14 Effects on All Travellers

14.1 Scope of the Assessment

14.1.1 The Effects on All Travellers assessment follows guidance within DMRB Volume 11 Section 3 Part 8 'Pedestrians, Cyclists, Equestrians and Community Effects' and Part 9 'Vehicle Travellers'. In accordance with the Interim Arrangements for the Reporting of Environmental Impact Assessments Interim Advice Note 125/09, these 2 sections now combine to form DMRB Volume 11, Section 3, Part 8 'Effects on All Travellers'.

14.1.2 This chapter describes the assessment undertaken to determine the potential effects of the Proposed Scheme on all travellers. For the purpose of this chapter all travellers refers to vehicle travellers and non-motorised users (NMUs). NMUs include pedestrians, equestrians and cyclists. Community severance is covered in detail within Chapter 15.

14.1.3 This chapter outlines the baseline conditions associated with effects on all travellers, assesses the impacts on NMU's, considers the changes in journey times/patterns and driver stress and amenity on the existing road compared to the Proposed Scheme. This chapter should be read in conjunction with Chapter 9 Landscape Effects (visual amenity) and Chapter 15 Community & Private Assets (severance). The assessment looks to identify the anticipated effects of the Proposed Scheme which diverts strategic traffic away from the town centre of Dalry providing relief from existing severance by improving the opportunities for safer crossing for the community and visitors alike. The assessment will also summarise any severance issues which are associated with the Proposed Scheme and the existing route through Dalry town centre.

Study Area

14.1.4 For the purpose of this assessment the study area includes the public paths, bridleways, main roads and minor roads within Dalry and surrounding the Proposed Scheme that are anticipated to be affected by the Proposed Scheme. A drawing showing the location of the Proposed Scheme is shown on Figure 14.1 Location Plan. This plan shows the Proposed Scheme, the existing A737 route through Dalry and 1 to 3km radii from the town centre.

14.2 Legislative, Regulatory and Planning Context

14.2.1 In addition to the guidance in DMRB Volume 11 (as indicated above) the following legislation and planning policy have been used to inform the assessment:

- National Planning Framework 2 (2009)
- Land Reform (Scotland) Act 2003
- Roads (Scotland) Act 1984
- North Ayrshire Local Plan (Adopted 2005)
- North Ayrshire Structure Plan (Adopted 2007)
- North Ayrshire Proposed Local Development Plan (LDP) (not yet adopted)

National Planning Framework 2

14.2.2 The National Planning Framework 2 (NPF2) sets out the long term spatial strategy for Scotland's Development. It was published in June 2009.

14.2.3 Paragraph 108 of the NPF2 states that the strategic outcomes are to improve journey times and connections, to tackle congestion and lack of integration in transport.

14.2.4 Paragraph 112 of the NPF2 states that there is a need:

'*to tackle congestion and improve public transport links between and within our cities. Improved connectivity can help unlock the potential of priority areas for regeneration such as the Clyde Corridor and Ayrshire, enabling more people to become economically active. Improvements in transport infrastructure are needed to support economic activity and improve access to facilities and services in our rural areas. It would be important to ensure that key locational decisions and the investments in transport infrastructure necessary to support them help to move us towards a more sustainable, low carbon economy*.'

Land Reform (Scotland) Act 2003

14.2.5 Under the Land Reform (Scotland) Act 2003, Local Authorities are required to produce a Core Paths Plan which includes 'a system of paths sufficient for the purpose of giving the public reasonable access throughout their area'. North Ayrshire Council produced a Core Paths Plan which was adopted in January 2009.

14.2.6 Core Paths; are defined in the North Ayrshire Core Paths Plan as:

'Paths or routes, including waterways that facilitate the exercise of the access rights under the Act [Land Reform (Scotland) Act 2003]. Only those paths that are identified with the Core Paths Plan form the system of Core Paths. This basic framework of routes links into and supports the wider networks of other paths. To achieve this framework, the Core Paths network consists of some existing and some new paths that together bring cohesion to the overall path network. This includes:

- Rights of Way by foot, horse, bicycle or any combination of those regardless of their status.
- Paths, footways, footpaths, cycle tracks, canals, rivers, other inland water or other means of access.
- Adopted minor public roads or footways.'

Roads (Scotland) Act 1984

14.2.7 The Roads (Scotland) Act 1984 is a piece of primary legislation affecting roads in Scotland. Its primary purpose is to enact similar provisions to those encompassed in the various Highways Acts of England and Wales.

14.2.8 Part 3 'New Roads' Paragraphs 21 states that 'A person other than a roads authority who wishes to construct a new road or an extension of an existing road, shall before commencing such construction obtain the consent thereto of the local roads authority'.

14.2.9 Paragraph 70 states that an order may authorise the roads authority-

- To stop up any private means of access to land adjoining or adjacent to land comprised in the route of the road, or forming the site of any works authorised by the order.
- To provide a new means of access to any such land.

North Ayrshire Development Plans

14.2.10 Local Plans set out the policies for dealing with Planning Applications. They also contain maps which zone land for different uses. Structure Plans set out broad policies for where development should take place. Together they are known as the "Development Plan". The Development Plan guides all land use decisions in the area. The Structure Plan covers North, East and South Ayrshire and gives a strategic view of planning. The Structure Plan adopted in 2007 will be the last prepared as a new Local Development Plan is being prepared, as described in section 14.2.16 below.

