31 Pedestrians, Cyclists, Equestrians and Community Effects

This chapter identifies key routes used by pedestrians, cyclists and equestrians, local vehicular traffic patterns and key community facilities and their access routes. It then describes the impacts of the proposed scheme on those journeys and outlines measures for avoiding or mitigating these impacts wherever possible.

As a result of the incorporation of mitigation proposals into the AWPR Southern Leg design, access to all paths severed will be maintained via diversions or alternative routes. The resultant diversions to journeys for some paths will result in some adverse impacts on pedestrian, cyclists and equestrians. Users will also experience some adverse impacts in terms of amenity value and community severance.

31.1 Introduction

- 31.1.1 This chapter provides an assessment of the impact of the proposed scheme on journeys that are made by pedestrians, cyclists and equestrians in the AWPR Southern Leg study area. For ease of reference the terms 'pedestrians and others' and Non-Motorised Users (NMUs) are used to describe this group. Impacts on vehicle travellers are also considered where this is considered to be relevant.
- 31.1.2 In accordance with the Design Manual for Roads and Bridges (DMRB) (Volume 11, Section 3, Part 8), the assessment of impacts on pedestrians and others focuses on three main aspects:
 - changes in journey lengths and times;
 - the effect on the amenity value of journeys; and
 - changes in existing and new severance of links with community facilities.
- 31.1.3 Routes used by pedestrians and others are important because they can provide:
 - access to local countryside and more remote areas on foot, bike or horse;
 - opportunities for long-distance travelling;
 - safe, non-motorised access to shops, work and school; and
 - opportunities to integrate access and land management.
- 31.1.4 The use of paths can help to improve health, reduce social exclusion, and unlike other modes of transport generally has no cost (i.e. fuel, travel tickets etc). A good path network can also encourage visitors to enjoy the outdoors and to visit places of landscape, historical and wildlife interest, therefore encouraging financial expenditure which supports the local rural economy. Well planned paths can potentially assist landowners and farmers to successfully integrate recreational use with land management operations.

31.2 Approach and Methods

- 31.2.1 The assessment of impacts on pedestrians and others was undertaken in accordance with the general approach to environmental impact assessment outlined in Chapter 5 (Overview of Assessment Process). Specific methodology followed the guidance in DMRB Volume 11, Section 3, Part 8, and included:
 - Baseline data collection: identification of the key community facilities within the study area and their catchment area, to estimate the number of users assuming that people will use the nearest available facility; and identification of key routes crossed by the AWPR Southern Leg and their journey times;
 - Potential Impacts: assessment of any likely changes to the journey lengths as a result of the proposed scheme with respect to journey length, amenity and community severance, prior to mitigation;

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- Mitigation design: incorporating mitigation design through an iterative process, in order to comply with legislation and national and local access policies; and
- Residual impacts: assessment of the residual impacts based on the mitigation proposals incorporated into the design.

Baseline Data Collection

- 31.2.2 For the purposes of journey length and amenity value assessments, the study area was defined as a corridor 500m to each side of the centre of the proposed AWPR Southern Leg scheme alignment as shown on Figures 31.1a–h. For community severance assessment, the study area was defined to include catchment areas of community facilities and recreational areas potentially affected by the proposed scheme or related traffic changes in the wider area (refer to Figures 31.2a–c).
- 31.2.3 Baseline data were collated from the following sources:
 - site surveys (conducted in June/July 2006) to identify key community facilities and routes used by pedestrians and others;
 - liaison with consultees including Aberdeen City and Aberdeenshire Councils, Aberdeen Countryside Project, Aberdeen and Aberdeenshire Community Councils and access groups such as Local Access Outdoor Forums, Ramblers Association, Scottish Natural Heritage (SNH), Sustrans, ScotWays, Cyclists' Touring Club and the British Horse Society (see Chapter 6: Scoping and Consultations);
 - review of The Adopted Aberdeenshire Local Plan (2006) and The Finalised Aberdeen Local Plan Green Spaces New Places (2004) to identify land use designations;
 - review of Aberdeen's Strategy for Access to the Outdoors (2004);
 - review of Ordnance Survey Maps to identify footpaths, cycle routes, settlements, facilities, etc; and
 - a web based search to identify community facilities, bus routes, and population estimates for settlements.
- 31.2.4 The Land Reform (Scotland) Act 2003 Part 1 establishes a duty on local authorities to draw up a plan for a path network and to keep a list of "core paths". The current Scottish rights of way system will still stand, with the new core path network providing additional routes where they meet the objectives set out in the Act under Section 17 (3). At the time of data collection and impact assessment, neither Aberdeen City nor Aberdeenshire Councils had yet published their core path networks. However, the Act also states that "it is the duty of the local authority to assert, protect and keep open and free from obstruction or encroachment any route, waterway or other means by which access rights may reasonably be exercised." Therefore, all paths, tracks, minor and major roads, and 'navigable' watercourses with the potential of being impacted by the proposed scheme were included in this assessment, regardless of whether they were Rights of Way, possible core paths or farm access tracks.
- 31.2.5 Although surveys were undertaken to identify routes, surveys to count user numbers were not conducted because of the wide ranging legislative requirements and policy commitments to increasing NMU activity (e.g. Land Reform (Scotland) Act 2003, National Planning Policy Guideline NPPG 11 Sport, Physical Recreation and Open Space and SPP 17 Planning for Transport). These requirements would now give an impetus to improve access where low count figures might be recorded, rather than using the figures as justification for closing access. Therefore this assessment treated all paths equally regardless of usage.
- 31.2.6 It should be noted that traffic data used in this assessment apply to selected sections of roads, and may not necessarily reflect traffic levels over the entire length of that road. For this reason, they should be treated as approximations.

Impact Assessment

Journey Length (Distance and Time)

- 31.2.7 An assessment was made of the changes in journey lengths caused by diversions and/or closures of pathways as a result of the proposed scheme. All paths crossed by the proposed scheme were identified as potential 'Conflict Points', which are shown on Figures 31.1 a–h.
- 31.2.8 DMRB Vol. 11 provides a method for determining the number of travellers and journey lengths. The method requires the identification on a map of key community facilities and their catchment areas. The number of users can then be estimated using the assumption that people will travel to the nearest facility. Journey lengths can be measured on the map, and an estimate of journey time can then be calculated using average journey speeds and distance travelled.
- 31.2.9 Due to the rural nature of the study area, woodland areas may represent community recreational facilities and links to them are considered important and have been included in the assessment. However, the assessment takes into account the recreational nature of the journey, and therefore the criteria provided in Table 31.1 may not strictly apply.
- 31.2.10 In accordance with DMRB, the average journey speeds for users has been assumed to be 5km/hr for non-vulnerable pedestrians (i.e. able bodied adults), 3km/hr for vulnerable pedestrians (i.e. elderly and disabled persons and children), 10km/hr for equestrians, 20km/hr for cyclists (assuming the latter two categories to be non-vulnerable). In order to assess the magnitude of impact on local vehicle travellers, it is assumed they travel at a speed of 50km/hr. These different categories of users define the sensitivity of the environmental receptors for this assessment.
- 31.2.11 The magnitude criteria are defined by change in journey length for pedestrians, in accordance with DMRB, ranging from Neutral (no change), Negligible (<150m), Minor (150-250m), Moderate (250-500m) to Major (>500m). DMRB offers guidance on the significance of these changes for the severance of pedestrian journeys between a community and its facilities. The criteria assume an increase in journey length has an adverse impact on users, indicating the shortest route is preferable.
- 31.2.12 Impact magnitude and receptor sensitivity are combined to determine the significance of impact. Table 31.1 provides an example matrix, although all impacts were individually assessed on a caseby-case basis, taking into account factors such as original journey length, usage and purpose. This includes consideration of the fact that, where journeys are predominantly recreational, moderate increases in journey length may be considered as beneficial by users in some cases.
- 31.2.13 The impact significance assigned by DMRB for community severance effects on pedestrians has been extrapolated for other NMU types and vehicles.

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	Magnitude							
Sensitivity	Neutral	Negligible	Minor	Moderate	Major			
	No change	<150m	150-250m	250-500m	>500m			
Very High	Negligible	Slight	Moderate	Major	Severe			
Vulnerable Pedestrians								
High	Negligible	Slight	Slight	Moderate	Major			
Non-vulnerable Pedestrians								
Medium	Negligible	Negligible	Slight	Slight	Moderate			
Equestrians								
Low	Negligible	Negligible	Negligible	Slight	Moderate			
Cyclists								
Negligible	Negligible	Negligible	Negligible	Negligible	Slight			
Vehicles					(>2000m)			

Table 31.1– Signi	ficance Criteria	for Changes in	Journey Length

31.2.14 Farm and other agricultural accesses are assessed in the Agricultural, Forestry and Sporting Interests section contained within Chapter 22 (Land Use). Accommodation works and construction impacts are discussed under Chapter 33 (Disruption due to Construction).

Amenity Value

- 31.2.15 The amenity value of a journey is defined in DMRB as 'the relative pleasantness of a journey'. This relates in particular to the exposure of pedestrians and others to traffic, and the associated factors of noise, air quality and safety. Visual impacts and the width of the pathways are also considerations.
- 31.2.16 Amenity value is a subjective issue and it is acknowledged that any changes in amenity value resulting from a new road would therefore also be subjective. However, for the purposes of assessment, it has been assumed that where pedestrians and others would experience a reduction in traffic or road-related noise, or visual impact and improvement in air quality, there would be a perceived improvement in amenity value. Conversely, an increase in any such traffic or road-related impacts or reduction in safety has been assumed to constitute a reduction in amenity value. It is important to note that traffic flows provided in this chapter are for a small section of the selected road only. Traffic flows along the full length of the road are likely to change due to junctions.
- 31.2.17 For the purposes of assessment of change to amenity value, all receptors (i.e. both vulnerable and non-vulnerable groups) were considered to be of high sensitivity. Impact significance was assigned for each receptor qualitatively, using professional judgement and taking into account the magnitude of change with respect to existing views, air quality, traffic flows and noise levels. Full visual, air quality and noise assessments for the AWPR Southern Leg are reported in Chapters 27 (Visual), 29 (Air Quality) and 30 (Traffic Noise and Vibration).

31.2.18 The significance of impact criteria for change in amenity are described in Table 31.2.

Table 31.2 – Significance Criteria for Change in Amenity

Significance	Criteria
Substantial	Where there is a substantial change in the existing view and/or air quality and/or a major change (increase) in noise levels.
Moderate	Where there is moderate or noticeable change in the existing view and/or air quality and/or a moderate change (increase) in noise levels.
Slight	Where there is slight or barely perceptible change in the existing view and/or air quality and/or a slight change (increase) in noise levels.
Negligible	Very little or no discernable change from baseline conditions equating to a no-change situation.

Community Severance

- 31.2.19 Community severance is defined in DMRB as 'the separation of residents from facilities and services they use within their community caused by new or improved roads or by changes in traffic flows'. The assessment of community severance relates to the impact on residents resulting from changes in amenity value, routes and journey lengths and/or times. The construction of new roads, or even relatively minor changes to existing roads, can result in significant changes to travel patterns within a community. A road may act as a barrier deterring people from using certain community facilities, or conversely, a diversion of road traffic away from a busy road may make an existing road easier to cross, thereby reducing community severance. A reduction in traffic levels is referred to as severance relief as community facilities are more accessible to NMUs.
- 31.2.20 It should be noted that traffic data used in this assessment apply to selected sections of roads, and may not necessarily reflect traffic levels over the entire length of that road. For this reason, they should be treated as approximations.

Existing Severance

31.2.21 Existing severance is considered to be the severance of communities from their facilities, as caused by the existing road network. The assessment of the significance of potential impacts arising from severance relief was made according to DMRB Volume 11 guidelines, using the criteria shown in Table 31.3. Average Annual Daily Traffic (AADT) was assessed against projected AADT for year of scheme opening with and without the proposed scheme (i.e. do-minimum case) in order to assess relief from existing severance. Note that the impact assessment is not conducted on roads with an existing AADT flow of less than 8,000 vehicles, as there is unlikely to be any existing severance of significance.

