5.5. Landscape Character Area E: Paisley Historic Core

7.5.5.1 Sub Character Area E1: Town Centre

This area is the main shopping core of Paisley, containing the principal retail streets of the town, civic plazas and municipal buildings. The predominant character is that of Victorian municipal and commercial architecture although the Abbey and town hall area has a less commercial character.

7.5.5.2 Sub Character Area E2: Abbey Area

Located close to E1 this area is dominated by the Abbey and does not have as strong a commercial character as the town centre.

Table 7.8 Landscape Character Summary for Area E

Landscape Attributes	Description
Positive Character	High quality building materials (E1, E2) Attractive streetscape (E1, E2)
Negative Character	Some inappropriate development (E1, E2) Intrusive retail signage (E1)
Sensitivity	Medium (E1) High (E2)
Quality	Very attractive (E1,E2)
Likely landscape trends	Continued commercial development of available sites (E1)
Likely landscape trends ('do minimum')	As above
Public Perception, Visibility & Use	A busy historic urban core and commercial centre, heavily used by local residents for recreation and shopping.

7.5.6. Landscape Character Area F: Urban Fringe Transport Infrastructure

This character type is variable but includes those areas where the landscape character is dominated by the transportation of people and goods.

7.5.6.1 Sub Character Area F1: Airport

This extensive area includes the airport terminal, the runways and associated peripheral landuses associated with Glasgow Airport - car parking, fuel and maintenance facilities, hotels, car hire facilities etc.

7.5.6.2 Sub Character Area F2: Road Corridors

The M8 corridor bisects the study area and includes a major interchange with the A737. Due to engineering design and the low lying nature of the alluvial plain landscape, large sections of the road are elevated on concrete viaducts and embankments, thereby increasing their prominence within the study area.

Table 7.9 Landscape Character Summary for Area F

Landscape Attributes	Description
Positive Character	Attractive modern terminal building (F1) No positive characteristics (F2)
Negative Character	Visually intrusive (F1); Engineered character (F2); Monolithic character (F2); Noise and movement (F1, F2);
Sensitivity	Low (F1)
Quality	Low (F1)
Likely landscape trends	Expansion of the airport and the development of landscape surrounds is likely (F1) Ongoing development of the road corridor and upgrading of surfaces and superstructures is likely (F2)
Likely landscape trends ('do minimum')	Expansion of the airport as well as retail and commercial development is likely to continue to encroach on the rural landscape Loss of mature trees due to the pressures of development for housing is likely to continue.
Public Perception, Visibility & Use	Busy, noisy transport infrastructure and a great deal of movement into the landscape.

7.6. Landscape Mitigation

7.6.1. Introduction

The Scottish Office Guidance 'Cost Effective Landscape: Learning from Nature (1998)' promotes three central themes to be applied throughout the planning design and implementation of a scheme proposal:

- Use of natural characteristics;
- Exploration of alternatives; and
- Wise use of resources.

Mitigation of adverse impacts associated with the introduction of a new scheme or modification to an existing scheme within the landscape and as a component in views of the area involves a combination of three approaches:

- *Prevention*: Prevention of adverse effects at source (e.g. by design changes).
- *Reduction*: Reduction of adverse effects that cannot be eliminated by prevention (e.g. mounding and planting to screen visual impact from property or publicly used areas).
- *Offsetting*: The provision of alternative or compensatory measures where appropriate and feasible (e.g. creation of new habitats to compensate for loss of habitat required for the scheme proposals).

7.6.2. Application of Mitigation Principles

The above approaches have been adopted during the planning and preliminary design of the proposed scheme. Preliminary evaluation of options for alignment of the route has to a large extent been focused on avoidance or reduction of potential adverse impacts, as described in the section 2.6 above (Alternatives Considered).

7.6.3. Detailed Objectives and Methods of Mitigation

Detailed consideration of horizontal and vertical alignment and junction arrangements during development of the scheme design has involved:

- Achievement of best fit with the existing rail corridor;
- Achievement of best fit with the existing urban pattern;
- Retention and best use of existing vegetation;
- Minimisation of damage to sports facilities at St James' Park;
- Protection of existing landscape structure on the boundaries of St James' Park; and
- Avoidance of the loss or damage to sites of ecological or archaeological interest.

The following components and techniques are proposed to integrate the scheme into the landscape, thereby mitigating impacts and where appropriate, enhancing the local landscape or townscape structure:

- Ground cover planting;
- Screening woodland planting;
- Redesign of sports provision at St James' Park
- Upgrading and relocation of sports pavilion and maintenance facilities within St James' Park;
- Earth shaping; and
- Creation of habitats for ecological interest.

7.6.4. Indicative Landscape Mitigation

The implementation of the scheme will be carried out by a contractor, who may, in theory, construct GARL anywhere within the corridor defined by the "Limits of Deviation" (LOD). However, an exemplar engineering design and indicative landscape proposals for St James' Park, including a new relocated pavilion have been prepared, which, for the purposes of this EA, forms the basis upon which both the assessment and the indicative landscape mitigation is founded. Where the details of the scheme differ from those assumed in the ES, it will be necessary for the scheme designers to consider the environmental impacts of those changes and ensure that they would not be materially worse than those identified in the ES.

These measures as illustrated and described below have therefore been developed as a set of committed principles, although it is acknowledged that their exact form will alter with the contractor's developing scheme;

- Improvements to the public realm affected by the GARL, in particular St James' Park;
- Provision of new pavilion and maintenance facilities at St James' Park and
- Soft landscape mitigation to the relocated fuel farm, mitigation principles were developed with reference to DMRB Volume 10 (Environmental Design) and involve earthworks, planting, and seeding.
- Maintenance of the existing landscape structure to the southern and eastern boundaries of St James' Park during the construction period to act as screening buffers to the construction process;

These landscape mitigation commitments in principle are described below in general and then more specific terms and illustrated in Figure 7.5.