The North Ayrshire Local Plan (Adopted 2005)

14.2.11 The North Ayrshire Local Plan was adopted in November 2005 and provides key planning policies relevant to all travellers.

14.2.12 Policy TRA2 - 'Walking and Cycling' requires that all significant development proposals shall demonstrate that account has been taken of the needs of walkers and cyclists, by ensuring that:

- Clearly signposted and well lit footpaths and cycle routes are provided to serve business and industrial areas, town centres and retail areas, railway stations and major tourism and leisure facilities.
- Residential areas have direct footpath links to local transport halts, local facilities, shops and schools.

14.2.13 Policy TRA3 – 'National Cycling Network' confirms that 'the route of the future off-road replacement section of the National Cycle Network (Route 7) is safeguarded from other development'. This route runs close to the River Garnock/Glasgow- Ayr railway line in the vicinity of the Proposed Scheme.

North Ayrshire Structure Plan (Adopted 2007)

14.2.14 Policy Trans 1 'Land use and Transportation' states that:

- All significant new trip generating development is closely linked to existing and proposed walking, cycling and public transport network.
- All appropriate measures are promoted to minimise any negative environmental impacts of road traffic.
- Accessibility to local services is maintained and improved by the integration of transport networks linking services.

14.2.15 Trans 3 'Strategic Road Development' states that:

- Priority is given to the study and if appropriate the promotion and development of:
  - Upgrading the A737 between Kilwinning and Horwood.

North Ayrshire Proposed Local Development Plan

14.2.16 North Ayrshire Council, with East Ayrshire Council and South Ayrshire Council, are currently preparing a Local Development Plan (LDP) which will replace the existing Local Plan and Structure Plan. Modifications were made to the Plan early this year, requiring the Plan to be published, incorporating the changes, as a Modified Plan. Subsequent to a consultation period and revisions, the Modified LDP was submitted to the Scottish Government for examination in June 2013.

14.2.17 The Proposed LDP Policies document also refers to A737 Enhancements and states that Intervention 22 of the Strategic Transport Projects Review (STPR) recommended targeted road congestion/environmental relief schemes. This includes enhancements on the A737 such as a bypass around Dalry. The STPR covers a 20 year period, and is therefore subject to the availability of resources in future spending reviews.

14.2.18 Policy PI 2 *'Future A737 Dalry Bypass Route'* states that the corridor for a Dalry bypass from Hillend to Highfield, which is illustrated on the LDP Map, will be protected from development. Any development in the vicinity of the proposed route will be required to incorporate an appropriate landscaped buffer zone to safeguard against the effects of road traffic noise.

14.2.19 STRAT7 Links to Glasgow City and states that the Council will support and pursue A737 and A78 improvements; including both committed projects and longer term aspirations for improvement to better the economic prospects of North Ayrshire.

14.3 Methods of Assessment

14.3.1 The assessment has been undertaken using the guidelines set out within Volume 11, Section 3, Part 8 and Part 9 of the DMRB (1993 and Revisions May 2003) and Interim Arrangements for the Reporting of Environmental Impact Assessments Interim Advice Note 125/09. For the purposes of this assessment Vehicle Travellers and Non Motorised Users (NMU's) have been separated in line with the above stated guidance.

Impact Assessment

Non-Motorised Users (NMU's)

14.3.2 The assessment has involved:

- identification of the existing network of public routes and local roads, likely to be affected by the implementation of the Proposed Scheme;
- evaluation of the levels of current use of the identified network with particular emphasis on those sections which would be crossed by the Proposed Scheme or in close proximity to it;
- estimation of changes in distance travelled and travel time for users of the existing network, where the Proposed Scheme provides for the stopping up, diversion of existing routes and the provision of new routes for NMUs;
- evaluation of the order of increased or reduced severance for users of the existing network; and
- description of the impacts and the predicted effects on NMUs using public routes and local roads taking into account severance and changes in amenity value.

14.3.3 The assessment of effects on NMU's was informed by liaison with consultees including the British Horse Society, North Ayrshire Council, Cyclists' Touring Club and Sustrans Scotland as well as two site visits carried out by MFJV on the 29th May 2012 and 12th July 2012.

14.3.4 For the purpose of this assessment, the level of use is applied as a guide to measure sensitivity to change. Based on the presence of roads and other public access routes and the use of the area by NMUs, the value and sensitivity of the area has been assessed as high, medium or low. An assessment of the magnitude of the impact on NMUs has then been undertaken and, based on these categories, an overall significance of effect rating has been determined.

Table 14.1 Definition of Site Value/Sensitivity for Non Motorised Users (NMU's)

Value/Sensitivity	Criteria
High	Presence of formal or nationally important footpaths/cycleways or Rights of Way or regionally/locally important paths/accesses highly valued and considered intolerant to relatively small changes. Travellers are exposed to high quality landscape/townscape or an area of unique landscape/townscape character.
Medium	Presence of several formal/informal paths/accesses considered important to users but reasonable tolerant of change. Travellers are exposed to a moderate quality landscape/townscape or areas of moderate landscape/townscape character.
Low	Presence of few informal paths/accesses considered potentially tolerant of substantial change. Travellers are exposed to low quality landscape/townscape/unremarkable landscape /townscape character .

14.3.5 The magnitude of an impact is the extent and degree to which the receptor is affected as a result of the Proposed Scheme. The definitions of each magnitude's criteria are summarised below.