Significance	Criteria						
	Built-Up Area	Rural Area					
Slight	When existing traffic levels are reduced by approximately 30%.	When existing traffic levels are reduced by approximately 60-75%. If the existing road passes through a village or on the perimeter of a built-up area, use 30%.					
Moderate	When existing traffic levels are reduced by between 30% and 60%.	When existing traffic levels are reduced by between 75% and 90%. If the existing road substantially bisects a village or small town, use half these figures.					
Substantial	When existing traffic levels are reduced by 60% or more.	When existing traffic levels are reduced by 90% or more. If the existing road substantially bisects a village or small town, use 60%.					

New Severance

- 31.2.22 New severance is considered as the severance of pedestrians and others from community facilities such as schools, bus stops and recreational areas as a result of the proposed scheme.
- 31.2.23 New severance is assessed using a three point scale as shown in Table 31.4. It should be noted that the DMRB guidelines apply specifically to pedestrians. Cyclists and equestrians are less susceptible to severance because they can travel more quickly than those on foot, although they may still be deterred from making journeys which require them to negotiate additional roads and especially junctions. The sensitivity of receptor is therefore not explicitly identified in Table 31.4.

Impact	Magnitude					
Slight	When a journey pattern is likely to be maintained although there may also be some hindrance to movement (such as crossing of a new road), for example:					
	Pedestrian at-grade crossing of a new road carrying below 8,000 vehicles (AADT); or					
	A new bridge will need to be climbed or a subway traversed; or					
	Journey distance will be increased by up to 250m.					
Moderate	When some residents (particularly elderly or children) are likely to be dissuaded from making trips or trips will become longer or less attractive, for example:					
	Two or more of the hindrances set out under 'Slight' applying to single trips; or					
	• Pedestrian at-grade crossing of a new road carrying between 8,000 – 16,000 vehicles (AADT) in the opening year; or					
	Journey distance will be increased by 250-500m.					
Severe	Residents are likely to experience considerable hindrance or be deterred from making trips to the extent that routes are changed, for example:					
	• Pedestrian at-grade crossing of a new road carrying over 16,000 vehicles (AADT) in the opening year; or					
	An increase in journey distance of over 500m; or					
	• Three or more of the hindrances set out under 'slight' or two or more set out under 'moderate'.					

31.2.24 A descriptive assessment of severance of school catchment areas was undertaken and provided later in the chapter.

Mitigation Design

31.2.25 The development of mitigation is based on the PAN 58 approach as described in Chapter 5 (Overview of Assessment Process) to meet the intentions of the relevant legislation as described below, and presented in detail in section 31.5. In addition to the mitigation proposed specifically for pedestrians and others, other chapters should be referred to for mitigation that will ameliorate impacts on users further. Chapter 22 (Land Use) should be referred to for proposed farm accommodation bridges; Chapter 25 (Ecology and Nature Conservation) provides proposed wildlife bridge locations and ecological planting; Chapter 26 (Landscape) provides proposed planting mitigation and Chapter 33 (Disruption Due to Construction) provides proposed accommodation bridges (non agricultural). Legislation, as detailed below, affirms rights to pedestrians and others to be able to use these in a responsible manner.

Land Reform (Scotland) Act 2003

31.2.26 The Land Reform (Scotland) Act 2003 Part 1 came into effect in February 2005 and establishes statutory rights of responsible access on and over most land, including inland water. The new legislation offers a general framework of responsible conduct for both those exercising rights of access and for landowners. Local authorities will be given new powers and duties to uphold and facilitate responsible access rights. It gives them a duty to draw up a plan for a path network and to keep a list of 'core paths' (see paragraph 31.2.4). The core path network should provide for all forms of recreational access including cyclists, equestrians and walkers.

- 31.2.27 Section 13 of the Act states: 'It is the duty of the local authority to assert, protect and keep open and free from obstruction or encroachment any route, waterway or other means by which access rights may reasonably be exercised'.
- 31.2.28 The finalised draft core path network plans for Aberdeenshire Council and Aberdeen City Council are expected to be ready by January 2008. The current mitigation proposals have therefore been designed based on existing path networks as the core path network has not yet been produced. However, through consultations with the relevant local authorities, mitigation proposals have been designed to maintain current access, and to protect the potential for access provision. Where over/under bridges are shown on the plans but are not specifically designated use by multi-users including cyclists, equestrians and walkers. it should be noted that under Section 1 of the Act, ('Access Rights'), these crossings may be used by the public using the countryside for the purposes set out in Section 2 ('Exercised Responsibly').

Disability Discrimination Act (1995)

- 31.2.29 Under this Act, a disabled person is an adult or child who has, or has had in the past, a physical or mental impairment which has a substantial and long term (i.e. at least 12 months) adverse effect on their ability to carry out normal day to day activities. This includes people with physical and sensory disabilities, learning difficulties and mental illness.
- 31.2.30 The Act makes it unlawful for service providers to treat disabled people less favourably than they would treat other people, for a reason related to their disability, when offering public services and facilities, thereby including paths and trails.
- 31.2.31 The provisions of the Act are consistent with SNH's policy of promoting 'access for all', under which access to the countryside should be barrier free and, where a structure is necessary, the 'least restrictive option' should be adopted. This means that access structures should accommodate the needs and interests of as wide a range of legitimate users as possible.
- 31.2.32 In accordance with the Act, access structures in the form of overbridges and underpasses, have taken into account potential barriers such as gradient, verge width, radius of bends and surfacing

Residual Impact Assessment

Journey Length, Amenity Value and Community Severance

31.2.33 Residual impacts were identified following the same methodology as described above for identification of potential impacts for Journey Lengths, Amenity Value and Community Severance. However, the residual impact on pedestrians and others is assessed by taking into account the mitigation proposals as described in section 31.5.

Countryside Access

- 31.2.34 An assessment on the impact on countryside access in accordance with the methodology described in Appendix 5 of the SNH Handbook of Environmental Impact Assessment (2005), has been included to consider access to countryside facilities. The assessment is presented under the Residual Impact Assessment section because it takes proposed mitigation into consideration.
- 31.2.35 The potential effects of a project on countryside access interests will usually depend on the following main considerations:
 - The type of countryside access facility;
 - The type of project, including its nature, scale, location, duration etc; and
 - The nature of recreation practised at the site or facility.
- 31.2.36 Using the defined types of outdoor facilities and types of outdoor access impacts provided by SNH in their Handbook, this chapter presents a qualitative assessment of the impacts and mitigations.

Limitations to Assessment

- 31.2.37 The assessment presented in this chapter and its associated figures is subject to the following limitations and assumptions:
 - The assessment is based on information provided during the consultation process. For example, the paths described may no longer be present, and others may have been missed.
 - Following discussions with landowners, additional access tracks and farm accommodation works may be provided.
 - Traffic data were not available for all the roads in the study area as the traffic model was developed at a strategic level given the large area which it had to cover.
 - Traffic data quoted apply to only selected sections of roads, and may not necessarily reflect traffic levels over the entire length of that road.
 - DMRB does not provide criteria for assessing the significance of change in journey length for equestrians and cyclists. The criteria provided for pedestrians are therefore used as a basis, in conjunction with professional judgement.

31.3 Baseline Conditions

- 31.3.1 The study area is characterised by rural fields and woodlands with scattered farms connected to small settlements via a network of minor roads and tracks. The two largest settlements include Peterculter/Milltimber and Westhill/Kingswells and these are connected to Aberdeen by the A93 and A944 respectively. The types of key routes used by pedestrians and others range from informal grassed over footpaths to stony farm access tracks to minor roads. As most of the minor roads carry little traffic, they are heavily used for recreational purposes by pedestrians and others even though no specific NMU features are provided.
- 31.3.2 Many routes are identified in the Scottish Paths Record and in the proposed core path network being developed by the Local Authorities (refer to paragraph 31.2.4), and a number of them are also recognised as pedestrian Right of Ways (RoWs) in the National Catalogue of Rights of Way. To be a RoW a route must meet certain conditions, the main ones being that the route must have been used by the public for at least 20 years, it must connect two public places, and it must follow a more or less defined route. The introduction of new access legislation (Land Reform (Scotland) Act 2003) will not affect the status of existing RoWs but does not guarantee that these will be incorporated into core path networks.
- 31.3.3 In 2004, a study was conducted and a report prepared for Aberdeenshire Council on a revision of the National Cycle Route 1. The preferred option from that study was taken into consideration during the assessment and is shown in Figures 31.1c–d as 'Proposed Cycleway'.

Local Vehicular Traffic

- 31.3.4 The major roads in the corridor include the A90, A93 and A944. The A93 has provisions for pedestrians (i.e. footpaths). The A944 is unsuitable for pedestrians or equestrians due to the lack of provisions and the high speed and high volume of traffic, but it does provide a parallel cycle path from Westhill to Kingswells used mostly by commuters into Aberdeen.
- 31.3.5 Local vehicular traffic currently utilises the following main routes around the study area:
- 31.3.6 Section Charleston to Cleanhill (see Figures 31.2a–b): the A90 is the main route carrying high traffic flows north and south, to and from Aberdeen; east-west traffic flows occur along the South Deeside Road (B9077), and along the Lochton-Auchlunies-Nigg (C5K) road.
- 31.3.7 Section Cleanhill to A93 (see Figure 31.2b): the A93, the B979 and South Deeside Road (B9077) bring most of the traffic into Milltimber.

- 31.3.8 Section A93 to A944 (see Figures 31.2b–c): the only north-south routes in this section are provided by the B979 to the west of the study corridor and the Bieldside-Blacktop-Kingswells road to the east. Contlaw Road and Silverburn Road (C127) provide east-west movements.
- 31.3.9 Section A944 to Dykeside (North Kingswells) (see Figure 31.2c): the main routes in this section are provided by the Chapel of Stoneywood Fairley Road (C89C) and the minor road heading north-west from the A944 towards Blackburn.
- 31.3.10 There are four main bus routes (shown in Figures 31.2 a–c) that cross the corridor:
 - From Aberdeen along Hilldowntree Causeyport Road (C34K), west along Lochton Nigg Road (C5K), continuing south through Burnhead to Cookney and further;
 - From Aberdeen west along the South Deeside Road (B9077) pulling in at Kirkton of Maryculter;
 - From Aberdeen west along the North Deeside Road (A93) through Milltimber and Peterculter; and
 - From Aberdeen west along the A944, past Kingswells and Westhill.

Key Community Facilities

- 31.3.11 Most of the community facilities in the study area are located in the larger settlements of Peterculter/Milltimber and Westhill/Kingswells as can be seen in Table 31.10 and Figures 31.2a–c.
- 31.3.12 As explained in paragraph 31.2.2, community facilities were surveyed whenever their catchment area had the potential to be impacted by the proposed scheme. In accordance with DMRB, key community facilities that were surveyed included:
 - Doctor's surgeries and hospitals: Peterculter Medical Practice, Kingswells Medical Centre, Roxburgh House, Ardene House Veterinary Hospital.
 - Aged persons homes: Hawkhill Residential Nursing Home, Kingsmead Home.
 - Schools/ Education centres: Culter School, Camphill Rudolph Steiner School, The International School of Aberdeen, Milltimber School, Great Western Pre School, Kingwells Primary School, Westhill Academy and Westhill Primary School and Kingswood Learning Enhancement Centre.
 - Shops: Peterculter Post Office, Five Mile Petrol Station and Garage, Kingwells shops (including post office), Tesco supermarket (Westhill), Westhill pharmacy and health care.
 - Churches and cemeteries: Kirkton of Maryculter Cemetary and Kirkton and Cookney Parish Church, Peterculter Parish Church, Deeside Christian Fellowship Church, Friends Burial Ground.
 - Parks, play areas, sport centres (including riding schools), etc: Redwing Livery Yards and Blaikiewell Animal Sanctuary, Redwing Riding School (Eastland Lodge), Storybook Glen Theme Park, Corbie Park Playing Fields, Peterculter Sports Centre, Milltimber Playing Fields (Albyn School), Milltimber Farm livery facilities, Kippie Lodge Sports and Country Lodge, Nether Beanshill Livery Yard, East Brotherfield Livery Yard, East Kingsford Livery Yard, Denburn Stud Farm and Livery (Denhead of Cloghill), Webster Park.
 - Libraries.
 - Bus services.
 - Community Centres/Services: Corbie Hall (also known as Maryculter Community Hall); Peterculter Police Station, Milltimber Community Centre and Playing Fields, Kingswells Community Centre.
- 31.3.13 Community facilities surveyed are listed in Table 31.10 and shown in Figures 31.2a–c. Also shown on the Figures are the catchment areas for primary and secondary schools.