7.6.4.1 Landtake

The proposals do not include landtake additional to that required for the essential engineering works for the proposed scheme, other than the realignment of the sports pitches at St James' Park to relocate the pavilion and maintenance facilities and to obtain an optimum pitch layout after construction.

7.6.4.2 Earthworks

Proposals for earthworks are targeted at enclosing St James' Park from the M8 corridor and improving the aesthetic experience and micro climate of the realigned pitches.

7.6.4.3 Planting

The main design principles which will be adopted relating to existing and new planting are as follows:

- Ground cover planting to the retained slopes of the retained embankment between St James' Station and Clark Street
- Compensation for existing tree planting lost to the GARL construction;
- Enhancement of habitat diversity, within limits imposed due to the proximity of the airport, at St James' Park and in association with the relocated fuel farm;
- Use of mass planting at St James' Park to develop an improved landscape character at the park;

- Planting to screen or reduce potential visual impact for identified receptors; and
- Planting of severed and landlocked areas where appropriate;
- Formal landscape associated with airport access routes and station.
- All planting will be based on the use of primarily low-maintenance native species proven to be locally hardy by established presence within the area and which are approved by consultees including BAA. There will be a concentration on the use of young stock, which will more readily establish in these conditions, although larger plants may be used for initial impact in specific high-profile locations. The key types of planting that will be introduced are outlined below.

7.6.4.4 Proposed Ecological Scrub Woodland Planting

This will comprise a combination of transplants, whips and feathered trees. The objective will be open scrub woodland integrating the relocated fuel farm with the existing vegetation associated with Paisley Moss LNR.

7.6.4.5 Proposed Mixed Woodland Planting

This will again comprise a combination of transplants, whips and feathered trees. The objective will be mature multi-layered woodland with a balanced mix of native deciduous and coniferous trees and including native evergreen understorey. Key species will include Oak, Ash and Scots Pine. The balance between deciduous and evergreen species will be varied to create density to achieve year-round screening of the M8 corridor from St James' Park.

7.6.4.6 Proposed Formal Landscape Planting

There will be areas primarily associated with the new structures constructed at the Airport and within St James' Park. The objective will be formal and ornamental planting to integrate the new structures into their environment.

7.6.4.7 Amenity Planting

There will be particular areas, such as in the vicinity of Greenock Road, where the proposals will include amenity shrub and groundcover planting reinforced, as appropriate, with specimen trees and shrubs. These will normally be planted in order to mitigate the loss of existing formal landscape planting and to enhance screening. Amenity tree species and shrub mixes will be the same as those currently on site.

7.6.4.8 Low Maintenance Ground Cover Planting

Specifically in the vicinity of the retained embankment between St James' Station and Clark Street low maintenance ground cover planting will be established on the slope batters of the retained embankment.

7.6.4.9 Specimen Trees

There will be areas, primarily associated with St James' Park boundaries and the new structures within the park where specimen trees will be planted. These will be planted to create a landscape framework within the redesigned park and to integrate the new structures with the redesigned St James' Park layout.

7.6.4.10 Seeding

One form of seeding will be used throughout the substantial part of the design. An amenity mix suited to sports pitch use will be the principal mix with appropriate tailored mixes being utilised as required for any sports pitch areas requiring specialist treatment if required. Where areas are not to be utilised for sports, appropriate alternative low-maintenance amenity seed mixes will be selected.

7.6.5. Description of Indicative Landscape Mitigation Commitments

Indicative landscape mitigation commitments in principle are illustrated on Figure 7.5 A, B and C and described below.

7.6.5.1 Reinforced Embankment

- Establish low maintenance ground cover to the sides of the embankment.

7.6.5.2 St James' Park

- Redesign and upgrading of existing football pitches including the relocation of the area of hardstanding and provision of drainage and ball stop fencing as required;
- Earthworks and structural planting to enclose St James' Park and to improve the existing landscape framework;
- Replacement of lost formal planting between St James' Park and Greenock Road; and

- Creation of tree lined avenue to either side of the route of the GARL viaduct
- Appropriate planting associated with the new pavilion;
- Suitable ground finish below the viaduct – either grass or gravel as appropriate.

7.6.5.3 Fuel Farm

- Ecological scrub woodland and mixed woodland planting will be used to screen the relocated fuel farm from the adjacent road corridor and Paisley Moss if possible;

7.6.5.4 Airport

- Formal ornamental planting adjacent to the proposed Airport station to tie the new structure into its surroundings.

7.7. Landscape Residual Impacts

The following section provides an assessment of the overall effects that the development will have on the local landscape areas during construction and once operational, winter year of opening and 15 years after opening.

The landscape impacts of the proposed scheme have been assessed taking into account the sensitivity of each landscape sub-area to change and the magnitude of change before and after the implementation of the above mitigation measures. These considerations are illustrated in tabular form providing details of the sensitivity of, and changes taking place within, each Landscape Character sub-area, together with their scale, duration, permanence and magnitude. Table 7.10 provides a summary of impacts on each of the Landscape Character sub-areas impacted and on each of the six LCAs. Refer to section 7.3.3 and table 7.3 for definitions of the assessment criteria used.