Table 14.2 Impact Magnitude Criteria for NMUs

Category	Definition
Major	A major alteration in the experience of the traveller in the area, such that the travelling experience would be significantly affected.
Moderate	An alteration in the experience of the traveller in the area, but to a moderate degree such that the travelling experience would be changed.
Slight	Minimal alteration in the experience of the travellers, such that there would be a measurable change but not considered to significantly affect the travelling experience.
Negligible	Very little appreciable change in the experience of the travellers in the area.

14.3.6 The method by which the significance of effect was determined using the sensitivity of the receptor and the magnitude of the impact is illustrated below.

Table 14.3 Significance of Effect for NMUs

		Value / Sensitivity (of receptor)		
		High	**Medium**	**Low**
Magnitude of impact	**Major**	Major	Major/Moderate	Moderate
	Moderate	Major/Moderate	Moderate	Moderate/Slight
	Slight	Moderate	Moderate/Slight	Slight
	Negligible	Negligible	Negligible	Negligible

14.3.7 Significance is not absolute and should be defined in relation to individual developments and their context and location. The two principal criteria determining the significance of an effect are the magnitude of the impact and the sensitivity of the receptor. A higher level of significance is generally attached to large-scale impacts and the impacts on sensitive or highly sensitive receptors. Therefore moderate magnitude on highly sensitive receptors can be more important than major impacts on less sensitive receptors. However, a major impact on a low value receptor also has the potential to be significant. Professional judgement is required to make a balanced and objective assessment taking all of those criteria into account.

Vehicle Travellers

14.3.8 The assessment on vehicle travellers relates to the view from the road and driver stress.

14.3.9 As the assessment of views from the road and driver stress and does not fit well with the general assessment method described above for NMUs, a separate assessment method is used. This is described in more detail in sections 14.3.10 to 14.3.17 below.

Views from the Road

14.3.10 View from the road is defined as the extent to which travellers, including drivers, are exposed to the different types of scenery through which a route passes. Most routes will pass through landscapes of different character and quality along their length.

14.3.11 The extent to which travellers can perceive the landscape through which they are passing will vary with the relative level of the road and its surrounding ground and vegetation. DMRB guidance specifies four categories which should be used in assessing traveller's ability to see the surrounding landscape:

- No view – road in deep cutting or constrained by earth bunds, environmental barriers or adjacent structures.
- Restricted view – frequent cuttings or structures blocking the view.
- Intermittent view – road generally at ground level but with shallow cuttings or barriers at intervals.
- Open view - view extending over many miles, or only restricted by landscape features.

14.3.12 In addition to the ability of the traveller to see the view, the assessment must take into consideration the route type, landscape character and the quality of the view experienced. Table 14.4 below provides definition of the category of the view from the road for vehicles travellers.

Table 14.4 Definition of Category of Views from the Road for Vehicle Travellers

Category	Criteria
High	Travellers are exposed to views of high quality landscape/ townscape or an area of unique landscape/townscape character. Views may have features of particular interest or quality, or distinctive attractive landscape features.
Medium	Travellers are exposed to views of moderate quality landscape/townscape, which may include views of some features of moderate interest.
Low	Travellers are exposed to views of low quality landscape/townscape and/or unremarkable landscape character/ townscape. Views may include detractors or features which are inconsistent with an area of higher quality or character.

Driver Stress

14.3.13 The assessment of driver stress has been based on the traffic and road conditions likely to be encountered and the certainty of the route for travellers. The following factors have been considered:

- Traffic flows;
- Journey speed;
- Frustration - the inability to drive at a speed consistent with the driver's wishes in relation to the general standard of the road;
- Fear - the potential for accidents due to the presence of other vehicles, poor road standards and the possibility of pedestrians stepping into the road; and
- Uncertainty - primarily due to signing that is inadequate for the driver's purpose.

14.3.14 In relation to traffic flows and journey speed, the DMRB provides guidance relates to levels of driver stress to the average hourly flow per lane, average journey speed, the urban or rural location of the road, and the type of road (motorway, dual carriageway or single carriageway).

14.3.15 Frustration is caused by a driver's inability to drive at a speed consistent with their own wishes in relation to the general standard of the road. Congestion can lead to frustration.

14.3.16 The main factors leading to fear of potential accidents are the presence of other vehicles, inadequate sight distances and the likelihood of pedestrians, particularly children, stepping into the road. Other factors include inadequate lighting, narrow roads, roadworks and poorly maintained road surfaces.

14.3.17 Existing and predicted levels of driver stress have been determined using the ratings given within DMRB as indicated in Table 14.5 below.

Table 14.5 DMRB Stress Ratings for Single Carriageway Roads

Average Hourly Flow Per Lane Flow Units / 1 Hour	Average Journey Speed – km/hr		
	Under 50	50-70	Over 70
Under 600	High*	Moderate	Low
600-800	High	Moderate	Moderate
Over 800	High	High	High

* Moderate in urban areas

14.4 Baseline Conditions

14.4.1 Baseline information relating to all travellers has been obtained from the previous Stage 2 assessment in addition to information gathered through site visits in July 2012 and desk top survey work during the period of writing this report.