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31.3.14 As can be seen, most community facilities in the study area can be found in the larger settlements of Milltimber, Peterculter, Kingswells and Westhill. The number of users for those facilities can therefore be estimated to be proportional to the settlement population (shown in Table 31.5) assuming that people will use the nearest available facility. Scotland's population is estimated to rise by only 0.8% by 2011¹, therefore the 2004 Census population estimates provide a suitable proxy for the proposed scheme year of opening.

Table 31.5 – Population Estimates

Name	2004 Population	Population	Population Demographics (%) ³				
	Estimate ²	Aged 0-15	Aged 65+				
Milltimber	2,450	25.1	63.9	10.9			
Peterculter	4,330	19.2	64.1	16.7			
Kingswells	4,360	20.6	62.2	17.2			
Westhill	10,070	23.2	67.8	9.0			

31.3.15 Primary and secondary school catchment areas are listed below and illustrated on Figures 31.2a–c These are listed separately from the community facilities mentioned above as they lie outwith the 500m study area.

Primary Schools

- Charleston School;
- Banchory-Devenick School;
- Maryculter School;
- Milltimber School;
- Culter School;
- Lairhillock School;
- Cults School;
- Westhill Primary School; and
- Kingswells School.

Secondary Schools

- Portlethen Academy;
- Cults Academy;
- Hazlehead Academy;
- Westhill Academy; and

¹ Source: General Register Office for Scotland (http://www.gro-scotland.gov.uk/statistics/library/popproj/ 04population-projections/index.html)

² Source: General Register Office for Scotland (http://www.gro-scotland.gov.uk/statistics/library/settlementsand-localities/mid-2004-population-estimates-for-settlements-in-scotland.html)

³ Source: Scottish Public Health Observatory (ScotPHO) (http://www.scotpho.org.uk/web/site/home/ Comparativehealth/Profiles/CommunityProfiles/Grampian/Grampian.asp)

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 - Bankhead Academy
- 31.3.16 Further details on community facilities and land use are provided in Chapter 22 (Land Use).

Countryside Access

- 31.3.17 Given the rural nature of the study corridor, an impact assessment using SNH methodology for countryside access was conducted (refer to paragraph 31.2.33). The types of outdoor access facilities within the corridor cover both area based (e.g. parks, reserves, local open spaces and inland lochs and reservoirs) and linear access (e.g. core paths, routes, RoWs) types. Linear access outdoor facilities will be assessed in detail in Key Routes and Journey Length sections; this section will therefore concentrate on area based facilities and on the River Dee (which, although a linear access facility, could not be assessed under the previous sections).
- 31.3.18 The study area includes eight forested areas, one local and one country park, the River Dee and a National Cycle route, which provide recreational use, as shown on Figures 31.1a–h and include:
 - Duff's Hill;
 - Greenhowe Woods;
 - Clochandighter Wood;
 - Durris Forest;
 - Cleanhill Wood;
 - Craigingles Wood;
 - River Dee;
 - Gairnhill (Rotten O' Gairn);
 - Kingshill;
 - Webster Park; and
 - Brimmond Hill.

Key Routes

- 31.3.19 The current journey distances for the key routes were estimated from plans, and the journey times were calculated using the speed of travel provided at paragraph 31.2.9. The results are provided in Table 31.6, and Figures 31.1a–h show the journey length end points (denoted as Rn) used to calculate distances (the journey descriptions in the table match the Rn markers on the figures).
- 31.3.20 Whilst the predominant users of the routes have been identified in the table using information provided or collected, it is reasonable to assume that all minor roads would be used by all NMUs and that paths and tracks not identified as routes would also be used by pedestrians and others where practicable.
- 31.3.21 National Cycle Route 1 uses the network of minor roads in the area to allow cyclists to travel from Aberdeen to Stonehaven. The roads followed include Hilldowntree Causeyport Road (C34K), C30K, and the C5K. The route is shown on Figures 31.1a–c.

Amenity Value

31.3.22 Throughout the study corridor the baseline air quality and noise levels have been measured and have been determined to be well within the minimum standards required (refer to Chapter 29: Air Quality and Chapter 30: Traffic Noise and Vibration for details). Traffic flows provided in Table 31.6 represent traffic along a particular section (i.e. between two junctions) and not the full length of the road.

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31.3.23 The existing amenity value for the key routes is provided in Table 31.6, with routes indicated on Figures 31.1a–h.

Community Severance

Existing Severance

- 31.3.24 Three major contributors to existing community severance are:
 - the A90 at Charleston;
 - the A93 (or North Deeside Road); and
 - the A944 (from Aberdeen to Westhill).
- 31.3.25 The construction of the A90 created community severance between the coastal and rural communities of Aberdeen with 2005 Average Annual Daily Traffic (AADT) flows of some 39,000 vehicles, allowing few opportunities to cross the road, especially for pedestrians and others.
- 31.3.26 At the regional level, the A93 and A944 provide a connection from Aberdeen to the peripheral communities of Peterculter/Milltimber/Bieldside/Cults and Westhill/Kingswells respectively. Traffic volumes on these roads have contributed to community severance with volumes of 12,500 and 24,300 vehicles AADT respectively, creating hindrance of movement between the communities south and north of each road. AADT from 2005 is used to represent existing traffic volume.

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Table 31.6 – Baseline Journey Lengths and Amenity Values

Key Ro	ute Identification		Baseline Journey Length				Baseline Amenity Value		
Route No	Description	Access Type	Journey Description	Distance [m]	Time [mins, secs]	Predominant NMU Type	Amenity Description/Primary Use	Traffic AADT 2005	Safety
1	Old Stonehaven Road (U168K)	Public road	From junction with Redmoss Road to junction with Cove Road	810	2 mins, 26 secs	Cyclists	U168K is lined with small commercial and light industrial businesses and it is used primarily for access to those sites. A956: This is a busy four lane arterial road allowing transport from the A90 to access the industrial sites of Charleston, Altens and Tullos.	U168K: No data available. A956: 14,700 vehicles with 8.3% HGVs	There is a narrow footpath along the U168K. There is no formal footpath and no safe crossing facility for NMUs to use when crossing the A956.
2	Hatton track	Track	From Bothy Brig Cottage to the C5K at Hillside	750	9 mins	Pedestrians	Stony track providing access to local residents with views out to sea. Used for access.	No data available.	-
3	Hilldowntree – Causeyport Road (C34K)				10 mins, 55 secs	Pedestrians	Minor road bounded by fields. Provides views of Hare Moss. Used for access and recreation.	80	Does not have footpaths and only narrow verge.
					2 mins, 44 secs	Cyclists			
4	U59K	Public road	From C5K to entrance to Bishopston Farm	810	2 mins, 26 secs	Cyclists	Minor road bounded by fields and forests. Used for access and recreation.	No data available.	Does not have footpaths and only narrow verge.
5	Sunnyside Steading access track	Track	From Sunnyside Steading to junction of C5K and C30K	1230	14 mins, 46 secs	Pedestrians	Paved road providing access to Sunnyside Steading only.	No data available.	-
6	Сзок	Public road	From Birken Braes to junction of C5K and C30K	770	2 mins, 19 secs	Cyclists	Minor road bounded by fields and forests. Used for access and recreation.	No data available.	Does not have footpaths and only narrow verge.

Key Ro	ute Identification		Baseline Journey Length				Baseline Amenity Value		
Route No	Description	Access Type	Journey Description	Distance [m]	Time [mins, secs]	Predominant NMU Type	Amenity Description/Primary Use	Traffic AADT 2005	Safety
7	Merchant's Croft access track	Track	From Merchant's Croft to junction of C5K and C30K	740	8 mins, 53 secs	Pedestrians	Stony track providing access to farms and grazing fields. Used for access and recreation.	No data available.	-
					2 mins, 13 secs	Cyclists			
8	Whitestone track	Track	From Red Tile Lodge to Merchant's Croft	1220	14 mins, 38 secs	Pedestrians	Stony track providing access to farms and grazing fields. Used for access and recreation.	No data available.	-
9	Lochton – Nigg Road (C5K)Public roadFrom Burnhead access road on the C5K to Red Tile Lodge	400	4 mins, 48 secs	Pedestrians	Minor road bounded by fields and forests. Used for access and recreation.	1800	Does not have footpaths and only narrow verge.		
					1 min, 12 secs	Cyclists			
10	Blaikiewell Road (U63K)	Public road	From Blaikiewell Farmhouse access road to Burnhead access road on the C5K.	580	6 mins, 58 secs	Pedestrians	Minor road bounded by fields and forests. Used for access and recreation.	No data available.	Does not have footpaths and only narrow verge.
11	Blaikiewell Farmhouse track (east)	Track	From U63K to Blaikiewell Farmhouse	680	8 mins, 10 secs	Pedestrians	Track providing access to Blaikiewell Farmhouse.	No data available.	-
12	Blaikiewell Road (U63K)	Public road	From Burnhead access road on the C5K to Crynoch Burn bridge	1040	20 mins, 48 secs	Pedestrians – Vulnerable	Minor road bounded by fields and forests. Used for access and recreation.	No data available.	Does not have footpaths and only narrow verge.
13	Boundary track in Cleanhill Wood	Path	From one junction with Kingcausie track to other junction	1400	16 mins, 48 secs	Pedestrians	Narrow pedestrian path through forest.	No data available.	-

Key Ro	ute Identification		Baseline Journey Length				Baseline Amenity Value		
Route No	Description	Access Type	Journey Description	Distance [m]	Time [mins, secs]	Predominant NMU Type	Amenity Description/Primary Use	Traffic AADT 2005	Safety
14	Eastland track	Track	From Blaikiewell Road to Kingcausie track	790	9 mins, 29 secs	Pedestrians	Bitumen single lane track providing access between Eastland and Kingcausie House.	No data available.	-
15	South Deeside Road (B9077)	Public road	From intersection with B979 to North Lodge	260	47 secs	Cyclists	Minor road that follows the River Dee and is bounded by fields and forests.	4300	-
16	North Deeside RoW (GC40)	Track	From the junction with the B979 to the junction with the Mains of Murtle track	1170	14 mins, 2 secs	Pedestrians	Follows the north bank of the River Dee and is dedicated to NMUs. Used for recreation.	No data available.	-
17	Milltimber access track (south)	Track	From B979 to edge of study corridor	670	8 mins, 2 secs	Pedestrians	Dirt track providing access to farms and grazing fields with views down to the River Dee.	No data available.	-
18	Milltimber access track (north)	Track	From B979 to edge of study corridor	630	7 mins, 34 secs	Pedestrians	Dirt track providing access to farms and grazing fields with views down to the River Dee.	No data available.	-
19	Old Deeside Line RoW (GC45)	Track/ RoW	From the junction with the B979 to the junction with Station Road	230	2 mins, 46 secs	Pedestrians	On an elevated position overlooking the River Dee plain and is dedicated to NMUs. Used for recreation.		-
					1 min, 23 secs	Equestrians			
					41 secs	Cyclists			
20	Milltimber Brae Road	Public road	From the B979 to North Deeside Road (A93)	200	4 mins	Pedestrians – Vulnerable	Leads to residential area and terminates as a dead-end (as does Station Road). Used for access.	No data available.	1.5m wide footpath
21	A93 (North Deeside Road)	Public road	From Bellenden Walk to Kippie Lodge access road	280	5 mins, 36 secs	Pedestrians – Vulnerable	Traverses residential areas but busy road carrying traffic from Aberdeen to the various communities along the River Dee. Used for access.	12500 west and 8900 east of Maryculter bridge	2.5m wide footpath
					50 secs	Cyclists			