Table 7.10 Impacts on Landscape Character

Character Area	Summary Description of Local Impacts	Construction	Winter, Year of Opening	Summer, 15 years after Opening
Character Area A Recreational green space				
A1	Direct impacts on the sub type arising from the temporary reuse of part of St James' Park as a construction compound. Permanent impacts arising from the 10m high viaduct which will bisect the area, the associated OLE, tied arch bridge and the regular passage of trains through the area in addition to the removal and replacement of the current pavilion,	Substantial Adverse	Moderate Adverse	Moderate Adverse
Character Area A; Recreational green space; Overall Impact On Landscape Resource; Moderate-Substantial Adverse ; Significant				
Character Area B Urban Fringe Agriculture				
B1	No direct or indirect impacts on the Sub Area.	Negligible	Negligible	Negligible
B2	No direct or indirect impacts on the Sub Area.	Negligible	Negligible	Negligible
B3	No direct or indirect impacts on the Sub Area.	Negligible	Negligible	Negligible
Character Area B; Urban Fringe Agriculture; OVERALL IMPACT ON LANDSCAPE RESOURCE; Negligible; Not significant				
Character Area C Urban Retail and Industrial				
C1	Direct long term impacts on buildings and yards. New element added to the townscape fabric as the viaduct is constructed, movement added to the townscape in the form of elevated trains. Construction will create a temporary change in character.	Substantial Adverse	Slight Adverse	Slight Adverse
C2	No direct or indirect impacts on the Sub Area.	Negligible	Negligible	Negligible

Character Area	Summary Description of Local Impacts	Construction	Winter, Year of Opening	Summer, 15 years after Opening
C3	Indirect impacts on the southern boundary of the area as the frequency of the trains on the adjacent line increases and the OLE supports will be replaced.	Slight	Negligible	Negligible
C4	No direct or indirect impacts on the Sub Area.	Negligible	Negligible	Negligible
C5	No direct or indirect impacts on the Sub Area.	Negligible	Negligible	Negligible
C6	Indirect impacts on the northern boundary as the airport station is constructed	Slight	Negligible	Negligible

AREA C; Urban Retail and Industrial;
OVERALL IMPACT ON LANDSCAPE RESOURCE;
Slight Adverse-negligible; Not Significant

Character Area D Residential Area

D1	Indirect impacts upon landscape character of residential areas immediately adjacent to St James' Park	Slight (locally substantial)	Negligible (locally substantial)	Negligible (locally moderate)
D2	No direct or indirect impacts on the Sub Area.	Negligible	Negligible	Negligible

AREA D; Residential Area;
OVERALL IMPACT ON LANDSCAPE RESOURCE;
Slight Adverse-negligible; Not Significant; Locally Significant at Old Greenock Road and St James' Avenue; elsewhere, not significant.

Character Area E Paisley Historic Core

E1	Indirect impacts on the northern boundary of the area as the frequency of the trains on the adjacent line increases and the OLE supports are replaced.	Slight	Slight /Negligible	Slight /Negligible
E2	Indirect impacts on the northern boundary of the area due to the frequency of the trains on the adjacent line increasing and the OLE supports being replaced.	Slight	Slight /Negligible	Slight /Negligible

AREA E; Paisley Historic Core;
OVERALL IMPACT ON LANDSCAPE RESOURCE;
Slight Adverse-negligible; Not Significant.

Character Area F Urban Fringe Transport Infrastructure

F1	Impacts on the southern boundary of the area due to the proposals especially the indirect beneficial impacts of the tied-arch bridge and the direct beneficial impacts of the new station building.	Slight	Slight /Negligible Locally Slight/moderate Beneficial	Slight /Negligible Locally Slight/moderate Beneficial
F2	Direct impacts on the area due to the proposals, especially the beneficial impacts of the tied-arch bridge and the indirect impacts of the new station building.	Slight	Slight /Negligible Locally moderate Beneficial	Slight /Negligible Locally moderate Beneficial

AREA F; Urban Fringe Transport Infrastructure;
OVERALL IMPACT ON LANDSCAPE RESOURCE;
Slight Adverse-negligible; Not Significant.

7.8. Landscape Summary

7.8.1. Impacts upon Landscape Designations

There are no international or national landscape designations in the study area. However, there are four (non-statutory) historic gardens and designed landscape (HGD/L) listings in the area. Three of these (Fountain Gardens, Ferguslie House and Woodside House and Cemetery) are located within the urban area of Paisley and any changes associated with GARL will be distant and seen in the context of existing

built forms and infrastructure. None of these three designed landscapes will be directly impacted by the proposed scheme nor will their settings be significantly adversely impacted. It is considered that the effects of GARL upon these landscapes will be negligible.

Walkinshaw House is a (non-statutory) historic garden located in the Urban Fringe Agriculture landscape type and the proposed flyover taking the GARL from St James' Park into the Airport across the M8 may be visible from the historic garden, as may the relocated fuel farm. These elements will be visible at distance and in the context of the existing M8 road corridor and Airport infrastructure. The designed landscape will not be directly impacted by the proposed scheme nor will its setting be significantly adversely impacted. It is considered that the effects of the GARL upon Walkinshaw House will be negligible.

7.8.2. Significant Impacts In Study Area During Construction

Substantial Adverse landscape impacts will occur:

- Due to the construction of viaduct, bridges, OLE portals, trains and wires, including construction traffic and the storage and movement of construction materials which will impact negatively upon the open character of St James' Park, the residential character of the immediately adjacent housing (D1) and the industrial character of the industrial yards through which the GARL will be built (C1) during the construction period.

No substantial Beneficial Landscape Effects will occur in the Study Area during construction.

7.8.3. Significant Impacts in Study Area Winter Year of Opening

Substantial Adverse or Moderate/Substantial landscape impacts will occur:

- Due to viaduct, OLE portals, trains and wires which will impact negatively upon the open character of St James' Park

Locally Moderate/Beneficial landscape impacts will occur:

- Due to the beneficial effects of the creation of the airport station within the airport (direct effects upon F1, indirect upon F2), creating a new feature building within the airport: and
- Due to the beneficial effects of the creation of the tied arch bridge spanning the M8 corridor (direct effects upon F2, indirect upon F1) creating a new landmark in the area.