14.4.2 Figure 14.1 indicates the Proposed Scheme location and key features in the vicinity.

NMU's

14.4.3 The North Ayrshire Council Access Officer has been consulted and confirmed that there are no Rights of Way identified within the Catalogue of Rights of Way (CROW) within the study area. However, the access officer did advise that several routes may fulfil the criteria for designation as a Right of Way, in that:

- It must join two public places (e.g. public roads or other rights of way);
- It must follow a more or less defined route;
- It must have been used, openly and peaceably, by the general public, as a matter of right, i.e. not just with the permission of the landowner; and
- It must have been used without substantial interruption for at least 20 years.

14.4.4 From site visits carried out by MFJV a number of footpaths within the area appear to be used by pedestrians, equestrians and cyclists. These paths are shown on Figures 9.2a and 9.2b Baseline Landscape as Core Paths and Wider Path Network Routes. Two such routes are illustrated in the photographs below.


Photo 1 – Track joining Blair Road


Photo 2 – Existing Path East of Railway track

14.4.5 The value of designated paths is influenced by the landscape quality through which they pass and the importance of routes to users. The Proposed Scheme crosses the Core Path on Blair Road in an area of high landscape quality; this is shown on Figure 9.2a Baseline Landscape Sheet 1.

14.4.6 Core Paths more frequently used within the area include the path running southeast to northwest on the existing Blair Road (noted as GV13 in the Core Paths Plan), which runs from Dalry town centre to the junction at Blair Bridge and is approximately 2.1km in length. The C93 is also noted as a core Path. The locations of Core Paths are indicated on Figures 9.2a and 9.2b.

14.4.7 Other local paths, including the Wider Path Network Routes, and access roads exist within the area and are utilised by users such as pedestrians and dog walkers. For example, the unsurfaced track off Blair Road, running alongside and to the east of the Blairland housing estate and passing under the railway line joining the path network in the vicinity of the River Garnock. The B707 which crosses the C93 to the south of Highfield, may also be used by pedestrians, equestrians and cyclists.

14.4.8 The proposed route of the bypass has avoided impacting unduly upon recognised paths during the operational phase of the bypass by:

- Including a bridge crossing over the River Garnock and the protected cycle route which runs alongside the river.
- Passing underneath Blair Road and the Core Path that runs along it.

14.4.9 There are no designated bridleways specifically for the use of equestrians within the area. However, the paths and tracks indicated on Figures 9.2a and 9.2b are multi-functional and are used by pedestrians, equestrians and cyclists. Within the Blair Estate there are extensive routes used by equestrians, as observed during site visits undertaken by MFJV in July 2012, as part of the wider paths network. Consultation with the British Horse Society was undertaken as part of the assessment and they requested that any road crossings incorporated into the design were equestrian friendly.

14.4.10 Transport Scotland actively encourage cycling as a cost efficient and healthy recreation. Within the Dalry study area, there are two designated cycle routes. The first, National Cycle Network (NCN) Route 7 runs along the C93/Auchengree Road from the north east of Blair Estate up to and beyond Highfield. It passes through the eastern section of the proposed route of the bypass and the proposed Highfield roundabout. NCN Route 7 is a long distance cycle route between Sunderland and Inverness via Penrith, Carlisle, Dumfries, Ayr, Glasgow, Pitlochry and Aviemore.

14.4.11 The second cycle route is a proposed route that is safeguarded in the Local Plan as an off road alternative to NCN Route 7 and runs adjacent to the River Garnock/railway line before veering east towards Dalry Train Station. The alternative off-road route has not been implemented; however it is safeguarded by its designation as a Protected Cycle Route.

14.4.12 These two cycle routes are indicated on Figures 9.2a and 9.2b Baseline Landscape Sheets 1 and 2.

14.4.13 Consultation with Sustrans Scotland raised the following issues:

- A safe and convenient crossing of the bypass would need to be achieved which would be suitable for cyclists and pedestrians and would comply with the Disability Discrimination Act (2004).

- Sustrans Scotland also request that cyclists are considered in the design of the new road, particularly at junctions and roundabouts where cyclists are the most vulnerable. They would like to see a dedicated cycle track along the road, but, at the very least, the width of the new road should allow cyclists enough space to travel safely beside high speed traffic.

14.4.14 The inclusion of cycle lanes along the length of the bypass was considered by MFJV during the design development, however this would necessitate greater land take and would increase the width of cutting. In addition, if cycle lanes were to be added, a full height parapet would need to be included in the design of the viaduct structure which would result in greater visual impact.

14.4.15 It is also considered that the cycling experience on the bypass would be poor compared to existing cycle routes in the area.

14.4.16 Cycle lanes or hard strips for cyclists adjacent to the new road are therefore not included in the scheme design.

14.4.17 The value/sensitivity of the area for NMUs is assessed as Medium based upon the criteria set out within Table 14.1.

Vehicles

Driver Stress

14.4.18 Driver stress has three main components:

- Frustration.
- Fear of potential accidents.
- Uncertainty relating to the route being followed.

14.4.19 The current route of the A737 passes through Dalry town centre where drivers encounter significant levels of driver stress, primarily due to the change in road characteristics compared to the majority of the A737. Drivers travelling through Dalry on the A737 encounter a signal controlled junction (which is immediately followed by a tight bend in the road), numerous T-junctions onto the A737 from minor access roads and residential streets, five pedestrian crossings and, as the A737 exits Dalry, a railway bridge with a height restriction. Lack of observance of warning signs by drivers may result in bridge strikes, which can lead to traffic build-up and delays.