Key Rou	ute Identification		Baseline Journey Length				Baseline Amenity Value		
Route No	Description	Access Type	Journey Description	Distance [m]	Time [mins, secs]	Predominant NMU Type	Amenity Description/Primary Use	Traffic AADT 2005	Safety
22	Culter House access road	Public road	From Culter House along access road, down Culter Road to A93.	1350	27 mins	Pedestrians – Vulnerable	Single lane road, going past the Kippie Lodge golf course and the rear of the International School. Used for recreation.	No data available.	Does not have footpaths and only narrow verge.
23	Culter House Road	road to the junction with Culter mins, Vulnerable of traffic through the rural area	behind Milltimber. Used for access	No data available.	Does not have footpaths and only narrow verge.				
					5 mins, 17 secs	Equestrians			
24	Contlaw Road	Public road	From Contlaw House to Hill Farm	350	2 mins, 6 secs	Equestrians	Minor road bounded by fields. Used for access and recreation.	No data available.	Does not have footpaths and only narrow verge.
25	Upper Beanshill track/RoW across Contlaw Road (GC46)	Vacross RoW		1070	12 mins, 50 secs	Pedestrians	Minor roads providing access to Westfield Cottage (north) and Nether Beanshill (south). Both used for access and recreation.	No data available.	Does not have footpaths and only narrow verge.
					6 mins, 25 secs	Equestrians			
26	RoW from Westfield Cottage along track heading northwest (GC47)	RoW	From Westfield Cottage to end of recognised RoW	620	7 mins, 26 secs	Pedestrians	Informal track through fields (barred by electric fence and barbed wire).	No data available.	-
27	Silverburn Road (C127) Public road From Silverburn House access road to Gairnhill Wood car park 400 4 Mins, 48 secs	Pedestrians	Minor road bounded by fields and forests, carrying a small volume of traffic. Used for access and recreation.	900	Does not have footpaths and only narrow verge.				
		2 Equestrians mins, 24 secs							

Key Rou	ute Identification		Baseline Journey Length				Baseline Amenity Value		
Route No	Description	Access Type	Journey Description	Distance [m]	Time [mins, secs]	Predominant NMU Type	Amenity Description/Primary Use	Traffic AADT 2005	Safety
					1 min, 12 secs	Cyclists			
28	Gairn Farm access track	Track	From Gairn Farm to Kingsford-Silverburn track	400	4 mins, 48 secs	Pedestrians	Stony track providing access to Gairn Farm.	No data available.	-
29	Track from Kingshill Wood to Moss of Auchlea	Track	From the junction with the road south of West Auchlea and the Kingshill Wood track at Tigh He Bluaich	1380	16 mins, 34 secs	Pedestrians	Stony track providing access to Mosside of Auchlea Farm with views across the valley.	No data available.	-
30	Short RoW (GC23) joining the two other RoWs: from A944 (East Kingsford) south to	Track/ RoW	From the junction between Backhill and Auchlea, to Ben View	600	7 mins, 12 secs	Pedestrians	Stony track providing access to locals farms and homesteads with views across the valley.	No data available.	-
	Kingshill Wood (GC25), and A944 (West Kingsford) to Auchlea (GC22)				3 mins, 36 secs	Equestrians			
31	RoW (GC25) from A944 (East Kingsford) south to Kingshill Wood	Track/ RoW	From the A944 (at East Kingsford) to the Kingshill Wood track at Tigh He Bluaich	710	8 mins, 31 secs	Pedestrians	Starts as a bitumen road then turns into a stony track. Used for access and recreation.	No data available.	-
					4 mins, 16 secs	Equestrians			
					2 mins, 8 secs	Cyclists			
32	A944	Public road	From road west of Kingsford heading north, to Ardene House Veterinary Hospital	1030	3 mins, 5 secs	Cyclists	Very busy double lane trunk road carrying traffic between Aberdeen and Westhill.	24,300	Does not have footpaths. Cycle lanes provided on the northern side of the road.

Key Ro	ute Identification		Baseline Journey Length				Baseline Amenity Value			
Route No	Description	Access Type	Journey Description	Distance [m]	Time [mins, secs]	Predominant NMU Type	Amenity Description/Primary Use	Traffic AADT 2005	Safety	
33	Westhill Road from A944 past East Kingsford Cottage to West Hatton Croft	Public road	From East Kingsford Cottage to Westholme	340	4 mins, 5 secs	Pedestrians	Minor road bounded by fields, carrying a small volume of traffic. Used for access and recreation.	No data available.	Does not have footpaths and only narrow verge.	
34	Consumption Dyke track to West Hatton Croft	Path	From the junction between West Hatton Croft and West Hatton to the eastern end of the Dyke at the C89C.	1050	12 mins, 36 secs	Pedestrians	Follows the Consumption Dyke, a 5m wide dyke of uneven stone, with gaps allowing access into fields. The path terminates at the boundary of the West Hatton Woods District Wildlife Site.	No data available.	-	
35	Access track to Denhead of Cloghill from West Hatton	Track	From the junction between West Hatton Croft and West Hatton to the access road entrance off the C89C.	1270	7 mins, 37 secs	Equestrians	Track providing access to Denhead of Cloghill.	No data available.	-	
36	Track along the bottom of Cloghill, north of Denhead of Cloghill	Track	From the Cloghill House access road at the C89C to the junction between West Hatton Croft and West Hatton	1400	16 mins, 48 secs	Pedestrians	Stony track providing access to farms and grazing fields with views across the valley.	No data available.	-	
37	Access road to Woodside of Cloghill	Track	From Woodside of Cloghill to access road at the C89C.	520	3 mins, 7 secs	Equestrians	Stony track providing access to farms and grazing fields with views across the valley.	No data available.	Does not have footpaths and only narrow verge.	
38	Track to the north of Woodside of Cloghill and to the northeast of Fairley Home Farm	Track	From Woodside of Cloghill to access road at the C89C via Fairley Home Farm.	1080	6 mins, 29 secs	Equestrians	Stony track providing access to farms and grazing fields with views across the valley.	No data available.	-	
39	Track from Fairley House to Brimmond Hill	Track	From Fairley Home Farm access track at the C89C to the Y-junction heading towards the Hillhead of Derbeth	630	7 mins, 34 secs	Pedestrians	Stony track providing access to farms and grazing fields with views across the valley.	No data available.	-	
40	Track from Derberth Farm to Hillhead of Derberth	Track	From Derbeth Farm access off the C89C to junction with track heading to Hillhead of Derbeth.	800	9 mins, 36 secs	Pedestrians	Grassed over track with deep ruts providing access to farms and grazing fields with views across to Kingswells.	No data available.	-	

31.4 Potential Impacts

- 31.4.1 As discussed previously, the potential impacts of the proposed scheme on pedestrians and others journeys have been assessed with respect to journey distance and time, amenity value and community severance.
- 31.4.2 The road model assessed in this chapter incorporates design elements which will mitigate potential impacts on pedestrians and others, such as the provision of footpaths alongside the overbridges necessary to enable side roads to pass over the mainline sections of the proposed scheme. The potential impacts described in this section are based on the finalised road model and therefore take these measures into account. However, any specific mitigation required for pedestrians and others including path diversions, farm accommodation bridges, cycle lanes, and NMU bridges is not included in the Potential Impacts assessment, but is described further in section 31.5 (Mitigation) and taken into account in section 31.6 (Residual Impacts).

Journey Lengths (Distance and Time)

- 31.4.3 The key routes identified in Table 31.6 were considered in relation to the proposed alignment of the AWPR Southern Leg. 'Conflict Points' were identified where the proposed scheme will cross a key route (denoted as 'Cn' on the Figures, where n is a numerical sequential identifier). For each of the Conflict Points identified, the change in journey length (in travel time and distance) was estimated and a corresponding impact significance value was determined with reference to the criteria defined in Table 31.1.
- 31.4.4 For a number of Conflict Points (generally the minor roads), the proposed scheme design maintains access along the route with the provision of an over/under bridge. In many cases the design maintains the original alignment of the route therefore journey lengths are not impacted. In other cases there is a slight realignment and the impact on journey length has been assessed using the criteria of Table 31.1 but the results showed Negligible or Slight impacts only. Conflict Points to which this applies are listed below:
 - C1: Access to the A956 (Wellington Road) will be maintained.
 - C6: The AWPR Southern Leg will dissect the road just south of Newlands. The C30K will be realigned and the C30K overbridge will maintain access over the AWPR Southern Leg. The realignment will decrease journey length by 30m (5 secs for cyclists), representing a Negligible beneficial impact.
 - C9: The AWPR Southern Leg will dissect the road 50m north of the junction with Blaikiewell Road. The road will be straightened and access maintained via the C5K overbridge. The realignment will increase journey length by 50m (36 secs for pedestrians and 9 secs for cyclists), representing a Slight impact for pedestrians and Negligible impact for cyclists.
 - C10: The AWPR Southern Leg will dissect the road 100m west of the junction with C5K. Blaikiewell Road will be straightened and reconnected to the C5K north of the AWPR Southern Leg. Access over the AWPR will be maintained via the C5K overbridge. The realignment will increase journey length by 210m (2 mins, 31 secs for pedestrians and 1 min, 16 secs for equestrians), representing a Slight impact.
 - C12: The AWPR Southern Leg will cross Blaikiewell Road 250m west of the Blaikiewell Farm access road. This minor road will be retained via Blaikiewell Road underbridge with no change to its alignment and therefore no change to the journey length.
 - C15: The AWPR Southern Leg will cross the South Deeside Road 100m west of North Lodge however the bridge design to cross the River Dee will start its span south of the South Deeside Road, leaving the road unaffected.
 - C16: The AWPR Southern Leg will cross the RoW just east of the B979. The bridge design will maintain the RoW with no impact on journey lengths.

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- C20: The AWPR Southern Leg will cross the road at its western end. This minor road will be retained via Milltimber Brae overbridge along its current alignment.
- C21: The AWPR Southern Leg will cross the A93 at the International School. The A93 will be retained via the A93 overbridge.
- C24: Contlaw Road will be retained via Contlaw Road overbridge along its existing alignment, therefore no change to journey lengths.
- C26: The existing track terminates where the AWPR Southern Leg will intersect it, at the southwest corner of Gairnhill Wood. However, Beanshill Accommodation underpass will provide access across the AWPR Southern Leg should NMUs wish to travel west at this point.
- C27: The AWPR Southern Leg will cross the road 100m west of the Gairnhill Wood car park. The road will be straightened slightly and maintained via the C127 underbridge under the AWPR Southern Leg.
- C32: The AWPR Southern Leg will intersect the A944 100m east of Kingsford Industrial Estate. The AWPR Southern Leg mainline will pass over the A944, and a new roundabout will allow traffic to access the AWPR Southern Leg from the A944. The realignment will increase journey length by 20m (4secs for cyclists), representing a Negligible impact.
- 31.4.5 Hatton overbridge maintains access at conflict point 2. The realignment of the side road across the Southern Leg does however create a diversion of Major impact significance due to the increase in journey length of 520m (6 mins, 14 secs for pedestrians).
- 31.4.6 For all other Conflict Points, the proposed AWPR Southern Leg scheme design, without mitigation, would close 27 of the 40 routes identified, 4 of these being established RoWs, creating a Severe impact.
- 31.4.7 Note it has been assumed that no NMUs travel on the A90. Cyclists may use this road, however, there will be no significant impact even with the change in the intersection layout with the A956.
- 31.4.8 Access to the following minor roads from the A90 will be closed to vehicular and NMU traffic for safety reasons. The A90 will be widened to six lanes south of the Charleston junction increasing the risk of safely negotiating the crossing. North of the Charleston junction, the slip roads to exit/access the AWPR Southern Leg will also make it unsafe for NMUs to attempt crossing the A90 at this point. The minor roads to be closed are:
 - Haremoss Checkbar Road (U58K);
 - Hatton track; and
 - Lochton Auchlunies Nigg Road (C5K).
- 31.4.9 In addition to those road closures, the bus stops currently located on the A90, just north of the Lochton Nigg Road (C5K), will have to be relocated approximately 600m south to be on the slip roads. This distance represents a Major impact, however it will be adverse for some pedestrians (increase journey lengths for residents along the C5K) but beneficial for others (decreasing journey lengths for residents south of the A956).

