

## **16 People and Communities: Effects on All Travellers**

### **16.1 Introduction**

- 16.1.1 This chapter reports the assessment of impacts the route options would have on pedestrians, cyclists and equestrians (collectively referred to as non-motorised users (NMUs)), as well as vehicle travellers. The development of a new road and/or alterations to an existing road layout can alter how NMUs move around a community or the wider environment using the existing local path network, as well as influence the level of stress vehicle travellers may experience when travelling along certain sections of road.
- 16.1.2 The assessment of NMUs has considered how the journey length, or amenity value of routes, would change, as well as any severance to existing routes. The assessment has also taken into account how an individual's 'access to outdoor areas', as well as access to public transport stops, would be affected by each of the route options.
- 16.1.3 Vehicle travellers have been assessed in terms of how factors that could contribute to driver stress would alter as a result of each of the route options.
- 16.1.4 The chapter sets out the following:
- a description of the methods used to predict and assess the potential impacts;
  - the baseline conditions within the study area relating to the path network, outdoor access, driver stress and public transport;
  - the assessment of potential impacts of each route option with regard to the identified baseline conditions; and
  - an outline of anticipated mitigation measures that might be developed for the preferred option.

### **16.2 Approach and Methods**

#### **Non-motorised Users**

- 16.2.1 Guidance has been taken from the Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 8, Pedestrians, Cyclists, Equestrians and Community Effects (Highways Agency, Scottish Executive, Welsh Assembly Government and the Department of Regional Development for Northern Ireland 1993a).
- 16.2.2 In addition to the guidance in the DMRB, an assessment of how NMUs access to outdoor areas would be affected by the route options has been undertaken in line with Scottish National Heritage (SNH) guidance for completing Environmental Impact Assessments (EIAs) in Scotland, (Scottish National Heritage 2013).
- 16.2.3 Public transport has been considered in terms of how access to bus stops by NMUs would be affected by the various route options. At this stage, information regarding temporary or permanent closures and/or relocation of bus stops is unknown. Therefore, the assessment has focused on whether there would be an increase or decrease in journey length to bus stops for NMUs.
- 16.2.4 The scheme objectives for the A9/A96 Inshes to Smithton scheme are of relevance to this Effects on All Travellers Assessment:
- To encourage more effective use of the road network hierarchy and thereby improve the operation of the network for longer distance and local journeys;
  - To contribute to The Highland's Council Development Plan aims for development east of the A9, and to complement the benefits arising from the dualling of the A96;

- To improve safety for motorised and non-motorised users where the trunk and local road network interact; and
- To maximise opportunities for active travel and public transport connections arising from the road infrastructure improvements.

### **Vehicle Travellers**

- 16.2.5 Driver stress is defined by the DMRB as *'the adverse mental and physiological affects experienced by a driver traversing a road network'* (Highways Agency, Scottish Executive, Welsh Assembly Government and the Department of Regional Development for Northern Ireland 1993b, p3/1.). DMRB Volume 11, Section 3, Part 9 Vehicle Travellers (Highways Agency, Scottish Executive, Welsh Assembly Government and the Department of Regional Development for Northern Ireland 1993b), states the requirement for a DMRB Stage 2 assessment to undertake a sufficient assessment of how route options would impact on levels of driver stress experienced by vehicle travellers, as well as 'views from the road'. An assessment of 'views from the road' has been scoped out of this assessment, as all route options travel through the same local landscape context and would therefore not be a key differentiator between routes. A complete assessment of 'views from the road' should be carried out for the preferred option during the DMRB Stage 3 Assessment.
- 16.2.6 In addition to DMRB guidance, Interim Advice Note (IAN) 125/09 (Highways Agency, Transport Scotland, Welsh Assembly Government, The Department for Regional Development Northern Ireland 2009), which provides supplementary guidance for users of DMRB guidance, has been followed in the assessment of both NMUs and vehicle travellers. Although IAN125/09 was superseded by IAN125/15 (Highways England, Transport Scotland, Welsh Assembly Government, The Department for Regional Development Northern Ireland 2015) in October 2015, this assessment has continued to adhere to IAN125/09. A review of IAN125/15 has confirmed that the changes relating to the 'Effects on All Travellers' chapter, primarily relate to the proposed combining of the 'Community and Private Assets' chapter (Chapter 17 of this report) and the 'Effects on All Travellers' chapter (Chapter 16 of this report) into a single chapter referred to as 'People and Communities'. Given that some of the key environmental considerations for the Scheme relate to aspects covered by these environmental aspects (including access to properties and communities, agricultural land-take, and changes to paths and cycle routes), it is considered that combining these chapters would reduce the clarity of reporting and readability for the assessment. This approach has been agreed with Transport Scotland.

### **Study Area**

- 16.2.7 The study area has been broadly set at 500m from each route option. In the absence of a defined distance for a study area within DMRB guidance, the study area has been based upon professional judgement. The study area has in some instances extended beyond 500m to include potential impacts to paths used to access outdoor areas that are outside of the 500m study area.

### **Consultation**

- 16.2.8 Consultation undertaken as part of the A96 Dualling Inverness to Nairn (including Nairn Bypass) Scheme overlaps with this assessment, given they cover the same geographical area. One of the key requirements highlighted by The Highland Council was the need to minimise severance of routes wherever possible as a result of the Scheme. Chapter 7 (Overview of Environmental Assessment) provides a summary of the consultation process at DMRB Stage 2.

### **Mitigation**

- 16.2.9 At this stage, the route options have no specific provisions for NMUs embedded within the designs. As such all potential impacts have been assessed assuming no embedded mitigation and therefore represent the worst case scenario.

- 16.2.10 Potential mitigation measures which are likely to be developed during the design of the Scheme at DMRB Stage 3 have been identified in Section 16.6 (Potential Mitigation).

**Baseline Data - non-motorised users**

- 16.2.11 The routes used by NMUs within the study area have been provided by The Highland Council and digitised into a web-based GIS tool. In addition, National Cycle Network (NCN) Routes have been obtained from the Sustrans website, whilst consultation has been undertaken with the British Horse Society (BHS) to identify key routes used by horse riders, as well as road crossing points within the study area. A site walkover of NMU routes was undertaken on 4 and 5 May 2016 to confirm the baseline conditions and inform the assessment.
- 16.2.12 The type of user, and where possible the usage levels, have been determined from information provided through the consultation process and site visits. In accordance with guidance provided in paragraph 9.7 of DMRB Volume 11, Section 3, Part 8 Pedestrians, Cyclists, Equestrians and Community Effects, no origin/destination surveys have been undertaken at this stage so as not to lead to unnecessary anxiety amongst local people about route options that could be ruled out.
- 16.2.13 The assessment of changes in access to outdoor areas for NMUs has focused on any changes to journeys undertaken for a variety of purposes including recreation, education, socialising, health benefits and travel from one place to another. The assessment criteria are broad in nature, relating to any recreational assets in the area that are available to, and likely to be used by, the general public. A qualitative description was completed based on changes in journey length and amenity value. Table 16.1 below summarises the types of outdoor access areas considered as part of this assessment, in line with guidance on undertaking EIA (SNH 2013).