14.4.20 When travelling on the A737 through Dalry town centre, sight distances are reduced to approximately 40 metres due to buildings either side of the A737. These restricted sight distances have the potential to lead to an increase in driver uncertainty relating to the route ahead and the fear of accidents. For instance, a vehicle travelling at the speed limit of 48km/hr (30miles/hr) will cover 40 metres in 3 seconds and an alert driver requires a stopping distance of approximately 23 metres in good conditions, double that when the road surface is wet. Therefore, the limited sight lines increase the potential for accidents, particularly in wet weather.

14.4.21 The condition of road signage travelling north along the A737 in Dalry town centre is generally very good. At the signal controlled junction in the town centre, there is an advance warning sign showing the layout of the road ahead and then a directional sign for the A737. Both of these signs offer clear instructions and would assist in ensuring that uncertainty relating to the route being followed is kept to the minimum. However, the condition of the road signage travelling south through Dalry on the A737 through the town centre is reduced in comparison to the signs travelling north. The signs are not prominent and often in shadow, which could result in the sign being easily missed. This may cause uncertainty relating to the route being followed, thereby increasing driver stress.

14.4.22 As the A737 exits Dalry town centre to the north east, the road passes under a railway bridge. This bridge has a height restriction of 3.8m and there is no lighting. Furthermore, the bridge crosses the road at an angle creating more of a hazard by casting irregular shadows onto the road. This combination of restrictions increases the fear of potential accidents for drivers.

14.4.23 Slow moving vehicles are common on the current route of the A737 and few safe overtaking facilities exist, which can result in the build-up of traffic behind Heavy Goods Vehicles (HGVs) and farm vehicles. Therefore, driver frustration can be expected.

14.4.24 Traffic counts were undertaken by SIAS Ltd in May 2012. The Annual Average Daily Traffic flow (AADT) on the section of the A737 in question through Dalry, is around 6700 with approximately 7% of the traffic being HGVs. The average peak hourly flow per lane (SIAS Ltd, 2008) is below 600 flow units per hour.

14.4.25 Traffic data gathered shows that the average journey speed on the existing section of the A737 between the northern and southern tie-ins of the new bypass is 52km/h (32miles/hr) and, therefore, using Table 14.5, driver stress levels are calculated to be Moderate.

14.4.26 The traffic data showed that during a two day period, on the 30th and 31st of May 2012, over the space of two 07:00 – 19:00 time periods, 21,771 vehicles used the junction between A737 Townend Road and North Street (Shown on fig 14.2). This junction is in the centre of Dalry, and gives a good representation of the use of the A737 by vehicles travelling in both directions. Of the 21,771 vehicles that used the junction in the above time period, 11,426 used the junction during peak rush hour times of 07:00-10:00 and 16:00-19:00.

14.4.27 The average journey time for a vehicle travelling along the existing A737 between the northern and southern tie-ins of the Proposed Scheme is calculated by utilising the average journey speed against the length of the current A737, which is approximately 3.3km (2.1 miles). The average journey time is approximately 3 minutes and 50 seconds.

14.4.28 Taking into account all the factors discussed above, the overall level of driver stress on the existing A737 route is regarded as generally Moderate based upon the criteria set out within Table 14.5.

Views from the Road

14.4.29 The main attractive landscape features are listed below. A more detailed description in included in Chapter 9Landscape and Visual Effects.

- Blair Estate – designated as a Designed Landscape and containing a number of listed buildings. The area has well maintained native hedgerows, stone walls and areas of attractive mixed woodland.
- The River Garnock flows through an undulating landscape and has associated vegetation along its banks.
- The old bridge abutment to the north of the Blair Estate is a remaining landscape feature of the dismantled railway line.
- Well maintained hedgerows and field boundaries.

14.4.30 The main detracting landscape features of the study area are:

- The railway line and the associated embankments, masts and cables.
- Drakemyre Works to the north east of Dalry consisting of large scale units, which are set out in a grid system.
- Wind Turbines to the west of Dalry.
- Parts of the River Garnock which are degraded and fragmented.

14.4.31 Views from the current route of the road when entering and exiting Dalry town centre from both directions are expansive and open over the surrounding agricultural and grazing fields. However, on the approach to Dalry, sight lines become restricted as buildings become more concentrated and the road narrows. Views from the A737 within Dalry town centre are limited to a 'restricted view' due to frequent buildings blocking views of the landscape.

14.4.32 The value of the views on the edge of Dalry travelling both south and north is classified as high quality due to the attractive unified landscape character and open long distance views. However, the overall value of the view within the current A737 road corridor setting is predominantly medium quality due to the presence of both attractive and unattractive townscape features. Therefore, views from the A737 are considered to consist of both open views of moderate quality landscape and generally intermittent, but restricted through Dalry town centre/townscape where the quality of the landscape/ townscape is low.

14.4.33 Using the criteria set out within section 14.3.11 and Table 14.4 above the views range from Medium to Low and from open to restricted.

Local Access

14.4.34 There are numerous local access points to properties and road junctions along the current route of the A737. This includes the B707 junction with the C93 at Highfield leading off in an easterly and westerly direction. Blair Road also leads off the A737 in a south easterly direction towards Stoopshill Farm and beyond. The sensitivity to change of local access has been determined to be Low.

14.4.35 The Blair Estate is actively managed for outdoor access and provides valuable off-road opportunities for walking, cycling and horse riding. These routes are defined as part of the 'wider path network'. The paths within the Blair Estate are within an area of high landscape quality.