7.8.4. Significant Impacts in Study Area Summer 15 years after opening

No Substantial or Moderate/Substantial Adverse landscape impacts will remain after 15 years, due to the maturing landscape mitigation measures.

Moderate and therefore Adverse impacts will, however, remain due to viaduct, bridges, OLE portals, trains and wires which will continue to impact negatively upon the open character of St James' Park.

The first section of the new spur linking GARL with the airport will run from east of St James' Station through low quality industrial and derelict land associated with the Murray Business Area, which will be impacted adversely but not significantly by the proposals.

The most significant residual adverse impacts will be localised and result from the introduction of the GARL Viaduct, OLE, the new pavilion and trains into St James' Park, specifically; their impact upon the character of the open and entirely recreational landscape; and the initial loss of mature trees at Greenock Road prior to mitigation taking effect. Some of these impacts can be reduced, but not eliminated, by appropriate planting although the replacement of the current pavilion with a new structure is considered to be a beneficial effect.

Locally Moderate/Beneficial landscape impacts will exist 15 years after opening

- Due to the beneficial effects of the creation of the airport station within the airport (direct effects upon F1, indirect upon F2), creating a new feature building within the airport: and
- Due to the beneficial effects of the creation of the tied arch bridge spanning the M8 corridor (direct effects upon F2, indirect upon F1) creating a new landmark in the area.

VISUAL IMPACTS

7.9. Visual Introduction

This section presents the assessment of the impacts of the proposed rail link between Glasgow Airport and its junction with the main line on the visual amenity of the study area during construction and operation of the proposed scheme. Visual amenity is defined as the pleasantness of the view or outlook of an identified receptor or group of receptors.

The assessment determines the degree of anticipated change to visual amenity, considering buildings, areas of public open space, roads and footpaths that will occur as a result of the proposed scheme. The buildings, open spaces, roads and footpaths that will yield views of the rail link development are collectively referred to as 'receptors'. The potential to mitigate adverse impacts has been taken into account in the assessment and the residual impacts identified. It is for this reason that mitigation measures are referred to in the text prior to the description of residual impacts.

7.9.1. Potential Impacts

Development can change people's direct experience of landscape depending on existing context, the scale, form, colour and texture of the proposals, the nature of activity associated with the development, and the distance and angle of view.

In this instance the proposals involve the introduction of a rail link from a new station at Glasgow Airport crossing the M8 corridor by bridge, traversing St. James' Park by viaduct, and linking into the existing rail corridor near Paisley St James' Station. The principal scheme elements will comprise: the overhead line equipment (OLE), portals, signals, the rail link vehicles themselves, the construction of major new structures and buildings and alterations to existing ones. Due to their vertical dimension and bulk, the new structures surmounted by OLE and portals will be likely to have the most significant impact on the landscape and visual amenity.

There are a number of ways in which the proposed rail link and associated infrastructure might impact on the existing landscape and visual amenity. Impacts are likely to be either temporary and relate specifically to the construction stage of works whilst others will be permanent and incurred once the scheme is in operation. Both adverse and beneficial impacts will be considered. Listed below are some likely key factors:

- The scale and form of the proposals may prove inappropriate and intrusive in the context of the existing landscape elements and overall character;
- The construction and final form of the proposals may involve the loss or fragmentation of important and distinctive landscape elements (buildings, urban form, open space, woodland and trees);
- The proposals may provide a mechanism for enhancing and regenerating poor quality or derelict areas of landscape and the establishment of areas of new landscape;
- The extent to which the proposals may intrude into existing views experienced by residents and day to day users of the area; and
- The extent to which users of the landscape such as local residents, tourists and visitors may be subject to new impacts.

7.10. Visual Methods

The visual assessment was undertaken in general accordance with the following documents:

- The Design Manual for Roads and Bridges (DMRB) (Volume 11, Section 3, Part 5) taking into account the Supplementary Guidance for Landscape & Visual Assessment (LVASG) (Scottish Executive, 2002);
- Guidelines for Landscape and Visual Impact Assessment (GLVIA) (Institute of Environmental Management and Assessment: IEMA, 2002);
- Cost Effective Landscapes: Learning from Nature (CEL:LfN) (The Scottish Office, 1998); and
- Planning Advice Note (PAN) 58, Environmental Impact Assessment (Scottish Executive 1999).

The following data sources were utilised in the visual assessment:

- Scheme proposal drawings, reviewed to ascertain the likely nature of proposals;
- Field studies to identify buildings, public spaces, roads and footpaths inter-visible with the GARL scheme and assess the likely impact of the proposals; and
- ZVI to guide field studies (see below for details).

7.10.1. Zone of Visual Influence

A ZVI was prepared to indicate those areas of land and buildings that may have views of the proposed scheme upon completion. It further provides a means of identifying potential receptors (areas of land used by the public and individual/groups of buildings) so that impact assessments can be undertaken. The ZVI is not representative of impact in itself nor does it indicate that the development will be visible from all locations in the ZVI.

The ZVI was generated manually by way of field survey due to the complex nature of visibility within the area. Whilst considerable care was applied to definition of the ZVI it was not practical to obtain access to all potential viewpoints to verify inter-visibility. There are also numerous localised obstructions within urban corridors that will temporarily close views for pedestrians and users of public areas. Local variations in topography, hedgerows, individual trees, buildings, walls or similar features can also vary the ZVI locally, particularly close to the viewpoint. Nevertheless the ZVI is a useful indicator of the potential area of influence of the rail line and system components and a valuable tool in landscape character and visual impact assessment.

In common with many urban corridors located in densely developed areas, the ZVI is frequently defined by the buildings fronting onto or adjacent to the proposed rail link. There are, however, areas of space, which open views and extend the influence of the rail link. There are also views through gaps in the built fabric which frame development and of the OLE inherent in the rail development which extends the influence of the proposals beyond the clearly recognisable framework of neighbouring structures.