**Table 16.1: Outdoor Access Areas considered relevant by SNH Guidance.**

<b>Area based assets</b>	National Park, Regional Park and Country Park
	Geoparks
	Munros
	Areas subject to S.49A Management Agreements including public access
	National Nature Reserve and Local Nature Reserves
	Local open space and green infrastructure
	Inland lochs and reservoirs
	Promoted surfing, diving and climbing sites
<b>Linear access assets</b>	Core paths and the wider paths network available through access rights
	Long Distance Routes, regional routes, NCN
	Any other public rights of way that are not identified as core paths, local paths or wider network paths
	Permissive paths and routes on land where access rights do not apply
	Rivers and canals

- 16.2.14 The baseline conditions for public transport have been gathered using online sources. Bus stops within the study area were gained from the following websites:
- Bus Times – [www.bustimes.org.uk](http://www.bustimes.org.uk);
  - Fishers Tours – [www.fisherstours.co.uk](http://www.fisherstours.co.uk);
  - Shiel Buses - [www.shielbuses.co.uk](http://www.shielbuses.co.uk);
  - Stagecoach website - [www.stagecoachbus.com](http://www.stagecoachbus.com);
  - Transport for Tongue – [www.transportfortongue.co.uk](http://www.transportfortongue.co.uk); and
  - Traveline website - [www.travelinescotland.com](http://www.travelinescotland.com).

- 16.2.15 The locations of railway stations were gained from the National Rail website (National Rail 2016). In addition further information has been gathered from the National Public Transport Access Nodes dataset (Department for Transport, 2017).

#### **Impact Assessment – Non-Motorised Users**

- 16.2.16 In accordance with DMRB Volume 11, Section 3, Part 8 Pedestrians, Cyclists, Equestrians and Community Effects, the assessment of impacts on NMUs has focused on the following three main aspects:
- changes in journey lengths and times;
  - changes in the amenity value of journeys; and
  - changes in access to outdoor areas.
- 16.2.17 The assessment of NMUs has been completed compared to the provision currently experienced within the study area, i.e. the baseline situation.
- 16.2.18 As part of the Stage 2 Assessment, DMRB Volume 11, Section 3, Part 8 Pedestrians, Cyclists, Equestrians and Community Effects guidance does not provide sensitivity and magnitude criteria. Therefore, assigning sensitivity and magnitude of change to each path has been reserved for the DMRB Stage 3 assessment. The assessment of potential impacts has therefore determined whether there would be potential for an adverse or beneficial effect.

#### Sensitivity

- 16.2.19 The Land Reform (Scotland) Act 2003, Part 1, Chapter 5, Section 13, paragraph 1, 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*”.
- 16.2.20 In line with the above, this assessment considers all paths as being of equal importance, regardless of user type or levels of usage and that all paths should be maintained and/or improved where practical. As such, no sensitivity criteria have been applied to the different types of paths.

#### Magnitude of Impact

- 16.2.21 For the purposes of this assessment, the magnitude of impact determined by the scale of predicted change in journey length, amenity value or access to outdoor areas. These aspects are discussed in further detail below.

#### *Journey Length*

- 16.2.22 A change in journey length is determined to have occurred where there is severance of a path or where there is an impact on the ability of NMUs to use the path in its current form, for example, where a path would be crossed by a proposed route option, requiring a new crossing point, diversion, or alternative route to be taken which would add to journey time for NMUs.
- 16.2.23 The number and type of NMU routes affected by a route option is reported, as well as the predicted change i.e. where there would be an increase, decrease, or no change in journey length. Any change in journey length at this stage of assessment has been deemed to be an adverse effect. Changes in journey length would be quantified and assessed in more detail for the preferred option during the DMRB Stage 3 Assessment.

#### *Amenity Value*

- 16.2.24 The amenity value of a NMU route is defined in DMRB Volume 11, Section 3, Part 8 Pedestrians, Cyclists, Equestrians and Community Effects as the ‘*relative pleasantness of a journey*’ (Highways

Agency, Scottish Executive, Welsh Assembly Government and the Department of Regional Development for Northern Ireland (1993a), p.4/1). The assessment of a route's amenity value has focused on how the implementation of the route options would alter the views experienced by NMUs when utilising a route, as well as any changes to the safety, air and noise environment that users of a path enjoy.

- 16.2.25 The number and type of paths anticipated to be affected by each route option is reported, with any changes to amenity value described qualitatively i.e. what influences would affect the character of the route (for example increase in traffic noise or changes of view). Any increase in amenity value has been deemed to be a beneficial effect, whereas any decreases are deemed to be adverse. Further detail on the degree of these changes in relation to the preferred option would be considered within the DMRB Stage 3 Assessment.

#### *Access to Outdoor Areas*

- 16.2.26 The assessment of access to outdoor areas has taken account of both changes in journey length and amenity value, in reference to the relevant facilities set out in Table 16.1. The number and type of paths affected by each route option is reported, with any changes in access to outdoor areas described qualitatively based on changes in journey length and amenity value. Further detail on the degree of these changes in relation to the preferred option would be considered within the DMRB Stage 3 Assessment.

#### Significance of Impact

- 16.2.27 Potential impacts are considered to be either significant or not significant and may be beneficial or adverse in nature. A potential impact has been based on professional judgement and is considered significant where a route option would result in a change to either journey length, amenity value or access to outdoor areas.

#### *Public Transport*

- 16.2.28 In the absence of specific DMRB guidance for assessing impacts on public transport, a qualitative assessment of the level of disruption to access to public transport has been undertaken, based on professional judgement. Disruption to access is considered to be an adverse effect, whilst physical improvements to access to bus stops are assessed as beneficial.

#### **Baseline Data - Vehicle Travellers**

- 16.2.29 Traffic data for the assessment of driver stress was provided by the Jacobs' Traffic Model team in August 2017. The traffic data has been produced from a Moray Firth Transport Model.