Limitations

14.4.36 Limited information regarding the numbers of NMUs utilising the identified access routes was available for the assessment. It has therefore not been possible to assess the numbers of users that would be affected by the Proposed Scheme; rather an assessment of the impact on the actual route itself has been undertaken.

14.4.37 No data regarding the catchment areas of pedestrian, cyclist or equestrian facilities was available.

14.4.38 Based upon the information available at the time of undertaking the assessment there has been no identification of any vulnerable groups (disproportionate in number) within Dalry's community.

14.5 Predicted Impacts

14.5.1 This section discusses permanent operational disruption to all travellers from the Proposed Scheme, during construction and operation.

NMU's

14.5.2 The sensitivity of the site to pedestrians, cyclists and equestrians, for the purpose of this assessment using the criteria in Table 14.1, has been defined as Medium. Pedestrians and others interact with the landscape while passing slowly through it and, therefore, they are moderately sensitive to any change to that path or landscape.

14.5.3 During the construction phase of the above, there would be some impact on Core Paths as they would need to be closed for a period of time. They may also require diverting depending on the duration of disruptions.

14.5.4 Designated routes affected by the Proposed Scheme include the Core Path running east to west along Blair Road and the Core Path (along the C93) running north to south from Blair Road to Highfield.

14.5.5 The predicted magnitude of the impact upon the Blair Road Core Path is assessed as Slight and significance of the effect Slight/Moderate during the construction phase as the creation of the cutting to pass the bypass below Blair Road would cause disruption along the Core Path. This may mean that the road has to be closed for a period of time, and possibly introduce a diversion depending on the duration of the disruption. NMU access may also have to be diverted. The predicted magnitude of impact and significance of the effect upon the C93 Core Path is Moderate due to an anticipated greater level of disruption.

14.5.6 However, the magnitude of impact and significance of effect once the bypass is operational is expected to be Negligible for both Core Paths as the routes would be retained and there would be very little appreciable change in the experience of the user.

14.5.7 There would be two roundabouts on the Proposed Scheme, one joining the A737 and one at Highfield. The roundabout at Highfield may affect cyclists more than the other roundabout due to the severance of the NCN Route 7. The Highfield roundabout would replace the current junctions, which Sustrans have designated a 'take care area' due to the current vehicular use. This designation is unlikely to change as cyclists would still

need to be aware of their surroundings on the proposed roundabout, however the roundabout would mean that the junction may become safer in the future for users of NCN Route 7.

14.5.8 The Proposed Scheme would temporarily sever the NCN Route 7 and the proposed Core Path which runs through the Highfield area. A new crossing point over the new road would be incorporated, as shown in Figure 4.5. Therefore, the magnitude of impact and significance of the effect is Moderate adverse during construction, however on completion there would be a Negligible impact as there would be improvement to some sections of the routes, due to reduced congestion and diversion of the route to a quieter alignment.

Vehicles

Driver Stress

14.5.9 The Proposed Scheme has been designed to current DMRB standards and these standards incorporate measures to mitigate driver stress. Such measures include longer sight distances and dedicated overtaking for northbound and southbound traffic.

14.5.10 There are two principal ways driver stress is reduced compared to the existing A737 route through Dalry. Firstly, the route would reduce journey times for vehicles on the bypass by allowing vehicles to travel at higher speeds and by reducing the distance travelled between both ends of the bypass, compared with the route through Dalry. In addition, it is predicted that drivers who continue to travel into Dalry on the current A737 route would benefit from reduced congestion and, therefore, reduced stress.

14.5.11 The second principal benefit is determined by the different characteristics of the proposed route. This includes the length of dedicated/opportunistic overtaking and the number of junctions along the route including the number of roundabout exits. There would be 2 roundabouts on the Proposed Scheme, the first at Hillend, which would have 3 exits and the second would be at Highfield, where there would be 4 exits. These types of roundabout are common throughout the UK and are regularly encountered by drivers. Because of this driver stress would not be increased. The predicted impacts of driver stress are detailed below under the categories: Driver frustration; fear of potential accidents; and uncertainty of the route being followed.

14.5.12 Driver frustration is caused by a driver's inability to drive at a speed consistent with his or her own wishes in relation to the general standard of the road. The Proposed Scheme would reduce the risk of driver frustration (compared to the existing A737) through the inclusion of dedicated overtaking opportunities along it's length. This is provided for by the incorporation of an alternating WS2+1 carriageway, i.e. a single carriageway road which consists of three traffic lanes, two in one direction and one in the other direction. Northbound overtaking would extend for approximately 1.3km and southbound overtaking for approximately 0.8km. The Proposed Scheme also involves provision of a Differential Acceleration Lane of approximately 250m in length, which would provide further overtaking opportunities for northbound traffic on the exit of the proposed roundabout at Highfield. It is predicted that driver frustration would be reduced to Low on the proposed new route based on flow units and average likely speeds expected for the new section of the road.

14.5.13 Congestion would be reduced, through Dalry town centre, and average speeds on the Proposed Scheme are predicted to increase as a result of the bypass. This would greatly reduce driver frustration contributing to a decrease in overall driver stress.

14.5.14 As with many town centres, there are cars parked on the roadside in Dalry as a result of people accessing the local facilities. This on-street parking contributes to driver's fear of potential accidents due to:

- Pedestrians; especially children, suddenly walking out into the road between parked cars.
- The doors of parked vehicles being opened into the flow of traffic.
- Cars suddenly pulling out into the flow of traffic.