The ZVI was initially drafted onto 1:2500 Ordnance Survey base maps of the rail corridor and its surrounding area by desk-based scrutiny of the mapping and analysis of the relationships between building, planting and landform. The initially drafted ZVI was then checked and modified on site. The assumptions adopted in drafting the ZVI were that the observer height was 1.8m, the viaduct at St James' Park was approximately 9m high, that the M8 Bridge was approximately 20-25m, the height of train vehicles which could intrude into views was 3.5m and the OLE was 5m high. It was assumed that the proposed railway station was approximately 30m high.

Figure 7.3 illustrates the ZVI summer 15 years into operation for the rail link. A ZVI during the construction of the rail link was not drafted as it was recognised during the site-based appraisal that areas in which the rail link will temporarily feature in views as a result of the construction activity will also feature in similar views in operation, by virtue of the permanent visually intrusive elements associated with the rail link such as the structures and OLE.

The ZVI clearly demonstrates that the visual awareness of the rail link is more contained in the southern section amongst the industrial and residential properties in Paisley. The ZVI expands as the alignment crosses St James' Park and as it approaches its most visible point when crossing the M8 Motorway on a landmark feature overbridge.

Between Paisley St James' Station and St James' Park, the ZVI is generally contained by the neighbouring urban fabric with visibility expanding down streets and between properties. At St James' Park the ZVI is bounded by properties surrounding the park, road and railway embankments and the M8 Motorway corridor. The rail link reaches its most visible point as it crosses the M8 Motorway via a landmark feature overbridge. At this point the ZVI widens to the north across the flat open grounds of the airport runways. As the rail link travels from the M8 Motorway to the airport station the ZVI is mainly contained by the surrounding airport buildings and M8 Motorway embankment.

7.10.2. Receptors

For there to be visual impact there is the need for a viewer (receptor). Receptors include residential properties, workplaces, recreational facilities, road users, pedestrians and other outdoor sites used by the public which will be likely to experience a change in existing views as a result of the construction and operation of the proposed rail link.

The ZVI for the proposed scheme was reviewed to aid identification of potential receptors. Those identified were then validated through site survey, which additionally verified the elements of the proposed scheme, which will be visible from the various receptors. Due to the scale and complexity of the urban fabric all but the most important receptor buildings were grouped and considered as streets and blocks rather than individual dwellings, offices etc.

7.10.3. Field Assessment of Affected Receptors

All receptors within the study area likely to experience visual impacts were assessed, including buildings, outdoor spaces, roads and footpaths. Each receptor or receptor group were visited and surveyed using a standardised checklist. Factors considered included:

- Receptor type and number (dwelling / office / commercial building / footpath / open space / school etc);

- Relative height to the proposal;
- Existing view (composition and quality);
- Distance of view;
- Percentage and elements of development potentially visible;
- Viewpoint position (view up/ view down/ level);
- Angle of view (acute/perpendicular/average);
- Type of view (foreground/mid-ground/background) and position of the development in the view;
- Duration of view i.e. is the receptor continuous such as a house, or such as a pedestrian/vehicular traveller; and
- Analysis of potential impact during construction and fifteen years into operation of the scheme. The analysis relates to each of the receptors and groups of receptors and will conclude with an evaluation of the significance of impact related to each receptor/groups of receptors.

The visual assessment was also undertaken by carrying out site survey and assessment work.

7.10.4. Visual Evaluation and Impact Assessment

The evaluation and impact assessment has involved consideration of the extent to which the proposals will change the composition of the existing view (magnitude of change) and the sensitivity to change based on the information gathered through site survey and analysis of the planning and design proposals. Both criteria are represented utilising thresholds of magnitude or sensitivity: High, Medium, Low and Negligible (magnitude only).

7.10.5. Sensitivity to Change

Sensitivity to change considers the nature of the receptor; for example a residential dwelling is generally more sensitive to change than a factory unit. The importance of the view experienced by the receptor also contributes to an understanding of how sensitive that receptor is to change. Scenic quality and value of the view are therefore considered. It has been generally assumed that the closer views that individual properties currently have of the M8, the less sensitive to further transport infrastructure construction they become due to their proximity to existing significant transport infrastructure. In the case of Greenock Road, this creates a situation where the properties are decreasing in sensitivity to change at the same time as the potential magnitude of change arising from the proposed viaduct increases. This occurs as the properties that will be nearest to the viaduct and which will experience the greatest effect are currently those closest to the M8, which are considered to be less visually sensitive.

In this assessment sensitivity is ranked as follows:

- **High Sensitivity** – where the changed landscape is an important element in the view;
- **Medium Sensitivity** – where the changed landscape is a moderately important element in the view; and
- **Low Sensitivity** – where the changed landscape is a less important element in the view.

7.10.6. Magnitude of Change

Magnitude of change considers the extent of development visible, the percentage of the existing view newly occupied by the development, the influence of the development within the view and viewing distance from the receptor to the development.

In this assessment magnitude is ranked as follows:

- **High Magnitude** - where the development will cause a very significant change in the existing view;
- **Medium Magnitude** – where the development will cause a very noticeable change in the existing view;
- **Low Magnitude** – where the development will cause a noticeable change in the existing view; and
- **Negligible** - where the development will cause no significant change in the existing view.

7.10.7. Impact Criteria

A visual impact rating for each receptor/groups of receptors is derived from consideration of the magnitude of change and sensitivity to change. Impact ratings adopted comprise major, moderate or minor and adverse or beneficial. A rating of negligible can be applied where there is no discernible impact. The assessment will report on the impacts during the construction phase, in the winter following completion and fifteen years after construction has been completed.