#### **Impact Assessment – Vehicle Travellers**

- 16.2.30 Driver stress has been assessed in relation to frustration, fear of potential accidents and uncertainty of a route. The assessment of driver stress was guided by methodology presented in DMRB Volume 11, Section 3, Part 9 Vehicle Travellers.
- 16.2.31 The assessment of driver stress is based on traffic modelling which considers the 'Do-Minimum' scenario i.e. the road network conditions if the Scheme is not constructed. There are a number of other committed infrastructure improvements which are included in the Do Minimum scenario model (Part 4 Traffic Assessment, Section 19.5 of this report provides further detail).
- 16.2.32 The methodology includes an assessment approach based on average peak hourly flow per lane, in flow units per one hour, where a car or light van equals one flow unit and a commercial vehicle over 1½ tons unladen weight or a public service vehicle equals 3 flow units. This assessment approach is applicable where there are stretches of highway longer than 1km and uses a three-point scale to classify driver stress as high, moderate or low.

**Table 16.2: Significance Criteria for Driver Stress following DMRB Guidance.**

<b>For Dual-Carriageway Roads</b>			
<b>Average peak hourly flow per lane, in flow units/1 hour</b>	<b>Average journey speed (km/hr)</b>		
	<b>Under 60</b>	<b>60-80</b>	<b>Over 80</b>
Under 1,200	High	Moderate	Low
1200-1600	High	Moderate	Moderate
Over 1600	High	High	High
<b>For Single-Carriageway Roads</b>			
<b>Average peak hourly flow per lane, in flow units/1 hour</b>	<b>Average Journey Speed (km/hr)</b>		
	<b>Under 50</b>	<b>50-70</b>	<b>Over 70</b>
Under 600	High <sup>2</sup>	Moderate	Low
600-800	High	Moderate	Moderate
Over 800	High	High	High
<sup>2</sup> "Moderate" in urban areas			

- 16.2.33 A value of driver stress was calculated for each link in the following scenarios:
- the Do-Minimum scenario (i.e. without the Scheme) - the worst year in the 15 years after opening (2036) (Figure 16.5); and
  - the Do-Something scenario (i.e. with the Scheme) - the worst year in the 15 years after opening (2036) (Figures 16.6 to 16.8).

16.2.34 It must be stated that the driver stress assessment approach described above is only applicable to the operational stage of a new road. There is no established methodology for the assessment of driver stress during the construction stage of the Scheme. Therefore, this aspect of the assessment has been completed via a descriptive explanation of how conditions on the existing road network would be altered throughout the construction period.

**Mitigation**

- 16.2.35 At this stage, all route options have no specific provisions for NMUs embedded within the designs. As such, all potential impacts have been assessed assuming no embedded mitigation, and therefore represent the worst-case scenario.
- 16.2.36 The design of each option has taken into account the need to maintain connectivity of existing NMU routes on the ground. As such, any NMU routes severed by a route option would either be re-routed safely across each of the route options or provided with pedestrian crossings at signalised junctions.
- 16.2.37 The details of potential mitigation measures have yet to be finalised at this stage and would be considered further and confirmed as part of the DMRB Stage 3 Assessment.

**Limitations to the Assessment**

- 16.2.38 Although The Highland Council provided details of the core paths, wider path network, links on roads and aspirational paths to assist, only the core paths data is audited by The Highland Council on an ongoing basis. Therefore, the aspirational paths and local paths data cannot be guaranteed to be free from errors or omissions. Confirmation was received from The Highland Council on 21 June 2016 that the aspirational paths used for this assessment are the most up to date, being developed last between 2006 and 2008. However, it should be noted that aspirational paths (as represented on Figure 16.1 to 16.4) represent a desire to have a path between a point A and a point B and it does not mean that the paths are projected to follow the exact route shown on the figures.
- 16.2.39 The assessment does not apply a significance scale to impacts on paths, rather impacts are simply recorded as either being significant or not significant based on professional judgement, taking into

account potential change to journey length, amenity value and access to outdoor areas. Although this assessment method does not involve detailed calculation of journey length changes, it does allow differentiation between the route options, which is sufficient to guide decision-making on which options perform better than others according to this topic area.

## **16.3 Policies and Plans**

- 16.3.1 Part 6 (Appendices), Appendix A8.1 (Planning Policy Context for Environmental Assessment) describes the planning policies and guidance from national to local level, which are relevant to Effects on All Travellers. An assessment of the compliance of each of the route options against all development plan policies relevant to this environmental topic is reported in Appendix A8.2 (Assessment of Development Plan Policy Compliance) and a summary overview is provided in Chapter 8 (Policies and Plans), Section 8.4 (Compliance with Policies and Plans).

## **16.4 Baseline Conditions**

### **Non-Motorised Users**

- 16.4.1 The baseline conditions for the study area are described below with further detail on the path network provided in Appendix A16.1 (Baseline Conditions for NMUs). Paths used by NMUs 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 community facilities such as shops, places of business and schools; and
- opportunities to integrate access and land management.

- 16.4.1 The use of paths can help to improve health, reduce social exclusion, and unlike other modes of transport, generally have few associated costs (e.g. fuel, travel tickets etc.). A good path network can also inspire visitors to enjoy the outdoors and to visit places of landscape, historical and wildlife interest, therefore encouraging financial expenditure and supporting the local rural economy. Well planned paths can potentially assist landowners and farmers to successfully integrate recreational use with land management operations.

- 16.4.2 The key baseline features in the study area and their interaction with the route options are shown on Figures 16.2 to 16.4.

### Core Paths

- 16.4.3 Core paths can include public rights of way, footpaths, tracks, cycle tracks, paths which are, or may be, covered by path agreements or path orders under the Land Reform (Scotland) Act 2003 (Sections 20 and 21), waterways, or other means by which persons may cross land.

- 16.4.4 The Highland Council, in their Inverness and Nairn Core Path Plan (The Highland Council 2008), has developed the following criteria for designating a path as a core path:

- linking settlements;
- access to places of interest;
- community demand;
- multi-use potential;
- access to facilities;
- assist land management;

- safe and fit for purpose;
- consistent with access strategy;
- close to where people live; and
- links and supports wider (path) networks.

16.4.5 The majority of core paths within the study area link settlements, provide access to places of interest (i.e. woodland, outdoor access areas), provide access to facilities and/or link and support wider (path) networks.