14.5.15 Upon scheme completion, the fear of potential accidents in Dalry would be reduced because:

- Fewer cars would pass through Dalry town centre.
- There would be more opportunities for parked cars to enter the flow of traffic and, therefore, drivers are less likely to be impatient and take risks.
- Road users travelling along the Proposed Scheme would encounter no side roads, no pedestrian crossings and no light controlled junctions. However vehicle travellers would be required to negotiate two roundabouts. Overall the fear of potential accidents and, therefore, driver stress, would be greatly reduced for those drivers using the bypass.

14.5.16 As indicated in section 14.4.27, the predicted average journey time between the northern and southern bypass tie-ins on the current A737 is approximately 3 minutes and 50 seconds. The predicted average journey time on the proposed bypass is approximately 1 minute, which is a reduction of 2 minutes 50 seconds.

14.5.17 At Highfield, the B707 and the C93 would be severed. This would increase journey times for a small amount of people in relation to the amount of predicted users of the road, with this in mind, it is expected that the associated effect would be Slight. This severance can be seen on Figures 15.4a and 15.4b Community Severance.

14.5.18 During construction, it is expected that due to off-line nature of the Proposed Scheme there would be few disruptions to the current A737 for vehicle travellers. However, there may be disruption on the A737, B707, C93 and Auchengree Road at Highfield; the A737 at Hillend; and Blair Road. This disruption could be in the form of temporary road closures and/or diversions. This may cause an increase in journey times during the construction phase of the bypass.

14.5.19 The impacts on driver stress would be generally positive once the Proposed Scheme was operational, however during construction there may be a negative impact due to temporary diversions and congestion caused by construction. Once operational, longer sight distances and dedicated overtaking lanes would help to combat driver fear and reduce driver frustration, resulting in reduced driver stress ratings. Due to this, the magnitude of the predicted impact is Major and the significance of this effect is Major/Moderate beneficial.

Views from the Road

14.5.20 The Proposed Scheme is generally well screened from surrounding short to long range views by the vertical alignment of the road running within cutting, or behind false cuttings/landscaped bunds for a majority of its length. Views from the road are generally confined by this screening, with the exception of roundabouts, junctions, SuDs basin locations and natural breaks in vegetation and landform/topography. This restriction on views is exacerbated on the viaduct over the River Garnock valley whereby a 1.5m high solid parapet is proposed. One vehicle travellers have crossed the new viaduct parts of the Blair Estate would be visible from the road between approximate chainage 400 and 900 where not in cutting; this would maintain a high quality setting for the stretch of road running close to this existing feature, although views would be only intermittent. However, views north east over Dalry and towards the Blaeloch Hills would be restricted due to landscape bunds or cutting faces providing screening. As such, the likely view from the new bypass route is considered to be of a medium quality landscape, experienced through only intermittent views or no view where the road corridor design does not facilitate views.

14.5.21 As this assessment considers views from the Proposed Scheme and the fact that the existing A737 route through Dalry would still be available to travellers, a direct comparison has not been made between the existing view from the A737 and the new view form the proposed bypass. However, it is considered that the existing view from the A737 may improve slightly due to reduce congestion on the road itself.

Local Access

14.5.22 The sensitivity to change of local access, for the purpose of this assessment, has been defined as Low. The primary concern of users utilising local access to properties and land is the continued existence of such access rather than any alteration to current access arrangements.

14.5.23 If Blair Road is closed during the construction phase of the new scheme, access to the Blair Estate may be affected. However access would still be possible through other routes but with a slight increase in journey times from Dalry town centre.

14.5.24 There would be permanent alteration of existing accesses to private properties which would effectively be severed by the Proposed Scheme, particularly at the northern end of the route where the proposed incorporation of a roundabout would mean that existing sections of local road access (the B707 and the C93/Auchengree Road), would be affected where severed by the new roundabout and also a section of the A737 through Highfield would be stopped up to allow for the new road layout, shown in Figure 14.1.

14.5.25 It is expected that the majority of local access would improve due to the proposed bypass. People travelling on the bypass and on the current route of the A737 would benefit from reduced journey times due to the bypass and, therefore, the bypass would have a positive effect on the residential properties in Highfield in terms of journey times. The predicted effect upon local access in Dalry is predicted to be a Slight, due to reduced traffic using the A737 through Dalry.

14.5.26 However, vehicular access to private residential properties and farmsteads would be maintained, albeit with possible minor changes in local journey times as vehicles would need access to these routes via the new roundabout.

14.5.27 The magnitude of the predicted impacts is therefore considered to be Moderate and the significance of this effect is considered to be Moderate/Slight.

14.6 Compliance with Policies and Plans

14.6.1 The Proposed Scheme complies with all of the relevant policies and plans relating to 'all travellers', as set out below:

National Planning Framework 2

14.6.2 The Proposed Scheme complies with the strategic outcome of the NPF2 which seeks to improve integration in transport, tackle congestion and improve journey times and connections. The Scheme would improve integration by removing the physical severance resulting from high traffic flows that currently exists in the town centre. It would also benefit the bus services in Dalry, as the reduced traffic load in the town centre would reduce journey times for buses travelling through it.

14.6.3 As such, the road represents an improvement in the existing transport infrastructure, improving integration in transport, reducing congestion, and improving journey times in accordance with the NPF2, to the betterment of both vehicle users and NMU's.