Local Vehicular Traffic

- 31.4.10 With most minor roads being retained, the AWPR Southern Leg will have a Slight impact on journey lengths for local vehicular movements. The impact of the proposed scheme on traffic flows (AADT) along those movements are detailed below (as a comparison with predicted AADT without the proposed scheme for the year of opening).
- 31.4.11 Section Charleston to Cleanhill (see Figures 31.2 a–b): A90 traffic flows are predicted to decrease by 16% with the scheme in place. Traffic along the South Deeside Road (B9077) is predicted to decrease by up to 23%. Closure of the U59K (conflict point C4) to vehicular traffic will most likely result in a diversion west to the Hillside Batchart Road (C30K), since the Hilldowntree –

Causeyport Road (C34K) to the east would also be closed to local vehicles. For the residents of the Banchory-Devenick area wishing to travel on the A90, the new side road connection at Hatton, minimises the potential increased journey length resulting from the closure of the three at-grade junctions to the A90 (as noted above in paragraph 31.4.8), by linking to the A90 via the School Hill scheme to the south of Marywell

- 31.4.12 Section Cleanhill to A93 (see Figure 31.2b): Traffic flows and the number of HGVs on the B979 and South Deeside Road (B9077) are predicted to decrease by up to 52%.
- 31.4.13 Section A93 to A944 (see Figures 31.2b–c): There is no traffic data available for the minor roads in this area except for Silverburn Road (C127) which is predicted to receive a 15% increase in traffic. The closure of Culter House Road (conflict point C23) will result in a diversion along the A93 and the new A93 link road. Traffic changes on the A93 are predicted to be variable, with an 8% increase on the stretch immediately to the west of the AWPR and decreases of 25-45% to the east of the AWPR.
- 31.4.14 Section A944 to Dykeside (North Kingswells) (see Figure 31.2c): Traffic flows on the Chapel of Stoneywood Fairley Road (C89C) are predicted to decrease by 39%. The closure of Westhill Road (conflict point C33) will result in a diversion along the A944.
- 31.4.15 None of the bus routes shown in Figures 31.2a–c will be affected by the AWPR Southern Leg.

Amenity Value

- 31.4.16 Impact on amenity value is assessed at the points where pedestrians and others will have to cross the proposed scheme, either by an over/under bridge or underpass. The potential impact is assessed taking into account visual, noise and air quality impacts. The results are provided in Table 31.9.
- 31.4.17 The traffic data provided in Table 31.9 are projected flows for the over/under bridges, underpasses, link roads and existing major roads connecting to the AWPR Southern Leg as there are no NMU atgrade crossings along the AWPR Southern Leg itself. In addition to the traffic travelling over/under the AWPR, pedestrians may experience some additional noise from traffic travelling along the AWPR.
- 31.4.18 The proposed scheme will provide a decrease in traffic along most of the minor roads within the study area, bringing a benefit for pedestrians and others. Also, whilst the experience of crossing the AWPR Southern Leg at the Conflict Points (shown in Figures 31.1a–h) will be adverse, it will be of short duration in most cases. Therefore the exposure to decreased air quality or increased noise levels will result in a Slight impact only.
- 31.4.19 The visual impacts listed in Table 31.9 have been assessed based on year of opening before mitigation, i.e. before new planting has become established. These impacts therefore represent the "worst case scenario". Visual impacts are not available for all locations as only selected paths were used in the assessment (refer to Chapter 27: Visual).
- 31.4.20 As traffic and visual impacts are the greatest differentiators in this assessment, the significance of impact on amenity value has not been assessed where neither of these pieces of information have been available. This was the case for routes 2 (Hatton track), 4 (U59K), 6 (C30K), 11 (Blaikiewell Farmhouse track (east)), 14 (Eastland track), 17 (Milltimber Access Track) and 26 (RoW from Westfield Cottage along track heading northwest (GC47)). Under the scheme design, only route 6 will be maintained open. This route is part of the National Cycle Route 1, therefore the transient nature of the journey will reduce any visual impact. It is also assumed that the levels of traffic on that road will be not change significantly to produce a discernible impact.

Community Severance

Relief from Existing Severance

- 31.4.21 The major roads, A90, A93 and A944, are all predicted to carry traffic volumes above 8,000 vehicles AADT, with and without the AWPR. To the east of the AWPR, traffic on the A93 is predicted to decrease. A moderate-to-slight relief of severance may be experienced in the area due to the potential 25-45% decrease compared to the Do-Minimum case. The A93 is a key route within the Cults Academy, Milltimber School and Culter School catchment areas; severance relief will therefore be experienced by vehicular movements to these schools. To the west of the AWPR traffic levels on some stretches of the A93 are expected to increase by about 8%. No increase in existing severance is envisaged.
- 31.4.22 The relocation of the bus stops from the A90 to the A90 slip road at the Charleston Junction, (refer to paragraph 31.4.9) will provide a significant benefit to pedestrians using these facilities because traffic volumes on the slip roads are predicted to be much less than the traffic on the A90 itself (1,034 vehicles AADT for year of opening on the northbound slip road, and 1,242 on the exit slip road southbound, compared to 37,902 on the A90 itself).
- 31.4.23 Traffic flows on the A944 are predicted to increase by up to 16% more than the Do-Minimum case, therefore not providing any relief from existing severance, but not significantly increasing severance.
- 31.4.24 Although most of the minor roads in the study corridor will carry less traffic with the scheme in place compared to the Do-Minimum case, all the traffic levels are below 8,000 vehicles AADT, which in accordance with DMRB is too low to generate any severance of significance.

New Severance

- 31.4.25 Access to the key community facilities (shown in Figures 31.2 a–c) is via the key routes in Table 31.6. Impact prediction on the journey lengths along those key routes is provided in Table 31.8.
- 31.4.26 Without mitigation, the following paths (identified using their respective Conflict Point numbers) will be severed causing a Severe impact for pedestrians and others in terms of severance from community facilities: C3 (Hilldowntree Causeyport Road, C34K), C4 (U59K), C5 (Sunnyside Steading access track), C7 (Merchant's Croft access track), C8 (Whitestone track), C11 (Blaikiewell Farmhouse track (east)), C19 (Old Deeside Line RoW (GC45)), C22 (Culter House access road), C28 (Gairn Farm access track), C31 (RoW (GC25) from A944 (East Kingsford) south to Kingshill Wood), C33 (Road from A944 past East Kingsford Cottage to West Hatton Croft), C37 (Access road to Woodside of Cloghill), and C39 (Track from Fairley House to Brimmond Hill).
- 31.4.27 Although most of the minor roads in the study corridor will carry less traffic with the proposed scheme in place compared to the Do-Minimum case, none of the traffic levels are above 8,000 vehicles AADT, which in accordance with DMRB is too low to generate any severance of significance.

Countryside Access

- 31.4.28 Access to the outdoor facilities listed under paragraph 31.3.18 is via the key routes in Table 31.6. Impact prediction on the journey lengths along those key routes is provided in Table 31.8
- 31.4.29 Without mitigation, the following paths (identified using their respective Conflict Point numbers) will be severed causing a Severe impact for pedestrians and others in terms of accessing outdoor facilities: C3 (Hilldowntree Causeyport Road, C34K), C13 (Boundary track in Cleanhill Wood), C14 (Eastland track), C29 (Track from Kingshill Wood to Moss of Auchlea), C30 (Short RoW (GC23) joining the two other RoWs: from A944 (East Kingsford) south to Kingshill Wood (GC25), and A944 (West Kingsford) to Auchlea (GC22)), C31 (RoW (GC25) from A944 (East Kingsford))

south to Kingshill Wood), C34 (Consumption Dyke track to West Hatton Croft), C39 (Track from Fairley House to Brimmond Hill) and C40 (Track from Derberth Farm to Hillhead of Derberth).

31.5 Mitigation

- 31.5.1 Potential adverse impacts have been minimised through the proposed scheme design, which has been developed through extensive consultation with organisations such as Aberdeen Cycle Forum, Aberdeen Countryside Project, British Horse Society, Scotways and the Aberdeen City and Aberdeenshire Councils. Mitigation has also been developed so as not to hinder the development of future core path networks by both Councils, and acknowledges the need to provide for all forms of recreational access.
- 31.5.2 As a result of the AWPR Special Road status, NMU provision cannot be provided adjoining the carriageway including at the River Dee crossing.
- 31.5.3 Mitigation of impacts from traffic noise and vibration is proposed in the form of low-noise road surfacing, the provision of noise bunds and barriers. Further details are provided in Chapter 30 (Traffic Noise and Vibration). No mitigation measures are applicable to air quality impacts (refer to Chapter 29: Air Quality).

New access provision

- 31.5.4 Mitigation measures include new access provision in the form of NMU overbridges, underbridges and underpasses and farm accommodation works, in addition to those provided as part of the proposed scheme design.
- 31.5.5 The access provisions at each conflict point are shown in Figures 31.1 a–h, listed in Table 31.8 and described in Residual Impacts. These have been developed to minimise the need for permanent route diversions, or to ensure that such diversions are beneficial to pedestrians and others in terms of factors such as amenity value and safety.
- 31.5.6 One of the principle aims of the mitigation is to link routes into a larger strategic network, and this will require the provision of additional paths to those already available. All proposed structures and new routes will not restrict the types or abilities of users. Where permanent route diversions have been deemed necessary, the shortest route has been proposed so as to minimise impacts on journey distance and time.
- 31.5.7 In summary, of the twenty-seven locations where severance of existing paths may occur, all will be diverted to cross the AWPR Southern Leg.

Safety

- 31.5.8 The Disability Discrimination Act (1995), as explained in section 31.2, requires that all paths and access structures should be free from barriers. The Countryside Commission (1994) recommend that the maximum gradient for ambulant disabled and wheelchair users is 1:20, although steeper gradients of up to 1:10 may be acceptable over short distances. The BT Community Partnership and Fieldfare Trust (undated) recommend that the minimum width to accommodate all types and abilities of user is 1200mm (1.2m); if heavy use by wheelchairs is envisaged, passing places should be constructed or the ramp width increased to 1700mm (1.7m). Gradient levels of underpasses and overbridges vary between 1:200 (0.5%) and 1:14 (7.2%), providing suitable access for vulnerable users. Should gradients exceed 1:200, handrails will be provided in accordance with British Standard BS8300.
- 31.5.9 The proposed scheme will be designed in accordance with the minimum requirements of DMRB. DMRB Volume 5, Section 2, Part 4 (Technical Advice TA 91/05) provides guidance in relation to design and features for NMU provisions. The specifications in TA 91/05 meet the legislative requirements of the Disability Discrimination Act (1995) (refer to paragraph 31.2.30) and incorporates the recommendations of various other bodies such as the Countryside Commission

(1994), and BT Community Partnership and Fieldfare Trust (undated). Design aspects covered in TA 91/05 include gradients, verge widths, radius of bends, crossings, surfaces, dimensions for subways and bridges, and safety features such as parapets and lighting.

- 31.5.10 All bridges where diversions are proposed have a minimum verge width of 2.5m. Underpasses will be designed in accordance with the requirements of TD36/93 'Subways for Pedestrians and Pedal Cyclists. Layout and Dimensions'.
- 31.5.11 Where equestrian access across the route is provided, safety measures such as parapets, slip resistant surfacing and solid infill panels, are provided in line with standards identified in DMRB Volume 2 Special Structures (BD29104). Equestrian access via underbridges will have such sufficient clearance to allow riders to remain mounted as clearance meets the minimum requirement of 3.7m for ridden horses.
- 31.5.12 Widened verges to accommodate cyclists and equestrians and safety measures such as equestrian parapets have been provided where required.

Landscaping

31.5.13 Mitigation in the form of landscape planting is proposed along the length of the proposed scheme to reduce potential visual amenity impacts on residential properties, paths and open space. The proposed landscaping mitigation for the amenity value of routes is discussed in Chapter 26 (Landscape).