16.4.6 Within the study area, the following seven core paths exist (Figure 16.1):

- IN08.10 - path along the Ashton Farm access track, connecting the A96 Aberdeen - Inverness Trunk Road with U1058 Caulfield Road North (Castlehill – Cradlehall – Smithton – Stratton Lodge Road);
- IN08.11 - path routed south off U1058 Caulfield Road North;
- IN19.15 - path along the northern edge of the Raigmore Hospital;
- IN19.16 - path connecting Old Perth Road with the Raigmore Interchange, to the east of the Raigmore Hospital;
- IN08.23 - path routed along the Moray Firth;
- IN08.30 - path connecting Smithton Junction with core path IN08.23; and
- IN08.31 - path linking U1058 Caulfield Road North, along Scretan Burn (Surface Water Feature (SWF) 04).

#### Public Rights of Way

16.4.7 A public right of way is a defined route which links two public places (usually public roads). Public rights of way vary from long hill routes (often historical routes) to local routes used for dog walking or as short cuts to shops, schools and other local amenities.

16.4.8 ScotWays maintains the National Catalogue of Rights of Way (CROW) in Scotland, in partnership with SNH. In addition, many local authorities also have their own records. Access along public rights of way is protected by the Countryside (Scotland) Act 1967, Section 46, requiring the local authority to '*assert, protect and keep open and free from obstruction or encroachment any public rights of way*'. Diversions can be considered if the proposed diversion is deemed suitable by the planning authority.

16.4.9 Consultation with ScotWays in June 2016, confirmed that there are no rights of way within 1km of the route options.

#### Aspirational Paths

16.4.10 Aspirational paths hold no statutory designation; however, they are recognised by The Highland Council as paths that the public want to see made part of the overall core paths network. Aspirational paths can include paths that physically exist or that are not currently in place, but are considered important for future development. They can include routes that The Highland Council would like to see made more accessible or that public access along is secured, or paths that provide a link and there is an aspiration to develop. It should be noted that this assessment only considers those aspirational paths that currently physically exist and not paths that are yet to be created. This allows assessment of paths in the area that are currently in use by NMUs.

16.4.11 Information was received from The Highland Council on 21 June 2016 that the aspirational paths included within the study area are the most up to date, being allocated last between 2006 and 2008.



16.4.12 The following aspirational paths are located within the study area (Figure 16.1):

- path from Cradlehall Meadows (AP1);
- path along Scretan Burn (SWF 04) to the east of the Inverness Retail and Business Park (AP2);
- path from Ashton Farm to C1032 Barn Church Road, along the Scretan Burn (SWF 04) (AP3);
- path routed south from Inshes Mews access road (AP4);
- path from WN.1 through Castlehill Drive housing estate (AP5);
- path from U1058 Caulfield Road North, to the east of Cradlehall Meadows (AP6);
- path orientated around Inverness Police Headquarters (AP7);
- path routed through the grounds of Inshes Primary School (AP8);
- path connecting core path IN08.23 with Smithton Junction (AP9);
- path through the Inverness Retail and Business Park from the A96 (AP10);
- path from core path IN08.30 to the Raigmore Interchange, to the north of the A96 (AP11); and
- path through the Beechwood Business Park (AP12).

#### Local Paths

16.4.13 Unlike core paths and public rights of way, local paths hold no statutory designation. However, they are considered important by The Highland Council in providing important links for NMUs. Local paths can either be links on roads (i.e. pavements) or wider network paths (other routes, usually through woodland or rural land). Within the study area, these are predominantly found within and between residential areas, or on route to retail or industrial areas.

16.4.14 There are six links on roads within the study area (Figure 16.1):

- Local Path (LP) 1 (along B9006 Culloden Road (Millburn Roundabout – Culcabock – Castle Hill – Culloden Moor – Croy – Gollanfield – Fort George Road);
- LP2 (along U1058 Caulfield Road North);
- LP3 (along C1032 Barn Church Road);
- LP4 (along the B8082 road);
- LP5 (along the A96 from Seafield to Cairnlaw); and
- LP6 (along the A96 from core path IN08.10 to the Inverness Retail and Business Park roundabout).

16.4.15 In addition, the following four wider network (WN.) paths exist, as shown on Figure 16.1:

- path off U1058 Caulfield Road North, connecting LP2 with AP5 (WN.1);
- path along Woodgrove Crescent (WN.2);
- path along the Inverness College (University of the Highlands and Islands Campus), before crossing the A9 Perth – Inverness Trunk Road at-grade and linking into the Beechwood Business Park (WN.3); and
- a network of paths through woodland around Birchwood Road (WN.4).

Cycle Routes

- 16.4.16 Sustrans describes the NCN as a UK wide series of safe, traffic-free and quiet on road cycling and walking routes that connect major towns and cities ([www.sustrans.org.uk](http://www.sustrans.org.uk)). Local cycle routes are much shorter routes and usually connect communities to facilities, or facilities to facilities.
- 16.4.17 NCN Route 1 (NCN1) (Figure 16.1) orientates through the study area, west – east, along the B9006 Culloden Road and U1124 Caulfield Road. In addition, a local cycle route connects the Inverness College (UHI Campus) and the Inverness Retail and Business Park, crossing the disused railway bridge.

Provision for Equestrians

- 16.4.18 There is currently no formal provision for equestrians (such as bridleways) within the study area. Consultation with the British Horse Society (BHS) confirmed there was no major equestrian use within the study area. However, it was advised by the BHS that there is a location where equestrians are known to cross the existing A96 (at-grade) where the trunk road meets the Ashton Farm access track.

Access to Outdoors

- 16.4.19 There are no National Parks, Regional Parks or Country Parks within the study area. The baseline description is therefore made up of local open space, including parks and woodlands. The main outdoor access areas within the study area are displayed on Figure 16.1, and described below:
- Moray Firth – accessed by core paths IN08.10, IN08.23 and IN08.30, as well as LP3, LP5, LP6, AP2, AP3, AP9 and AP11;
  - Balvonie Wood – accessed by WN.2 and AP4;
  - Inshes Wood – accessed by LP1 and WN.4; and
  - Inshes District Park – accessed via AP8, LP1 and LP4.