Explanation of the impact ratings is provided below:

Major positive impact – where the proposal will cause a very noticeable improvement in the existing view.

In the urban context this will typically apply where the proposals lead to the removal of a significant eyesore such as a derelict site or buildings and incorporates townscape improvements which substantially remodel and enhance the outlook for a large number of people.

Moderate positive impact – where the proposal will cause a noticeable improvement in the existing view.

This will typically apply where the proposed development incorporates landscape improvements which will largely reduce the impact of the proposals and enhance the outlook for a moderate number of people.

Minor positive impact – where the proposal will cause a barely perceptible improvement in the existing view.

Negligible – where there is no discernible improvement or deterioration in the existing view.

Minor adverse impact – where the proposal will cause a barely perceptible deterioration in the existing view.

This will typically occur where the receptor is at some distance from the proposals and the proposals newly appear in the view but not as point of principal focus. It will also occur where the proposals are closely located to the viewpoint but are seen at an acute angle and at the extremity of the overall view.

Moderate adverse impact – where the proposal will cause a noticeable deterioration in the existing view.

In an urban context this will typically apply where the proposals involve the removal of existing property or boundary walls/planting thereby exposing the property to the proposals, but with views limited to bedrooms or rarely occupied rooms.

Major adverse impact – where the proposal will cause a very noticeable deterioration in the existing view.

This will typically occur where the proposals close an existing view of local landscape and the new proposals will dominate the future view.

Impacts of moderate and above are considered to be significant, as this is the level at which changes will be clearly perceived.

In terms of ratings for sensitivity, magnitude and impacts the thresholds represent points on a continuum. Where appropriate intermediate ratings are used to indicate impacts at the higher or lower end of a particular threshold.

7.10.8. Limitations of the Assessment

The limitations of the ZVI are described under section 7.10.1 above. The assessment of visual impacts was undertaken from outside properties and assumptions were made about the types of rooms existing and about the types and importance of views obtained from these rooms. Not all properties were visited but instead viewed from the centreline of the proposed rail link. The assessment was therefore based on anticipated views from adjacent areas with inward views of the area and aerial photographs.

Due to the scale and complexity of the urban fabric receptors with a similar outlook were grouped together to give receptor groups rather than hundreds of individual receptors. Individual receptors were considered, where appropriate. Only roads and adjacent footpaths along the immediate rail link alignment were assessed, as these were considered to be the only receptors of this type likely to experience significant impacts.

The method of procurement which will be utilised to construct the proposed works has not yet been decided; however the assessment was based on the schematic alignment shown in this Environmental Statement, the finer details of which will be developed later as part of the design process.

7.11. Visual Baseline

The 'Guidelines for Landscape and Visual Impact Assessment' (IEMA; 2002) state, "landscape and visual assessments are separate, although linked, procedures. The landscape baseline, its analysis and the assessment of landscape effects all contribute to the baseline for visual assessment studies". Accordingly, the baseline visual situation is described earlier in this Chapter under the Landscape Character section.

Groups of receptors (buildings, outdoor locations, roads, rail and footpaths) are illustrated on Figure 7.4 (sheets 1 & 2).

7.12. Visual Mitigation

Visual impacts resulting from the introduction of the rail link will arise from the infrastructure; the OLE, signals, embankment, viaduct and bridge structures, station, and by the train vehicles themselves. Due to their elevated levels the viaduct and bridge structures will have the most significant impact on the landscape, which for the most part cannot be screened or hidden. The mitigation for these is to design them so that they fit as comfortably into the landscape and streetscape as possible. Visual impacts on individual receptors / receptor groups will also be mitigated by the principles and specific measures identified by the landscape mitigation commitments, also described earlier in this Chapter under the Landscape Character section and illustrated in Figure 7.4 (sheets 1 & 2).

7.13. Residual Visual Impacts

The likely impacts of the proposed scheme on each receptor or group of receptors (buildings, open spaces, roads, rail and footpaths) are presented in detail in Appendix 7 and summarised below.

Figure 7.4 (sheets 1 & 2) illustrate impacts on receptors during construction, winter year of opening and summer 15 years after completion. Refer to section 7.3.4 in the earlier Landscape section for details of the assessment assumptions.

7.13.1. View from Buildings

Principal receptors include:

- Industrial properties south of St James' Park (**Receptors 3, 4, 5, 9, 10, 17, 21, 41**) with various views to the rail link alignment travelling from the existing railway corridor to the M8 Motorway;
- Residential properties south of St James' Park which view industrial properties (**Receptors 1, 2, 11, 12, 13**). These properties will view the rail link in conjunction with views of surrounding industrial properties;
- Residential properties with views to St James' Park (**Receptors 14, 15, 20, 22, 23, 24, 25, 26, 27**). These properties will have various views of the rail link as it crosses St James' Park on Viaduct and potentially have views affected by the relocated pavilion;
- Residential properties with distant glimpses of the rail link alignment (**Receptors 7, 16, 28**); and
- Hotel, commercial and airport related properties within airport grounds (**Receptors 29-40, 43, 44**).

During construction three receptors (25, 26, 27) at Old Greenock Road will receive Major Adverse visual impacts, four receptors (11, 22, 24, 35) will receive Moderate to Major Adverse visual impacts, ten receptors (1, 8, 9, 10, 14, 33, 37, 36, 38, 47) will receive Moderate Adverse visual impacts and seven receptors (2, 3, 12, 13, 15, 37, 39) will receive Minor to Moderate visual impacts.

During Winter year of opening three receptors (25, 26, 27) at Old Greenock Road will receive Major Adverse visual impacts, none will receive Moderate to Major Adverse visual impacts, four receptors (11, 22, 24, 35) will receive Moderate Adverse visual impacts and three receptors (1, 14, 47) will receive Minor to Moderate visual impacts.