Air Quality and Noise

31.5.14 Mitigation of impacts from traffic noise and vibration is proposed in the form of low-noise road surfacing, the provision of noise bunds and barriers, and is discussed in detail in Chapter 30 (Traffic Noise and Vibration). No mitigation measures are applicable to air quality impacts as explained in Chapter 29 (Air Quality).

Community Severance

31.5.15 Community severance is mitigated by the measures taken for Journey Lengths and Amenity Value.

Countryside Access

31.5.16 Countryside access impacts are mitigated by the measures taken for Journey Lengths and Amenity Value

31.6 Residual Impacts

- 31.6.1 Residual impacts are addressed in terms of changes to journey lengths, amenity value, community severance and countryside access.
- 31.6.2 The magnitude of residual impacts on pedestrians and others' journeys incorporating the proposed scheme design and proposed mitigation, has been assessed for each of the conflict points as shown in Table 31.8. As described in section 31.5, mitigation includes NMU overbridges and underpasses and accommodation bridges not intended for local vehicular traffic other than local farm access.
- 31.6.3 The significance of residual impacts on the amenity value of pedestrians and others' journeys has been assessed as shown in Table 31.9, incorporating landscape mitigation. Noise mitigation such as barriers and bunds has not been included as impacts on pedestrians and others are anticipated to remain Slight at these conflict points. For further details on proposed noise mitigation along other sections of paths Chapter 30 (Traffic Noise and Vibration) should be referred to.

Journey Lengths (Distance and Time)

- 31.6.4 With mitigation, the proposed AWPR Southern Leg will not close any key routes. Of the new diversions, the AWPR Southern Leg will create 3 Slight beneficial, 5 Negligible, 12 Slight, 11 Moderate and 4 Major adverse impacts on pedestrians and others in terms of journey length.
- 31.6.5 Where routes have been identified as being predominantly for recreational use, assessment of residual impact significance considers that an increase in journey length may be regarded as beneficial by users in some cases. The routes (identified by their conflict point number) to which this applies are as follows:
- 31.6.6 C17: This rural track provides a route for pedestrians using the area around the River Dee for recreation. Whilst it provides access to local farms, users accessing farms are likely to be motorised and therefore for non-motorised users, recreation is identified as the key function of the route. With this in mind, the diversion via the access track under the crossing of the River Dee could be viewed as a beneficial journey increase for some users, reducing the residual impact significance from Moderate to Slight for pedestrians.
- 31.6.7 C18: This rural track also provides access to local farms by motorised users. Pedestrians utilising this route will most likely be using it as part of the larger network of pathways and tracks in the River Dee area. The diversion via the access track under the crossing of the River Dee and alongside the AWPR, may be considered by some users to be of beneficial impact as their journey is lengthened. The residual impact significance could be assessed as Major, though reduces to Moderate taking into account the recreational function of the route.
- 31.6.8 C23: The Culter House Road is identified as supporting recreation for pedestrians and equestrians. Whilst it is used by a small amount of traffic for access purposes, it is of predominantly recreational value, linking equestrian and pedestrian routes to the east and west. An increase in journey length will extend the linkage network between routes which could be considered to be beneficial by users in some cases. The assessment of significance is therefore reduced to from Severe to Major for vulnerable pedestrians and from Moderate to Slight for equestrians.
- 31.6.9 C28: Access to Gairn Farm along this rural track is likely to be predominantly by vehicle users. NMU use of the track is identified for recreational purposes, forming part of the network of pathways in the area which links Gairnhill Wood with Auchlea and smaller woodland areas. The diversionary route via the Gairn Farm Accommodation underpass, in conjunction with other proposed new routes in the area is considered to extend the linkages and pathway network, possibly providing a beneficial impact for some users. The residual impact significance is therefore reduced from Moderate to Slight.
- 31.6.10 C29: This pathway currently links Kingshill Wood to the Moss of Auchlea. The network of pathways in this area is identified for recreational purposes. The diversion south to the Gairn Farm Accommodation underpass could be considered of benefit by some users, because the diversion increases the length of their recreational route and also offers additional lengths of new multi-user track. The residual impact significance is therefore reduced from Major to Moderate for journey length.
- 31.6.11 C34: This Consumption Dyke track is part of a network of rural pathways to the west of Kingswells. The proposed diversion route via the Fairley Cloghill accommodation overbridge could be considered by some users to be beneficial as it extends the path network for pedestrian use, and therefore the residual impact significance is reduced from Major to Moderate.
- 31.6.12 C40: The track at Hillhead of Derbeth provides access to farms and forms a key pedestrian recreational route linking Brimmond Hill with the wider rural landscape. Farm access is likely to be by vehicle and the predominant NMU use is identified as by pedestrians. The proposed diversion of 250m to the south via the Derbeth overbridge could be assessed as Moderate impact

significance, though taking its recreational value into account this can be reduced to Slight for journey length.

31.6.13 Route No 26 (RoW GC47) terminates at the AWPR Southern Leg. As a benefit, the provision of the Beanshill accommodation underpass will allow pedestrians and others to continue their use of the existing right of way and extends this route to the west.

Amenity Value

- 31.6.14 The residual visual impacts listed in Table 31.9 have been assessed based on the design year (2026), representing 15 years from year of opening for landscape mitigation plantings to become established. Visual impacts are not available for all locations as only selected paths were used in the assessment (refer to Chapter 27: Visual).
- 31.6.15 With mitigation, the AWPR Southern Leg will create 4 Negligible, 4 Slight, and 8 Moderate impacts on pedestrians and others in terms of amenity value. Most of these are due to Visual impacts (even taking into account the landscape mitigations).

Community Severance

Relief from Existing Severance

31.6.16 There are no additional mitigation proposals to provide relief from existing severance, therefore residual impacts are as per described in section 31.4.

New Severance

- 31.6.17 Access to the key community facilities (shown in Figures 31.2a–c) is via the key routes in Table 31.6. Impact prediction on the journey lengths along those key routes was provided in Table 31.8. Of the paths identified in paragraph 31.4.26 as being severed, all will remain open with the incorporation of appropriate mitigation, but most will result in a diversion. The results of severance assessment are presented in Table 31.10.
- 31.6.18 As anticipated, the worst impacts (up to Severe) occur around the settlements of Peterculter/Milltimber and Kingswells.
- 31.6.19 The relocation of the bus stops currently on the A90 just north of the Charleston Junction will provide a safer means to access those facilities using the traffic signals and footpaths of the Charleston Junction overbridge.
- 31.6.20 For schools that were located further out from the study corridor but whose catchment areas would be crossed by the proposed scheme, the residual impacts are assessed as:
 - Charleston Primary: there will be no impact to its catchment area.
 - Banchory-Devenick School: the southern portion of its catchment area will be severed by the AWPR Southern Leg, however for the few residents in this area most access would be done via the retention of existing minor roads.
 - Portlethen Academy: the AWPR Southern Leg will sever the northern half of its catchment area. Given the size of this catchment, it is expected that most children would be driven to school or utilising public transport. With all the minor roads in the catchment being maintained, there will be no impact.
 - Maryculter School: the top right hand corner of the catchment area will be severed by the AWPR Southern Leg. Given the size of this catchment, it is expected that most children would be driven to school. With all the minor roads in the catchment being maintained, there will be no impact.
 - Milltimber School: refer to Table 31.10.

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- Culter School: refer to Table 31.10.
- Cults School: the AWPR Southern Leg will follow the boundary of its catchment area, therefore there will be no impact.
- Cults Academy: the AWPR Southern Leg will sever its catchment area in half. Given the size of this catchment, it is expected that most children would be driven to school or catching public transport. With all the minor roads in the catchment being maintained, there will be no impact.
- Westhill Primary School: the AWPR Southern Leg will follow the boundary of its catchment area, therefore there will be no impact.
- Kingswells School: the AWPR Southern Leg will sever the top left hand corner of the catchment area impacting less than ten residences. However the journey length impacts due to the proposed scheme range from Slight to Major.
- Hazlehead Academy: the AWPR Southern Leg will follow the boundary of its catchment area, therefore there will be no impact.
- Westhill Academy: the AWPR Southern Leg will follow the boundary of its catchment area, therefore there will be no impact.
- Bankhead Academy: the AWPR Southern Leg will sever its catchment area in half. Given the size of this catchment, it is expected that most children would be driven to school or catching public transport. Using the criteria from Table 31.1, motorised users will experience a Negligible impact as a result of this diversion.

Countryside Access

- 31.6.21 As explained in paragraph 31.3.17, this section will concentrate on area based facilities and on the River Dee (which, although a linear access facility, could not be assessed under the previous sections); linear access outdoor facilities have been assessed in detail in previous sections.
- 31.6.22 The assessment considers the differing issues and objectives for outdoor access facilities. Except for Cleanhill/Craigingles Wood (private) and Greenhowe (commercial plantation), all major forest areas are owned and managed by the Forestry Commission. Therefore access and enjoyment of Greenhowe and Forest Commission woods are already subject to the regular application of restrictions during clearing operations. Webster Park is a local park for the Kingswells community and Brimmond Country Park is a popular local and tourist attraction for ramblers and hill climbers.
- 31.6.23 In accordance with SNH guidance, the method for assessing impact on pedestrians and others in terms of enjoying area based facilities has been assessed by considering access and amenity value, providing a qualitative assessment. The severance and landtake of the recreational areas is assessed in Chapter 22 (Land Use). Pedestrians and others are expected to experience a degree of loss in amenity value at areas including Duff's Hill, Greenhowe Woods, River Dee and Brimmond Hill where they are close to the AWPR Southern Leg. However, mitigation in the form of landscape and ecological planting will reduce the impact, resulting in a Slight impact on pedestrians and others utilising the recreational areas as listed above.
- 31.6.24 Access to the outdoor facilities (shown in Figures 31.2a–c) is done via the key routes in Table 31.6 Impact prediction on the journey lengths along those key routes is provided in Table 31.8. Of the paths identified in paragraph 31.4.29 as being severed, all will remain open with the incorporation of appropriate mitigation, but most will result in a diversion. The results of the countryside access assessment are presented in Table 31.7

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Outdoor Access Facility	Mitigation (refer to section 31.5)	Residual Impacts
Duff's Hill	Landscaping/planting	Access from the A90 along the Haremoss – Checkbar Road (U58K) will be closed, though the new side road at Hatton with overbridge will connect the C5K to the U58K and provide access from the A90. Access to Duff's Hill from the south via the Hilldowntree – Causeyport Road (C34K) will remain, though from the north a diversion via the Hatton overbridge will be necessary since access for vehicles is not maintained across the AWPR. Access from Greenhowe Woods will also be prevented by the AWPR Southern Leg itself. Reduction in amenity
Greenhowe woods	Diversion via Hatton overbridge	Severance of access path (C2)
	Landscaping/planting	Reduction in amenity
Clochandighter Wood		Access from Hillside – Batchart Road (C30K) will remain open as part of scheme design.
		New track for Sunnyside Steading will provide additional access.
	Landscaping/planting	Reduction in amenity
Durris Forest	n/a	Access from Blaikiewell Road (63K) maintained as part of scheme design.
Cleanhill Wood		Access from Blaikiewell Road (63K) and Lochton – Nigg Road (C5K) maintained as part of scheme design.
	Landscaping/planting	Reduction in amenity
Craigingles Wood	n/a	Nil.
River Dee		Access from B979 at Maryculter Bridge will be maintained as part of scheme design.
	Landscaping/planting	Reduction in amenity
Gairnhill (Rotten O'Gairn)		Access from Silverburn Road (C127) will be maintained as part of scheme design.
	Landscaping/planting to screen the scheme	Possible reduction in amenity when using the Kingsford – Silverburn Road
Kingshill Woods		Access from A944 (eastern side of AWPR Southern Leg) maintained as part of scheme design.
	Diversion via Gairn Farm accommodation overbridge	Severance of access path from western side of AWPR Southern Leg (C29, 30 and 31).
	Landscaping/planting to screen the scheme	Possible reduction in amenity when using the Kingsford – Silverburn Road
Webster Park	Diversion via Derbeth overbridge	Severance of access path for residents on the western side of the AWPR Southern Leg (C37, C40)
National Cycle Route 1 (NCR 1)	n/a	Nil (all routes are being maintained as part of the scheme design via under/over bridges)
Brimmond Hill	Diversion via Derbeth overbridge	Severance of access path (C37, C40)
	Landscaping/planting	Reduction in amenity