Public Transport

- 16.4.20 Bus stops and bus services within the study area were identified in the following locations:

**Table 16.3: Location of Bus Stops and Description of Bus Routes within the Study Area**

Bus No.	Bus Stop Location	Route	Service Provider
1A	*At the time of writing it was not possible to verify which stops the bus utilises.	Inverness (Union Street) - Inverness (Union Street)	Stagecoach
1B	Inshes Tesco – eastbound, Inshes Tesco – westbound, UHI Campus west	Inverness [Culduthel Farm] - Inverness [Union Street] / Inverness [Union Street] – Inverness [Culduthel Farm]	Stagecoach
2	Inshes Tesco – eastbound, Inshes Tesco – westbound, Castlehill Gardens – eastbound, Castlehill Gardens – westbound, Inshes Brae – eastbound, Inshes Brae – westbound, Cradlehall Business Park – eastbound, Cradlehall Business Park – westbound, UHI Campus west, UHI Campus east	Inverness [Culloden] - Inverness [Craig Dunain] / Inverness [Craig Dunain] – Inverness [Culloden]	Stagecoach

Bus No.	Bus Stop Location	Route	Service Provider
2A	Carlton bingo, Inshes Tesco – eastbound, Inshes Tesco – westbound, Castlehill Gardens – eastbound, Castlehill Gardens – westbound, Inshes Brae – eastbound, Inshes Brae – westbound, Cradlehall Business Park – eastbound, Cradlehall Business Park – westbound, UHI Campus west, UHI Campus east	Inverness [Craig Dunain] – Inverness [Culloden] / Inverness [Culdeon] – Inverness [Craig Dunain]	Stagecoach
2D	Inshes Tesco – westbound, Castlehill Gardens – westbound, Inshes Brae – westbound, Cradlehall Business Park - westbound	Inverness [Craig Dunain] – Inverness [Culloden] / Inverness [Culloden] – Inverness [Craig Dunain]	Stagecoach
2U	UHI Campus west	Inverness [Queensgate] – Inverness [UHI Campus]	Stagecoach
3	Inshes Tesco – eastbound, Inshes Tesco – westbound, Birchwood Road (two stops), Castlehill Gardens – eastbound, Castlehill Gardens – westbound, Cradlehall Business Park – eastbound, Cradlehall Business Park – westbound, UHI Campus west, UHI Campus east	Inverness [Craig Dunain] – Inverness [Culloden] / Inverness [Culdeon] – Inverness [Craig Dunain]	Stagecoach
3A	Inshes Tesco – eastbound, Inshes Tesco – westbound, Birchwood Road (two stops), Castlehill Gardens – eastbound, Castlehill Gardens – westbound, Cradlehall Business Park – eastbound, Cradlehall Business Park – westbound, UHI Campus west, UHI Campus east	Inverness [Craig Dunain] – Inverness [Culloden] / Inverness [Culdeon] – Inverness [Craig Dunain]	Stagecoach
4	Police headquarters (two stops)	Inverness [South Kessock] - Inverness [South Kessock]	Stagecoach
S4	*At the time of writing it was not possible to verify which stops the bus utilises.	Culloden – Ardersier / Ardersier - Culloden	D & E Coaches
S4A	*At the time of writing it was not possible to verify which stops the bus utilises.	Longman - Culloden	D & E Coaches
S4B	*At the time of writing it was not possible to verify which stops the bus utilises.	Culloden – Ardersier / Ardersier - Culloden	D & E Coaches
5	Inverness Retail Park, Tesco	Inverness [Queensgate] - Croy [Ardcroy Road]	Stagecoach
5	*At the time of writing it was not possible to verify which stops the bus utilises.	Talmine-Inverness / Inverness - Talmine	Transport for Tongue
5A	Inverness Retail Park, Tesco	Croy [Ardcroy Road] - Inverness [Queensgate]	Stagecoach
S5	Inshes Tesco – eastbound, Inshes Tesco – westbound, Inshes Vets (two stops), Cauldfield Road - eastbound, Cauldfield Road – westbound, Birchwood Road (two stops)	Inverness or Culloden – Croy / Croy – Inverness or Culloden	D & E Coaches
S6	Inshes Tesco – eastbound, Inshes Tesco – westbound, Inshes Vets (two stops), Cauldfield Road - eastbound, Cauldfield Road – westbound, Inshes Brae – eastbound, Inshes Brae – westbound	Culloden - Bun Sgoil Ghaidhlig / Bun Sgoil Ghaidhlig - Culloden	D & E Coaches

Bus No.	Bus Stop Location	Route	Service Provider
8	Chattan avenue (two stops), Community centre	Inverness [Raigmore] - Inverness [Raigmore]	Stagecoach
10	Inverness Retail Park Tesco	Inverness Bus Station – Aberdeen Union Square / Aberdeen Union Square – Inverness Bus Station	Stagecoach
10	*At the time of writing it was not possible to verify which stops the bus utilises.	Inverness – Aberdeen / Aberdeen - Inverness	Stagecoach Bluebird
X10	*At the time of writing it was not possible to verify which stops the bus utilises.	Aberdeen - Inverness	Stagecoach Bluebird
11	Inverness Retail Park, Tesco	Inverness - Nairn	Stagecoach
11	*At the time of writing it was not possible to verify which stops the bus utilises.	Inverness – Elgin / Elgin - Inverness	Stagecoach Bluebird
11A	Inverness Retail Park, Tesco	Inverness – Nairn / Nairn - Inverness	Stagecoach
11A	*At the time of writing it was not possible to verify which stops the bus utilises.	Inverness – Elgin / Elgin - Inverness	Stagecoach Bluebird
11U	Carlton Bingo, UHI Campus west, Inverness Retail Park, Tesco, Inshes Tesco - westbound	Inverness [Bus Station] – Nairn [Bus Station] / Nairn [Bus Station] – Inverness [Bus Station]	Stagecoach
S21	Inshes Tesco – eastbound, Inshes Tesco – westbound, Inshes Vets (two stops), Cauldfield Road - eastbound, Cauldfield Road – westbound, Birchwood Road (two stops)	Inshes – Culloden Academy via Westhill (School Days Only)	D & E Coaches
25U	Inshes Tesco – westbound, UHI Campus west	Inverness [Bus Station] – Invergordon [High Street] / Invergordon [High Street] – Inverness [Bus Station]	Stagecoach
26	*At the time of writing it was not possible to verify which stops the bus utilises.	Inverness (Bus Station) - Cromarty (Victoria Hall)	Stagecoach
26A	Inverness Retail Park, Tesco	Inverness [Bus Station] – Cromarty [Victoria Hall] / Cromarty [Victoria Hall] – Inverness [Bus Station]	Stagecoach
26C	Carlton Bingo, Inverness Retail Park, Tesco	Inverness [Bus Station] – Cromarty [Victoria Hall] / Cromarty [Victoria Hall] – Inverness [Bus Station]	Stagecoach
26U	UHI Campus east	Inverness [Bus Station] – Cromarty [Victoria Hall] / Cromarty [Victoria Hall] – Inverness [Bus Station]	Stagecoach
34X	Inshes Tesco - eastbound	Carrbridge - Inverness [Bus Station]	Stagecoach
35	Inshes Tesco – eastbound, Inshes Tesco – westbound, Inshes Vets (two stops), UHI Campus west, UHI Campus east	Inverness [Bus Station] – Carrbridge [Car Park] / Carrbridge [Car Park] – Inverness [Bus Station]	Stagecoach
61	*At the time of writing it was not possible to verify which stops the bus utilises.	Inverness – Ullapool / Ullapool - Inverness	D & E Coaches
103	Castlehill Gardens – eastbound, Cradlehall Business Park – eastbound, UHI Campus east, Inshes Brae - eastbound	Inverness [UHI Campus] – Inverness [Culloden Academy]	Stagecoach