The North Ayrshire Local Plan (Adopted 2005)

14.6.4 The Proposed Scheme is in accordance with the relevant vehicle, pedestrian, equestrian and cyclist items in Policy TRA2 of the North Ayrshire Local Plan. Once operational, with the proposed mitigation measures in place, the impacts of the Scheme have been deemed 'negligible'. This demonstrates that appropriate mitigation is in place and account has been taken of the needs of walkers and cyclists, in accordance with Policy TRA2.

14.6.5 Policy TRA2 also requires clearly signposted and well lit routes to be provided; in accordance with this requirement, the safe diversions required during construction and the proposed crossing at Highfield roundabout would be designed to include clear signage, with the Highfield crossing also being designed to follow 'Cycling by Design' guidance.

14.6.6 In keeping with the requirements of Policy TRA3, the proposed route of the future off-road replacement section of the NCN7 is safeguarded from development. The only section of the cycleway affected by the Proposed Scheme is at Highfield roundabout; in this location a crossing facility is proposed which would be designed in accordance with 'Cycling by Design'. Therefore, safe crossing would be provided and the route effectively safeguarded in accordance with Policy TRA3.

North Ayrshire Structure Plan (Adopted 2007)

14.6.7 The Proposed Scheme is in accordance with the relevant vehicle, pedestrian, equestrian and cyclist items in Policy Trans 1 of the North Ayrshire Structure Plan. As set out above, the Scheme would provide relief from existing severance and would therefore result in an improvement in the integration of existing transport networks linking services. The physical severance resulting from high traffic flows in the town centre would be removed, and bus services would improve as a result of quicker journey times. Overall existing transport networks through Dalry would therefore

function better, with benefits to both vehicle users and NMU's, in keeping with the aims of Policy Trans 1.

14.7 Mitigation

NMU's

14.7.1 Mitigation measures for pedestrians would be provided where designated paths, such as the Core Paths and the Wider Path Network Routes, are affected by the Proposed Scheme.

14.7.2 In consultation with North Ayrshire Council, prior to and during construction of the proposed bypass, safe diversions would be implemented where designated paths are disturbed; including clear signage, to ensure disruption to pedestrians is kept to a minimum. This mitigation measure is also appropriate for cyclists and equestrians and continued use by these groups should be encouraged during construction of the bypass.

14.7.3 The proposed NCN7 crossing facility at Highfield roundabout would be designed in accordance with 'Cycling by Design', which advises that safe cycle crossing facilities ('*signal controlled crossing, give way crossing and cycle priority crossings*') should be provided.

Vehicles

14.7.4 Due to the gently undulating landform of the proposed alignment route and the constraint posed by crossing below Blair Road large sections of the road would be located within cutting. In other locations, benching into the hillside is required due to the route traversing the hillside from Blair Road to Highfield. Where the new road is located within deep cutting, the top of the cutting face is proposed to be rounded off and all cutting faces would be vegetated with a conservation grassland meadow to reduce its visual impact upon road users. Landscape bunds mitigate the impacts upon views from short to long range visual receptors and prevent views from the road. In order to integrate these additional features with the site context, the bunds would have a rounded top with hedgerow planting which aids in the redefining of new field and highway boundaries and reinforces the landscape character of the area.

14.7.5 North Ayrshire Council suggested that a differential acceleration lane is incorporated into the design due to the lack of suitable overtaking locations on the current A737. These measures have been incorporated within the proposed design.

14.7.6 During construction of the bypass it may be necessary to close existing roads that would be affected by the proposals. If roads were closed, then suitable diversions would be identified and implemented. The roads that would experience disruption would be the A737 at Highfield, B707, C93 and Auchengree Road at Highfield, the A737 at Hillend, and Blair Road. Traffic management would be put in place where required.

14.8 Residual Effects

NMU's

14.8.1 Residual impacts on NMU's are considered to be Negligible. Those significant impacts highlighted above relate mainly to during construction and are temporary. On completion of the scheme impacts to NMU's in relation to Core Paths, and the NCN are Negligible.

Vehicle Travellers

14.8.2 During construction of the Proposed Scheme, driver stress would increase due to congestion and the uncertainty over the Proposed Scheme caused by diversions, however, once operational driver stress would be reduced as congestion and journey times would be reduced. With this in mind, the residual significance of the effect is considered as Major/Moderate beneficial.

14.8.3 The views from the Proposed Scheme once completed would consist of both restricted views whilst the scheme is in cutting and intermittent views whilst the scheme passes over the over structures. No comparison is made between the existing view from the A737 and the view from the new bypass route.

Local Access

14.8.4 Local access may be improved through Dalry town centre due to the reduction of congestion, especially at rush hour times. Access to fields and farms for property in rural locations on the outskirts of the town would be affected negatively by the bypass; however, this negativity is outweighed by the positive impacts that would be felt in the town centre. It is for these reasons that the residual significance of the effect is Slight beneficial.

14.8.5 Table 14.5 below summarises the residual impact of the Proposed Scheme.

Table 14.5 Residual Effects

Impact Assessment	Value/Sensitivity	Magnitude of Impact	Residual Significance of Effect
Pedestrians, Equestrians and Cyclists	Medium	Moderate/Slight	Negligible
Vehicle Travellers Driver Stress	Medium	Major	Major/Moderate Beneficial
Views from the Proposed Scheme	Medium	N/A	N/A
Local Access	Low	Moderate	Slight Beneficial