Table 31.7 – Countryside Access Impact Assessment

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Table 31.8 – Potential and Residual Impacts on Journey Lengths

	Potential Journey Length Impact – no	o mitigatio	า		NMU Type	Residual Journey Length Impact – w	ith mitigatio	on		
Conflict Point No	Impact Description	Change [m]	Change [mins, secs]	Significance		Mitigation and Residual Impact Description	Change [m]	Change [mins, secs]	Significance	Comment
C1	None, access to the A956 (Wellington Road) will be maintained, within proposed scheme design.	-	-	Negligible	Cyclists	-	-	-	Negligible	Predominantly recreational route for NMUs
C2	The track will be closed. The AWPR Southern Leg will dissect the track 200m north of Bothy Brig Cottage. Provision of a new side road and Hatton overbridge will maintain access for all users including NMUs across the AWPR Southern Leg.	520	+ 6 mins, 14 secs	Major	Pedestrians				Major	Functional route used for access by local residents.
C3	The road will be closed. The AWPR Southern Leg will dissect the road	vill dissect the road overbridge will maintain access for		150	+ 1 min, 48 secs	Slight	Predominantly recreational			
	150m north of U58K.				Cyclists	NMUs and farm vehicles.		+ 27 secs	Negligible	route, though also used for access.
C4	The road will be closed. The AWPR Southern Leg will dissect the road just north of Bishopston Farm, closing access to vehicles.	-	-	Severe	Cyclists	Bishopton accommodation overbridge will maintain NMU access across the AWPR Southern Leg.	370	+ 67 secs	Slight	Predominantly recreational route for NMUs.
C5	The track will be closed. The AWPR Southern Leg will dissect the track just north of Sunnyside Steading.	-	-	Severe	Pedestrians	NMUs will be diverted via a new track south of the AWPR Southern Leg, to connect with the C30K, over the C30K overbridge and to the C5K.	-190	- 2 mins, 17 secs	Slight Beneficial	Access route to Sunnyside Steading.
C6	The AWPR Southern Leg will dissect the road just south of Newlands. The C30K will be realigned and the C30K overbridge will maintain access, within the proposed scheme design.	-30	- 5 secs	Negligible	Cyclists	-	-	-	Negligible	Recreational and access route.
C7	The track will be closed. The AWPR Southern Leg will dissect the track	-	-	Severe	Pedestrians	AWPR Southern Leg will maintain		+ 58 secs	Slight	Predominantly recreational
	150m west of the C30K.				Cyclists	access to the C30K. The C30K overbridge will maintain access over the AWPR Southern Leg.		+ 14 secs	Negligible	route for NMUs. Access is gained to farms and grazing fields.

	Potential Journey Length Impact – n	o mitigatio	n		NMU Type	Residual Journey Length Impact – w	ith mitigation	on			
Conflict Point No	Impact Description	Change [m]	Change [mins, secs]	Significance		Mitigation and Residual Impact Description	Change [m]	Change [mins, secs]	Significance	Comment	
C8	The track will be closed. The AWPR Southern Leg will dissect the track 100m east of Whitestone.	-	-	Severe	Pedestrians	A new track will reconnect the track south and along the AWPR Southern Leg to the C5K. The C5K overbridge will maintain access over the AWPR Southern Leg.	360	+ 4 mins, 19 secs	Moderate	Predominantly recreational route, though also used for access to farms and grazing fields.	
C9	The AWPR Southern Leg will dissect the road 50m north of the junction with Blaikiewell Road. The road will	50	+ 36 secs	Slight	Pedestrians	-	-	-	Slight	Predominantly recreational route for NMUs,	
	be straightened and access maintained via the C5K overbridge, within the proposed scheme design.		+9 secs	Negligible	Cyclists				Negligible	also used for access.	
C10	The AWPR Southern Leg will dissect the road 100m west of the junction with C5K. Blaikiewell Road will be straightened and reconnected to the C5K north of the AWPR Southern Leg. Access across the AWPR will be maintained via the C5K overbridge.	210	+ 2 mins, 31 secs	Slight	Pedestrians	-	-	-	Slight	Predominantly recreational route for NMUs, also used for access.	
C11	The track will be closed.	-	-	Severe	Pedestrians	NMUs will be diverted further west along the U63K to access Blaikiewell Farmhouse via another track.	920	+ 11 mins, 2 secs	Major	Potential functional route for Blaikiewell Farm residents to access community facilities in Kirkton of Maryculter	
C12	The AWPR Southern Leg will cross Blaikiewell Road 250m west of the Blaikiewell Farm access road. This minor road will be retained via Blaikiewell Road underbridge, within the proposed scheme design.	-	-	Negligible	Pedestrians – Vulnerable	-	-	-	Negligible	Potential functional route for local residents to access community facilities	

0	Potential Journey Length Impact – no	o mitigatio	n		NMU Type	Residual Journey Length Impact – w	ith mitigatio	on		
Conflict Point No	Impact Description	Change [m]	Change [mins, secs]	Significance		Mitigation and Residual Impact Description	Change [m]	Change [mins, secs]	Significance	Comment
C13	The track will be closed as the AWPR Southern Leg will dissect it in two locations.			Severe	Pedestrians	The AWPR Southern Leg will dissect the track in two locations, however those two points will be reconnected on the eastern side of the AWPR Southern Leg via a new track.	-50	- 36 secs	Slight Beneficial	Predominantly recreational route for NMUs.
C14	The track will be closed.	-	-	Severe	Pedestrians	The AWPR Southern Leg will cross the track however the Kingcausie/ Eastland accommodation underpass will be provided to maintain access.	50	+ 36 secs	Slight	Predominantly recreational route, though also used for access between Eastland and Kingcausie House
C15	The AWPR Southern Leg will cross the South Deeside Road 100m west of North Lodge however the bridge design to cross the River Dee will start its span south of the South Deeside Road, leaving the road unaffected.	-	-	Negligible	Cyclists	-	-	-	Negligible	Predominantly recreational route for NMUs.
C16	The AWPR Southern Leg will cross the RoW just east of the B979. The bridge design will maintain the RoW.	-	-	Negligible	Pedestrians	-	-	-	Negligible	Predominantly recreational route for NMUs.
C17	The track will be closed.	-	-	Severe	Pedestrians	NMUs will be diverted south via an access track to the River Dee crossing	440	+5 mins, 17 secs	Slight	Predominantly recreational route for NMUs.
C18	The track will be closed.	-	-	Severe	Pedestrians	NMUs will be diverted south via an access track to the River Dee crossing	850	+ 10 mins, 12 secs	Moderate	Predominantly recreational route for NMUs.
C19	The AWPR Southern Leg will dissect the Old Deeside Line Walk east of Millimber Farm	-	-	Severe	Pedestrians	NMUs will be diverted onto Station Road and Milltimber Brae overbridge.	60	+ 43 secs	Slight	Potential functional route for local
	Milltimber Farm.	-	-		Equestrians			+ 22 secs	Negligible	residents to access community
					Cyclists			+ 11 secs	Negligible	facilities

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NMU Type Potential Journey Length Impact – no mitigation Residual Journey Length Impact – with mitigation Conflict Point No Impact Description Change Change Significance **Mitigation and Residual Impact** Change Change Significance Comment [m] [mins, Description [m] [mins, secsl secsl C20 The AWPR Southern Leg will cross Negligible Pedestrians -Negligible --Functional route the road at its western end. This Vulnerable minor road will be retained via Milltimber Brae overbridge, within the proposed scheme design. C21 The AWPR Southern Leg will cross Negligible Pedestrians -Negligible Functional route -the A93 at the International School. Vulnerable The A93 will be retained via the A93 Cvclists Negligible overbridge. C22 Culter House access road will be 160 + 3 mins. Moderate Potential Culter House access road will be -Severe Pedestrians -Vulnerable reconnected to the new link road as a 12 secs functional route closed. t-junction. NMUs will be diverted along a NMU path down the link road to the A93. NMUs will be diverted north along the C23 Culter House Road will be closed. Severe Pedestrians -510 + 10 Major Predominantly . Vulnerable link road, via the NMU path across mins. 12 recreational the Milltimber Junction overbridge, route for NMUs. secs and down a new track linking the Small amounts Equestrians + 3 mins. Slight iunction to Culter House Road on the of traffic travel 4 secs eastern side of the AWPR Southern on this route. Leg. C24 This minor road will be retained via Negligible Negligible Predominantly Equestrians -Contlaw Road overbridge, within the recreational proposed scheme design. route for NMUs. C25 The AWPR Southern Leg will dissect Severe NMUs will be able to cross the 80 + 58 Slight Pedestrians Predominantly the path/RoW. AWPR Southern Leg via the Contlaw secs recreational Road overbridge. route for NMUs. Equestrians + 30 Negligible secs The track terminates at the AWPR Negligible C26 Pedestrians Beanshill accommodation underpass Sliaht Predominantly -Southern Leg, at the southwest will be provided for farm and NMU beneficial recreational corner of Gairnhill Wood. access. route for NMUs. C27 The AWPR Southern Leg will cross Negligible -Negligible Predominantly -Pedestrians the road 100m west of the Gairnhill recreational Wood carpark. The road will be route for NMUs. Equestrians straightened slightly and maintained Small amount of

•	Potential Journey Length Impact – n	o mitigatio	n		NMU Type	Residual Journey Length Impact – w	vith mitigati	igation			
Conflict Point No	Impact Description	Change [m]	Change [mins, secs]	Significance		Mitigation and Residual Impact Description	Change [m]	Change [mins, secs]	Significance	Comment	
	via the C127 underbridge, under the AWPR Southern Leg, within the proposed scheme design.				Cyclists					traffic travel on this route.	
C28	The track will be closed.	-	-	Severe	Pedestrians	NMUs will be diverted north to Gairn Farm accommodation underpass	450	+ 5 mins, 24 secs	Slight	Predominantly recreational route for NMUs.	
C29	The path will be closed.	-	-	Severe	Pedestrians	NMUs will be diverted south to Gairn Farm accommodation underpass.	900	+ 10 mins, 48 secs	Moderate	Predominantly recreational route for NMUs.	
C30	The path will be closed. The AWPR Southern Leg will dissect the path 100m west of Ben View.	-	-	Severe Pedestrians NMUs will be diverted south along a new track on the western side of the AWPR Southern Leg connecting with Gairn Farm accommodation 880 + 10 mins, 34 secs		Major	Potential functional route for local residents to				
					Equestrians	underpass.		+ 5 mins, 17 secs	Moderate	access Kingsford and Westhill community facilities	
C31	The path will be closed. The AWPR Southern Leg will dissect the path between Hillview and Ben View.	-	-	Severe	Pedestrians	NMUs will be diverted south along a new track on the western side of the AWPR Southern Leg connecting with Gairn Farm accommodation	1150	+ 13 mins, 48 secs	Major	Potential functional route for local residents to	
					Equestrians	underpass		+ 6 mins, 54 secs	Moderate	access Kingsford and Westhill	
					Cyclists + 3 mins, 27 secs		Moderate	 community facilities 			
C32	The AWPR Southern Leg will intersect the A944 100m east of Kingsford Industrial Estate. The AWPR Southern Leg mainline will be taken under the A944, and a new roundabout will allow traffic to access the AWPR Southern Leg from the A944.	20	+ 4 secs	Negligible	Cyclists	The existing dedicated cycle lanes for the Westhill-Kingswells route will continue through the roundabout with on-demand traffic lights provided.	20	+ 4 secs	Negligible	Functional route (cycle lanes used for cyclists commuting into Aberdeen)	

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NMU Type Potential Journey Length Impact – no mitigation **Residual Journey Length Impact – with mitigation** Conflict Point No Impact Description Change Change Significance **Mitigation and Residual Impact** Change Change Significance Comment [m] [mins, Description [m] [mins, secsl secsl C33 The road will be closed. Severe Pedestrians NMUs will be diverted to the A944 320 Moderate Potential -+ 3 mins, iunction. 50 secs functional route to access cycle lanes for commuting into Aberdeen C34 The track will be closed. The AWPR Severe Pedestrians At the western end of the Dyke, 620 + 7 mins, Moderate Predominantly --Southern Leg will cross the track NMUs will be diverted north to Fairley recreational 26 secs 100m north east of Highfield Farm. Cloghill accommodation overbridge. route for NMUs. C35 220 Slight The track will be closed. Severe Equestrians NMUs will be diverted to Fairley + 1 min, Route is of --Cloghill accommodation overbridge. 19 secs recreational value as well as providing access to Denburn Farm and Livery. C36 The track will be closed. The AWPR Severe Pedestrians NMUs will be diverted south to 90 Slight Route is of -+ 1 min, Southern Leg will cross the track at Fairley Cloghill accommodation 5 secs recreational Cloahill. overbridge. value as well as providing access to farms and grazing fields. C37 The track will be closed. Severe Equestrians NMUs will be diverted north to the 1250 + 7 mins. Moderate Potential -functional route Derbeth overbridge. 30 secs for local residents to access Kingswells community facilities C38 The track will be closed. . Severe Equestrians NMUs will be diverted north to the 530 + 3 mins, Moderate Route is of recreational Derbeth overbridge. 11 secs value as well as providing access to farms and grazing fields.