Bus No.	Bus Stop Location	Route	Service Provider
104	Inshes Retail Park	Inverness [Milton of Leys] – Inverness [Millburn Academy] / Inverness [Millburn Academy] – Inverness [Milton of Leys]	Stagecoach
112	Inshes Tesco – eastbound, UHI Campus West	Tomatin (Clune Road End) – Inverness (Millburn Academy) / Inverness (Millburn Academy) – Tomatin (Clune Road End)	Stagecoach
113	Inshes Tesco – eastbound, Inshes Tesco – westbound, Inshes Vets (two stops), UHI Campus west	Inverness [Bus Station] – Coignashee / Coignashee – Inverness [Bus Station]	Stagecoach
228	*At the time of writing it was not possible to verify which stops the bus utilises.	Arbroath – Inverness / Inverness - Arbroath	Fishers Tours
244	*At the time of writing it was not possible to verify which stops the bus utilises.	Forfar – Inverness / Inverness - Forfar	Fishers Tours
252	*At the time of writing it was not possible to verify which stops the bus utilises.	Inverness to Nairn via Cawdor / Nairn to Inverness via Cawdor	D & E Coaches
267	*At the time of writing it was not possible to verify which stops the bus utilises.	Cupar – Inverness / Inverness - Cupar	Fishers Tours
300A	Inshes Primary School, Inshes Tesco – eastbound, Inshes Tesco – westbound, Inshes Vets (two stops), Cauldfield Road – westbound, Birchwood Road (two stops)	Inverness – Meallmore / Meallmore - Inverness	D & E Coaches
301	*At the time of writing it was not possible to verify which stops the bus utilises.	Whitebridge – Inverness / Inverness - Whitebridge	D & E Coaches
303	Carlton Bingo, Inshes Tesco – westbound, Inshes Retail Park, Inverness Retail Park, Tesco	Whitebridge – Raigmore Hospital / Raigmore Hospital - Whitebridge	D & E Coaches
304	Inshes Tesco – eastbound, Inshes Tesco – westbound, UHI Campus west, UHI Campus east	UHI or Raigmore – Tomich / Tomich – UHI or Raigmore	D & E Coaches
308	Inverness Retail Park, Tesco	Tomich – Dingwall or Inverness / Dingwall or Inverness - Tomich	Ross's Minibuses
410	Inverness Retail Park, Tesco	Cromarty – Croy / Croy - Cromarty	D & E Coaches
513	*At the time of writing it was not possible to verify which stops the bus utilises.	Fort William to Inverness / Inverness – Fort William	Shiel Buses
919	UHI Campus west	Fort William – Inverness / Inverness – Fort William	Stagecoach

Bus No.	Bus Stop Location	Route	Service Provider
JG2	*At the time of writing it was not possible to verify which stops the bus utilises.	Inverness - Kirkwall	John O'Groats Ferries
<p>N.B. In addition to the bus stops above, the following bus stops were identified from the National Public Transport Access Nodes dataset: Lifescan, Vue Cinema (two stops), UHI Main Campus, Woodlands Court (two stops) and Inshes Church. However at the time of writing route information was not available.</p>			

- 16.4.21 The location of the bus stops identified in Table 16.3 can be seen in Figure 16.1.
- 16.4.22 It is understood that no school bus transport services operate in the vicinity of the Scheme.
- 16.4.23 There are no railway stops within 500m of each of the route options, with the nearest train station being Inverness Railway Station (approximately 2.6km west of the proposed route options).

Vehicle Travellers - Driver Stress

- 16.4.24 The Scheme is required to encourage a more effective road network and improve the operation of the network for longer distance and local journeys. The existing road network currently experiences substantial volumes of traffic as a result of the convergence of two 'A' roads. Both roads experience significant volumes of heavy goods vehicles, which can lead to driver frustration and dangerous overtaking manoeuvres from other vehicle travellers. Both roads are also popular routes for tourists, many of whom are unfamiliar with the road, which can create frustration for both themselves and other vehicle travellers.
- 16.4.25 Vehicle travellers currently experience low levels of driver stress when travelling along the A96 for the majority of the stretch within the study area, given its characteristics as a relatively straight stretch of the trunk road that has few junctions. Driver stress is likely to increase in the vicinity of the Raigmore Interchange, as a result of driver frustration among some individuals relating to the need to negotiate a junction which suffers congestion at peak times (Figure 16.5). The Raigmore Interchange is a key junction for drivers travelling east to Nairn, west to Inverness, north to the Highlands and south towards the Cairngorms National Park, and hence experiences significant volumes of traffic.
- 16.4.26 Levels of driver stress are likely to be moderate along a number of local roads in Inshes and Smithton, possibly as a result of vehicle travellers using single lane, local roads to access places of employment or recreation.
- 16.4.27 Current levels of driver stress for selected roads within the study area are shown in Table 16.4 and Figure 16.5. It must be noted that the driver stress ratings are based on average peak hourly flow (flow units/hour) along local roads, meaning levels of stress vary along certain stretches of the road. This variation has been recorded in Table 16.4. The roads highlighted in Table 16.4 represent those that may be currently utilised to move between the A9 and A96.