During summer year 15 of operation no receptors will receive Major Adverse visual impacts, three receptors (25, 26, 27) will receive Moderate to Major Adverse visual impacts, one receptor (11) will receive Moderate Adverse visual impacts and four receptors (1, 14, 22, 24) will receive Minor to Moderate visual impacts.

Receptors 25, 26 and 27, Old Greenock Road, currently have open views across St James' Park. These receptors will be adversely affected by the temporary construction compound located on St James' Park in their foreground view. During operation the alignment of the rail link will travel on a viaduct across the front mid-ground views of these receptors, shortening the distance of open views from the front of the properties. All three receptors will receive Moderate to Major visual impacts during year 15 of operation.

Receptor 24 consists of a group of properties with views from the upper floor as ground floor views are restricted by a boundary wall. From viewing the properties beyond the boundary wall, the upper floor windows are predominately bedroom windows. Views from this receptor will consist of short mid-ground views to the temporary construction compound located on St James' Park including construction traffic entering and exiting the site. Views from some properties will be filtered by planting at the south eastern corner of St James' Park. During year 15 of operation the receptor will receive mid ground views of the rail link alignment travelling on a viaduct across the park, shortening the distance of open views from the properties, resulting in Minor to Moderate Adverse visual impacts.

Receptor 11 will view the rail link alignment through back windows of the tenement flats making up this receptor. Although the views currently consist of industrial properties, relatively short mid-ground views of the elevated rail link and passing trains will result in Moderate Adverse visual impacts during year 15 of operation.

Receptor 1 consists of two storey semi detached residential properties that are surrounded by industrial properties and currently have mid-ground views to the existing rail corridor. This receptor will receive mid-ground front on views to the rail link alignment as it moves on embankment from the existing rail corridor. As the alignment moves closer to the properties and the angle of view becomes more oblique until it disappears from view as the alignment crosses Clark St via an overbridge. This receptor will receive Minor to Moderate Adverse visual impacts during year 15 of operation.

Receptor 2 is similar to receptor 1, however visual impacts are lower due to the properties being slightly further away from the proposed alignment, resulting in more oblique views. Visual impacts during year 15 of operation will be Minor Adverse.

Receptor 14 will view the rail link alignment from side windows as it crosses Macfarlane Street and the A726 Road via an overbridge and from upper floor front windows as the alignment crosses St James' Park on viaduct. It will also have views to the relocated pavilion. The combination of these changes in view will result in Minor to Moderate Adverse visual impacts during year 15 of operation.

Receptors 15 and 20 are similar to receptor 14, however the properties will only have front views of the train alignment as it crosses St James' Park. Views will also be more distant and oblique resulting in Minor Adverse visual impacts during operation.

Receptors 12 and 13 are residential receptors that will view the elevated rail link alignment in mid-ground views past neighbouring industrial properties. Visual impacts during year 15 of operation will be Minor Adverse.

Receptor 6 consists of a group of residential properties that back on to the existing rail corridor. The proposed rail link will branch off from the existing rail corridor in close proximity to these properties resulting in an increase in railway infrastructure and passing trains in the receptor's view. Visual impacts will be Minor Adverse during operation.

Receptor 22 will receive Moderate to Major visual impacts during construction due to the close proximity of the construction compound that will be located in St James' Park. During year 15 of operation visual impacts will change to Minor to Moderate Adverse as the area used for the compound will be reinstated to its existing condition. The properties will view the rail link alignment crossing St James' Park on viaduct, then crossing the M8 Motorway via a landmark feature overbridge and the relocated pavilion on the far side of the viaduct, however impacts will not be substantial as existing views include the M8 Motorway and the elevated flyovers associated with the M8, A737 and A726 road junction.

Receptors 3, 8, 9, 10 and 21 are all industrial properties with relatively short views to the proposed alignment. Being industrial properties the sensitivity of these receptors is low, resulting in a maximum visual impact of Minor Adverse during operation.

Receptors 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 43, 44, 45 and 46 are all located within the Glasgow Airport environment. All receptors located in this area have some form of association with the airport and hence, users of these receptors are less visually sensitive to transport development associated with the airport. Excluding receptor 35, the maximum visual impact to these receptors during operation will be Minor Adverse.

Receptor 35 is a hotel which is situated adjacent to the proposed airport station. The station will fall into the hotels immediate view resulting in Moderate Adverse visual impacts during year 15 of operation.

7.13.2. View from Outdoor Locations

Principal receptors include:

- Areas of open space including St James' Park (**Receptors OS2**), football pitch on St Andrews Crescent (**Receptors OS3**) and open grass space on Ferguslie Park Avenue (**Receptor OS1**);
- Classified roads within the area including the M8 Motorway (**Receptor R4**), the A737 Road (**Receptor R3**) and the A726 Road (**Receptor R2**);
- Glasgow to Gourock/Wemyss Bay railway line (**Receptor R1**);
- Airport runway, taxiways and approaches (**Receptor R5**); and
- Footpath from St Andrews Crescent to Barnsford Road (**Receptors F1**).

During construction one receptor (OS2) will receive Major Adverse visual impacts, two receptors (OS3, F1) will receive Moderate to Major Adverse visual impacts and two receptors (R2, R4) will receive Moderate Adverse visual impacts.

During winter year of opening no receptors will receive Major Adverse visual impacts, one receptor (OS2) will receive Moderate to Major Adverse visual impacts, two receptors (OS3, F1) will receive Moderate Adverse visual impacts and one receptor (R2) will receive Minor to Moderate visual impacts. One receptor

(R4) will receive Minor Beneficial visual impacts and one receptor (R3) will receive Minor Beneficial to Negligible visual impacts.