0	Potential Journey Length Impact – n	o mitigatio	n		NMU Type	Residual Journey Length Impact – with mitigation					
Conflict Point No	Impact Description	Change [m]	Change [mins, secs]	Significance		Mitigation and Residual Impact Description	Change [m]	Change [mins, secs]	Significance	Comment	
C39	The track will be closed.	-	-	Severe	Pedestrians	The track will be straigtened and access will be maintained via Derbeth overbridge.	-30	- 22 secs	Slight Beneficial	Potential functional route for local residents to access Kingswells community facilities	
C40	The track will be closed.	-	-	Severe	Pedestrians	NMUs will be diverted south to the Derbeth overbridge.	250	+ 3 mins	Slight	Route is predominantly of recreational value to NMUs as well as providing access to farms and grazing fields.	

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Table 31.9 – Predicted and Residual Impacts on Amenity Values

	Predicted Amenity Impacts – no mitiga	tion (see Note 1	I)		Residual Amenity	Impacts – with mitig	ation (see Note '	l)
Route ID	Traffic (AADT year of opening) (Do- Minimum vs. With-Scheme)	Visual (year of opening)	Safety	Significance	Visual (2026)	Safety	Significance	Comment
1	U168K: No data available. A956: Traffic volumes with the proposed scheme are predicted to increase by 5% to 25,827 vehicles AADT, compared to the Do-Minimum predictions of 24,557 vehicles.	Negligible	No change.	Slight	Negligible	Access across the A956 (Wellington Road) will be improved with the addition of on- demand NMU traffic lights.	Negligible	-
3	C34K: Road to be stopped up so traffic flow information is no longer relevant.	Substantial	No change.	Moderate	Moderate	No change.	Slight	The route currently forms part of a wider path network. Adverse impacts are therefore considered localised in nature as the proposed diversion will only affect a small section of the route
9	C5K: The traffic with the proposed scheme is predicted to be 18% less than the Do-Minimum case (434 vs. 529).	Substantial	No change.	Slight	Severe	No change.	Moderate	The route currently forms part of a wider path network. Adverse impacts are therefore considered localised in nature as the proposed diversion will only affect a small section of the route
12	No data available.	Substantial	No change.	Slight	Substantial	No change.	Moderate	The route currently forms part of a wider path network. Adverse impacts are therefore considered localised in nature as the proposed diversion will only affect a small section of the route
15	AADT traffic with the proposed scheme (3072) is predicted to be 52% less than the Do-Minimum case (6460).	Substantial	No change.	Slight	Moderate/ Substantial	No change.	Slight	-
16	No data available.	Severe	No change.	Moderate	Severe	No change.	Moderate	The route currently forms part of a wider path network. Adverse impacts are therefore considered localised in nature as the proposed diversion will only affect a small section of the route

	Predicted Amenity Impacts – no mitiga	tion (see Note	1)		Residual Amenit	y Impacts – with mitig	ation (see Note	1)
Route ID	Traffic (AADT year of opening) (Do- Minimum vs. With-Scheme)	Visual (year of opening)	Safety	Significance	Visual (2026)	Safety	Significance	Comment
17	No data available.	Severe	No change.	Moderate	Severe	No change.	Moderate	
20	No data available.	Substantial	The decrease in traffic along the B979 will make its crossing easier and safer.	Slight	Moderate	The decrease in traffic along the B979 will make its crossing easier and safer.	Negligible	-
21	The traffic along the A93 west of the Maryculter bridge is predicted to be 8% higher than the do-minimum case (14,969 vs 13,891), however, east of the bridge it is predicted to be 25% less (7,604 vs 10,171).	Substantial	No change.	Slight	Moderate/ Substantial	Traffic signals will allow NMUs to safely cross the intersection between the A93, B979 and new link road.	Slight	-
22	The diversion down the link road to the Milltimber junction will be significantly more unpleasant given the traffic prediction of 13,940 AADT.	Moderate/ Substantial	No change.	Substantial	Moderate	The link road will be provided with a 2.5m wide footpath along its length.	Moderate	-
24	No data available.	Substantial	No change.	Moderate	Moderate	No change.	Slight	The route currently forms part of a wider path network. Adverse impacts are therefore considered localised in nature as the proposed diversion will only affect a small section of the route
27	AADT traffic for the proposed scheme is predicted to be 15% greater than the do-minimum case (1,739 vs. 1,507).	Severe	No change.	Substantial	Substantial/ Severe	No change.	Moderate	The route currently forms part of a wider path network. Adverse impacts are therefore considered localised in nature as the proposed diversion will only affect a small section of the route
29	No data available.	Substantial	No change.	Moderate	Moderate/ Substantial	No change.	Slight	The route currently forms part of a wider path network. Adverse impacts are therefore considered localised in nature as the proposed diversion will only affect a small section of the route

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	Predicted Amenity Impacts – no mitiga	tion (see Note 1	I)		Residual Amenity Impacts – with mitigation (see Note 1)				
te ID	Traffic (AADT year of opening) (Do- Minimum vs. With-Scheme)	Visual	Safety	Significance	Visual (2026)	Safety	Significance	Comment	
Route		(year of opening)							
32	Traffic along the A944 with the proposed scheme is expected to be 20% greater than the do-minimum case for westbound traffic (16,236 vs 13,525), and 11% greater for eastbound (13,761 vs 15,402). NMUs negotiating the roundabout will experience greater traffic at that junction however, with a maximum predicted traffic flow of 15,803 on the south side of the junction.	Moderate	Pedestrians and cyclists will need to negotiate the new roundabout.	Substantial	Moderate	On-demand traffic lights will be provided to assist the crossing of the roundabout.	Moderate	-	
36	No data available.	Substantial/ Severe	No change.	Moderate	Substantial/ Severe	No change.	Moderate		
39	No data available.	Moderate	No change.	Slight	Slight	No change.	Negligible	The route currently forms part of a wider path network. Adverse impacts are therefore considered localised in nature as the proposed diversion will only affect a small section of the route	

Note 1: Air Quality and Noise impacts are assessed as Slight.

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Table 31.10 – Community Severance Assessment

Description of community facility	Journey Length / comment	Traffic AADT (year of opening)	New bridge or subway	Significance
Redwing Livery Yards and Blaikiewell Animal Sanctuary	Blaikiewell Road is maintained however the change in access to the livery yard and sanctuary will increase the journey length by more than 500m. This will impact local residents who use this facility, however many of this facility's customers access it by car.	No data available	No	Slight
Redwing Riding School (Eastland Lodge)	The only changes to journey lengths will be due to the realignment of the C5K and U63K, with increases less than 250m. This will impact local residents who use this facility, however many of this facility's customers access it by car.	No data available	No	Slight
Kirkton of Maryculter Cemetery and Kirkton and Cookney Parish Church	No change.	Traffic on B979 and South Deeside Road will decrease and remain below 8,000 vehicles per day. No traffic data available for other roads.	No	Negligible Beneficial
Storybook Glen Theme Park	No change.	Traffic on B979 and South Deeside Road will decrease and remain below 8,000 vehicles per day. No traffic data available for other roads.	No	Negligible Beneficial
Corbie Park Playing Fields	No change.	Traffic on B979 and South Deeside Road will decrease and remain below 8,000 vehicles per day. No traffic data available for other roads.	No	Negligible Beneficial
Corbie Hall (also known as Maryculter Community Hall)	No change.	Traffic on B979 and South Deeside Road will decrease and remain below 8,000 vehicles per day. No traffic data available for other roads.	No	Negligible Beneficial
Peterculter community facilities	Most affected will be residents of Milltimber who would normally use these facilities. Diversion for Culter House Road will increase journey lengths by more than 500m.	At-grade crossing of new A93-Milltimber Junction link road which will carry 13,940 vehicles per day.	Milltimber Junction overbridge	Severe
Milltimber community facilities	Most affected will be residents of Peterculter who would normally use these facilities. Diversion for Culter House Road will increase journey lengths by more than 500m.	At-grade crossing of new A93-Milltimber Junction link road which will carry 13,940 vehicles per day.	Milltimber Junction overbridge	Severe
Nether Beanshill Livery Yard	Contlaw Road is maintained with no change to journey lengths.	No data available	Contlaw Road overbridge	Slight
East Brotherfield Livery Yard	Silverburn Road is maintained with no change to journey lengths.	Traffic on Silverburn Road (C127) is predicted to increase to 1,739 vehicles per day, well below 8,000 vehicles.	Silverburn Road underbridge	Slight
Kingswood Learning Enhancement Centre	Access to the Centre is maintained via the Gairn Farm Accommodation underpass. This route will increase journey length by up to 950m if approached from the north.	No data available.	Gairn Farm accommodation underpass	Slight

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Description of community facility Journey Length / comment Traffic AADT (year of opening) New bridge or Significance subwav Ardene House Veterinary Hospital The A944 is maintained and all minor roads and tracks Traffic levels on the A944 will increase but Slight No reconnected to the A944. Changes in journey lengths are remain around 26,400 vehicles per day, east of greatest for residents on southwestern side of the AWPR the roundabout. Southern Lea-A944 intersection, with diversion lengths greater than 500m; however residents are unlikely to access this facility without a vehicle. Five Mile Petrol Station & Garage The A944 is maintained and all minor roads and tracks Traffic levels on the A944 will increase but No Slight reconnected to the A944. Changes in journey lengths are remain around 26,400 vehicles per day, east of greatest for residents on south eastern side of the AWPR the roundabout. Southern Lea-A944 intersection, with diversion length increase between 500m; however residents are unlikely to access this facility without a vehicle. East Kingsford Livery Yard The A944 is maintained and all minor roads and tracks Traffic levels on the A944 will increase but No Slight reconnected to the A944. Changes in journey lengths are remain around 30.000 vehicles per day, west of greatest for residents on south eastern side of the AWPR the roundabout. Southern Leg-A944 intersection, with diversion length increase between 250 and 500m however residents are unlikely to access this facility without a vehicle. Friends Burial Ground Westhill Road at conflict point 33 will be closed. NMUs will At-grade crossing with on-demand traffic lights No Sliaht be diverted south to the A944 junction. will assist NMUs negotiating the heavy traffic (approximately 13.800 vehicles AADT). Denburn Stud Farm and Livery Diversion across the accommodation overbridge will result Not applicable. Fairley-Cloghill Slight in a journey length increase less than 250m. This will Road overbridge impact local residents who use this facility; however many of this facility's customers access it by car. Most affected will be residents of Westhill who would No data available Fairlev-Cloghill Kingswells community facilities Moderate normally use these facilities. Diversion for the various farm Road overbridge access roads will increase journey lengths by more than and Derbeth 500m. overbridae Westhill community facilities The catchment areas for most facilities in Westhill will be Negligible Traffic levels on the A944 will increase but No located to the west of the AWPR Southern Leg, therefore remain around 30,000 vehicles per day. there will be no change to journey lengths.

31.7 References

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