**Table 16.4: Baseline (Do-Minimum) Driver Stress Levels for Selected Roads on the Existing Road Network (2021)**

Road	Road Class	Driver Stress Rating
A96 Aberdeen - Inverness Trunk Road (Inverness Retail Park roundabout to Smithton Junction)	Dual Carriageway	High, moderate and low
A96 Aberdeen – Inverness Trunk Road (Raigmore Interchange to Inverness Retail Park roundabout)	Dual Carriageway	High, moderate and low
A9 Perth – Inverness Trunk Road	Dual Carriageway	Low
C1032 Barn Church Road	Single Carriageway	Low
U1058 Caulfield Road North	Single Carriageway	Moderate
B9006 Culloden Road	Single Carriageway	High and moderate
Sir Walter Scott Drive	Single Carriageway	High and moderate

## 16.5 Impact Assessment

- 16.5.1 This section describes the impacts for the path network that are specific to the three route options.
- 16.5.2 The impact assessment has been undertaken with reference to the following:
- Potential impacts of the route options on NMUs are described in the absence of mitigation, as any mitigation measures would be developed for the preferred option during DMRB Stage 3.
  - At this stage in the design (DMRB Stage 2), the likely nature and location of the construction activities is not available. As such, it is not possible to undertake a detailed assessment of the impacts as a result of construction.
- 16.5.3 Paragraphs 16.5.4 and 16.5.5 set out general construction and operational phase effects for NMUs, associated with highways projects.
- 16.5.4 During the construction period, NMUs have the potential to be disrupted by:
- Temporary disruption in access to and/or closures of bus stops.
  - Temporary severance and/or closures of paths, cycleways and/or local roads.
  - Temporary diversions of paths, cycleways and/or local roads.
  - Impacts to the amenity value of paths as a result of construction noise, dust and visual intrusion.
  - Disruption in access to outdoor areas as a result of temporary diversions and/or closures of paths, cycleways and/or local roads.
- 16.5.5 Once operational, NMUs could be disrupted by the following:
- Relocation and/or closures of bus stops.
  - Permanent changes to the amenity value of NMU routes from increased noise, disrupted views or reduced air quality.
  - Permanent closures of paths, cycleways and/or local roads.
  - Permanent diversions of existing paths, cycleways and/or local roads resulting in a change in journey length.

- 16.5.6 NMUs may also experience beneficial impacts as a result of the Scheme, with the traffic re-routed potentially improving the amenity value of certain routes.

**Non-Motorised Users**

Impacts Common to all Route Options

- 16.5.7 All of the route options would have a potential significant adverse effect on 12 paths within the study area, four of which provide access to the Moray Firth, to the north of the A96. In addition, all route options would have potential significant beneficial effects on nine paths, six of which provide access to the Moray Firth. A summary of these potential impacts is provided in Table 16.5.

**Table 16.5: Potential Impacts on NMU Routes – Common to All Route Options**

Path Name	Path Type	Change in Journey Length	Change in Amenity Value	Access to outdoor Areas Affected
<b>Adverse Impacts</b>				
IN08.10	Core path	Increase	Reduction in amenity (noise, air and visual impact)	Increase - Moray Firth
LP2	Local path	Increase	Reduction in amenity (noise, air and visual impact)	N/A
LP3	Local path	No change	Reduction in amenity (noise, air and visual impact)	Increase - Moray Firth
WN.1	Wider network	Increase	Reduction in amenity (noise, air and visual impact)	N/A
WN.3	Wider network	Increase	Reduction in amenity (noise, air and visual impact)	N/A
AP1	Aspirational path	Increase	Reduction in amenity (noise, air and visual impact)	N/A
AP2	Aspirational path	Increase	Reduction in amenity (noise, air and visual impact)	Increase - Moray Firth
AP3	Aspirational path	Increase	Reduction in amenity (noise, air and visual impact)	Increase - Moray Firth
AP5	Aspirational path	No change	Reduction in amenity (noise, air and visual impact)	N/A
AP6	Aspirational path	No change	Reduction in amenity (noise impact)	N/A
NCN1	NCN Route	Increase	Reduction in amenity (noise, air and visual impact)	N/A
Local cycle route from the Inverness College (UHI Campus) to the Inverness Retail and Business Park	Local cycle route	No change	Reduction in amenity (noise, air and visual impact)	N/A
<b>Beneficial Impacts</b>				
IN08.23	Core path	No change	Improvement in noise and air amenity	Increase - Moray Firth
IN08.30	Core path	No change	Improvement in noise and air amenity	Increase - Moray Firth



Path Name	Path Type	Change in Journey Length	Change in Amenity Value	Access to outdoor Areas Affected
IN19.15	Core path	No change	Improvement in noise and air amenity	N/A
IN19.16	Core path	No change	Improvement in noise and air amenity	N/A
LP5	Local path	No change	Improvement in noise and air amenity	Increase - Moray Firth
LP6	Local path	No change	Improvement in noise and air amenity	Increase - Moray Firth
AP9	Aspirational path	No change	Improvement in noise and air amenity	Increase - Moray Firth
AP11	Aspirational path	No change	Improvement in noise and air amenity	Increase - Moray Firth
AP12	Aspirational path	No change	Improvement in noise and air amenity	N/A

16.5.8 The potential adverse impacts on all of the paths are mainly as a result of changes in amenity value, with the route options passing through a largely rural landscape. For the following eight paths, the route options would directly sever their alignment, resulting in a change in journey length:

- IN08.10;
- LP2;
- WN.1;
- WN.3;
- AP1;
- AP2;
- AP3; and
- NCN1.

16.5.9 The potential beneficial effects on paths identified in Table 16.5, would be as a result of the route options moving vehicle traffic away from the paths near the A9 and A96, therefore improving the amenity value of these NMU routes.

16.5.10 Access to the Moray Firth to the north of the A96 would be adversely affected as a result of severance along core path IN08.10, as well as LP3, AP2 and AP3.

16.5.11 There would be no significant effect, either positively or negatively, or directly in terms of a change in length or indirectly by a change in amenity, for the following paths within the study area:

- IN08.11;
- IN08.31;
- LP4;
- LP6;
- WN.4;
- AP7;
- AP8; and
- AP10.

- 16.5.12 There would be no direct physical effect on the equestrian crossing located where the A96 meets the Ashton Farm access track (see Figure 16.1). However, the reduction in traffic along the A96 road, as a result of all the route options, would be beneficial for riders utilising the crossing.

Option 1A, 1B, 2A and 2B

- 16.5.13 In addition to those impacts identified in Table 16.5, Options 1A, 1B, 2A and 2B would sever and adversely affect the amenity of LP1, whilst also reducing the amenity value of WN.2.

Option 3A and 3B

- 16.5.14 Options 3A and 3B would be the only route options to have no additional effects to those identified in Table 16.5. In addition, both options would be the only two route options not to sever LP1. Option 3B is located further away from a greater number of paths than Option 3A, resulting in an overall reduced adverse effect on amenity.

**Public Transport**

- 16.5.15 The alignment of route options 1A, 1B, 2A and 2B could potentially impact upon the Inshes Vets bus stops, with increased lengths of journeys experienced for NMUs (see Figures 16.2 and 16.3). The alignment of route options 3A and 3B would have no impacts upon any of the bus stops within the study area, as they are located a sufficient distance away, with no change in journey length anticipated for NMUs (see Figure 16.4).