During summer year 15 of operation no receptors will sustain Major Adverse visual impacts, one receptor (OS2) will receive Moderate Adverse visual impacts and one receptors (F1) will receive Minor to Moderate visual impacts. One receptor (R4) will receive Minor Beneficial visual impacts and two receptors (R3, R5) will receive Minor Beneficial to Negligible visual impacts.

Receptor OS2 will receive Major Adverse visual impacts during construction, and Moderate Adverse visual impacts during year 15 of operation. During construction approximately half of St James' Park will be utilised for works. A temporary construction compound will be located on the eastern side of the park. During operation the rail alignment will travel across the centre of the park on an elevated viaduct. Football pitches and planting will be reinstated at the completion of the works.

Receptor OS3 will receive Moderate to Major Adverse visual impacts during construction, and Minor Adverse visual impacts during year 15 of operation. Views to the rail link alignment will consist of mid-ground views of the proposed over landmark feature bridge structure as it crosses the M8 Motorway and travels on viaduct towards the airport station. The existing airport fuel farm will be relocated adjacent to the football pitch in foreground views as part of the works.

Receptor OS1 is an area of unmaintained grass space with low visual sensitivity that will have distant glimpses of some of the rail infrastructure resulting in a Negligible visual impact during both construction and operation.

Receptor R2 (A726 Road) will view the rail link as it crosses the road via an overbridge and as it travels on viaduct across the current open views of St James' Park. The construction compound and relocated pavilion within St James' Park will also be highly visible. This receptor will receive Moderate Adverse visual impacts during construction, and Minor Adverse visual impacts during year 15 of operation.

Receptor R4 (M8 Motorway) is an existing busy transport corridor. The branch alignment will cross over this road via a landmark feature overbridge structure giving immediate views to motorists. Views of the branch line will also be seen in context with the airport and as it crosses St James' Park. This receptor will receive Moderate Adverse visual impacts during construction, and Minor Beneficial visual impacts during year 15 of operation. The beneficial visual impacts arise from open views of the feature overbridge structure.

Receptor R3 (A737 Road) will view the branch line as it crosses St James' Park on viaduct and the feature overbridge crossing of the M8 Motorway. Motorists viewing the proposals will be travelling on or approaching the flyovers linking the road to the M8 Motorway. This receptor will receive Minor Adverse visual impacts during construction, and Minor Beneficial to Negligible visual impacts during year 15 of operation. The beneficial visual impacts arise from open views to the feature overbridge structure.

Receptor R1 (Glasgow to Gourock/Wemyss Bay railway line) will view the proposals as from various angles as it travels on embankment to and from Paisley town centre and the west. Main views include, foreground views of branch line as it moves from existing rail corridor near Paisley St James' station and distant glimpses of rail link on viaduct within airport grounds. Views to St James' Park are restricted by the embankment of the A726 Road. This receptor will receive Minor Adverse visual impacts during construction, and Negligible visual impacts during year 15 of operation.

Receptor R5 (Airport runway, taxiways and approaches) will have distant views of the proposals set amongst existing airport and transport infrastructure. Views of the proposal would form a small part of wider views. This receptor will receive Minor Adverse visual impacts during construction, and Minor Beneficial to Negligible visual impacts during year 15 of operation. The beneficial visual impacts arise from views to the feature overbridge structure crossing the M8 Motorway.

Receptor F1 consists of an infrequently used gravel pedestrian and cycle path that runs between the M8 Motorway and a football pitch, adjacent to the Local Nature Reserve (LNR) and along the boundary fence to the airport runway. Views of the rail link crossing the M8 Motorway will be visible from much of the path. However, more significant will be the relocation of the airport fuel farm to a site adjacent to the path which is currently open scrub. The fuel farm will be viewed from the majority of the path, with foreground views at its closest point. Structure planting will be used between the path and the fuel farm to help mitigate the visual impacts. This receptor will receive Moderate to Major Adverse visual impacts during construction, and Minor to Moderate Adverse visual impacts during operation.

7.14. Visual Summary

During the construction period a number of receptors will experience significant and adverse visual impacts as a result of the visually intrusive construction activity associated with the construction of the rail link and associated compounds.

For the purposes of this assessment long term impacts (summer year 15 of operation) with an impact of Minor to Moderate Adverse or higher have been considered significant and adverse. Significant and adverse visual impacts will be limited to the following receptor groups by virtue of their sensitivity (expectation and importance of the changed landscape to the receptor), their immediate orientation towards the rail link alignment and visual proximity to new structures, and associated infrastructure.

The following receptors will experience Moderate to Major Adverse long term impacts

- Residential properties, Nos. 134 to 154 Greenock Road (Receptor 25);
- Residential properties, Nos. 156 to 172 Greenock Road (Receptor 26); and
- Residential properties, Nos. 172a, 172b & 176 Greenock Road (Receptor 27).

The following receptors will experience Moderate Adverse long term impacts

- Residential flats, Nos. 108 & 110 Greenhill Road (Receptor 11);
- St James' Park (Receptor OS2).

The following receptors will experience Minor to Moderate Adverse long term impacts

- Residential properties, Nos. 68, 70, 72 & 74 Clark St (Receptor 1);
- Residential property, No.1 St James' Ave (Receptor 14);
- Residential flats, Nos. 1 to 7 McFarlane Street (Receptor 22);
- Residential properties, Nos. (odd 19 to 45, 42 and 44 Lansbury Gardens (Receptor 24); and
- Pedestrian and cycle path from St Andrews Crescent to A726 Barnsford Road (Receptor F1).

The following receptor will experience Minor Beneficial long term impacts

- M8 Motorway (Receptor R4).

The following receptors will experience Minor Beneficial to Negligible long term impacts

- A737 Road (Receptor R3); and
- Airport runway, taxiways and approaches (Receptor R5).