**Vehicle Travellers – Driver Stress**

- 16.5.16 Table 16.4 sets out the Do-Minimum, or existing, driver stress levels along the local road network. During construction there would be temporary delays and diversions on the local road network and the existing A9 which may lead to frustration and an increase in driver stress. Table 16.6 describes the effects each route option would have on driver stress levels once the Scheme is operational, both along the route options as well as on selected roads within the local road network. The results can also be seen visually on Figures 16.6 to 16.8. The road links on each figure largely display driver stress for both directions along a road.
- 16.5.17 It must be noted that the driver stress ratings are based on average peak hourly flow per (flow units/hour) along local roads, meaning levels of stress vary along certain stretches of the road. This variation has been recorded in Table 16.6.

**Table 16.6: Do-Something Driver Stress Levels for Each Route Option (2036)**

Road	Road Class	Driver Stress Rating
<b>Route Options 1A / 1B</b>		
A9/A96 Inshes to Smithton	Dual Carriageway	High and moderate
A96 Aberdeen – Inverness Trunk Road	Dual Carriageway	High, moderate and low
A9 Perth – Inverness Trunk Road	Dual Carriageway	Low
C1032 Barn Church Road	Single Carriageway	Moderate and low
U1058 Caulfield Road North	Single Carriageway	Moderate
B9006 Culloden Road	Single Carriageway	High and moderate
Sir Walter Scott Drive	Single Carriageway	High and moderate
<b>Route Options 2A / 2B</b>		
A9/A96 Inshes to Smithton	Dual Carriageway	High and moderate
A96 Aberdeen – Inverness Trunk Road	Dual Carriageway	High, moderate and low
A9 Perth – Inverness Trunk Road	Dual Carriageway	Low

Road	Road Class	Driver Stress Rating
C1032 Barn Church Road	Single Carriageway	Moderate and low
U1058 Caulfield Road North	Single Carriageway	Moderate
B9006 Culloden Road	Single Carriageway	High and moderate
Sir Walter Scott Drive	Single Carriageway	High and moderate
<b>Route Options 3A / 3B</b>		
A9/A96 Inshes to Smithton	Dual Carriageway	High and moderate
A96 Aberdeen – Inverness Trunk Road	Dual Carriageway	High, moderate and low
A9 Perth – Inverness Trunk Road	Dual Carriageway	Low
C1032 Barn Church Road	Single Carriageway	Moderate and low
U1058 Caulfield Road North	Single Carriageway	Moderate
B9006 Culloden Road	Single Carriageway	High and moderate
Sir Walter Scott Drive	Single Carriageway	High and moderate

16.5.18 As can be seen from Table 16.6, all route options would result in the same average levels of driver stress.

## 16.6 Potential Mitigation

16.6.1 At this stage of the assessment (DMRB Stage 2), the design of the Scheme has not been developed sufficiently to allow for detailed mitigation measures to be defined. This section has therefore suggested measures that could be considered during the DMRB Stage 3 Assessment. However embedded mitigation would be included as part of the detailed design of the Scheme, as the design process develops.

16.6.2 This section also outlines potential mitigation measures according to construction best practice measures. The measures outlined below for the construction and operational phases of the Scheme would be developed and defined further during the DMRB Stage 3 Assessment.

### Construction

16.6.3 Typical construction mitigation measures are likely to include:

- Programming the construction works in such a manner to reduce the length of closures or restrictions of access as far as practicable. Any diversion routes must be safe for NMUs and all-inclusive in accordance with the Roads for All: Good Practice Guide for Roads (Transport Scotland 2013).
- Implementation of traffic management plan, in consultation with Traffic Scotland, to ensure as minimal disruption is experienced as possible for vehicle travellers. This would include programming the works to reduce the length of closures or restrictions of access as far as practicable.
- Best practice construction techniques to ensure as minimal impact to the air, noise and visual environment is experienced as possible. This would include measures such as temporary screening of construction works and working during social hours.
- Consultation would be undertaken with The Highland Council, Stagecoach, D & E Coaches and Highland Scotbus, where necessary, to ensure bus stops are relocated to locations suitable for NMU with safe access routes provided.
- Temporary diversion routes should be provided to maintain access for NMUs throughout the works, and any closure or re-routing of routes used by NMUs should be agreed in advance with the local authorities.

## **Operation**

- 16.6.4 Once the Scheme is operational, mitigation should take into the account the need to maintain connectivity of NMU routes, and/or enhance provision wherever possible. The typical operational phase mitigation to be developed as part of the DMRB Stage 3 Assessment are anticipated to include:
- Design to avoid severance by incorporating underpasses, overbridges and/or permanent diversions of paths wherever possible. Consultation should be undertaken with The Highland Council to ensure diversions are suitable for all NMUs.
  - Design to include the creation of new footways and/or cycleways.
  - If bus stops were to be permanently lost as a result of the Scheme, liaison with The Highland Council, Stagecoach, D & E Coaches and Highland Scotbus should be undertaken to ensure bus stops are relocated to locations suitable for NMU access.
  - Appropriate vegetation planting and landscaping should be designed and maintained to ensure paths maintain a pleasant visual amenity. The amenity value of paths can also be improved as a result of the mitigation measures employed to reduce potential visual and air and noise impacts (these are discussed in more detail in Chapter 9 (Air Quality), Chapter 10 (Noise and Vibration) and Chapter 11 (Landscape and Visual) of this report.

## **16.7 Summary of Route Options**

- 16.7.1 This section provides a summary of the impact assessment for each section including those potential impacts which are common to all and those that vary between the route options. A discussion of the potential mitigation for the route options is also presented taking into account the likely mitigation measures outlined in paragraphs 16.6.1 to 16.6.4.

### **Non-motorised Users**

- 16.7.2 Table 16.7 provides a summary of all the route options with the number of paths with significant adverse or beneficial potential impacts for NMUs. One impact score point in the table is equivalent to one impact (i.e. a change in journey length or a change in amenity value), so individual paths can have multiple scores. There is no specific methodology set out in DMRB guidance for summarising the significance of impacts. Therefore, this scoring system has been developed using professional judgement and is consistent with the methodology used on the A96 Dualling Inverness to Nairn (including Nairn Bypass) Stage 2 Assessment.

**Table 16.7: Number of Paths with Potential Significant Adverse or Beneficial Impacts, with the respective Route Options**

Potential Impact	Option					
	1A	1B	2A	2B	3A	3B
<b>Path Network</b>						
Adverse Impacts	22	22	22	22	20	20
Beneficial Impacts	9	9	9	9	9	9
<b>Access to Outdoor Areas</b>						
Adverse impacts	4	4	4	4	4	4
Beneficial Impacts	6	6	6	6	6	6

- 16.7.3 All route options have the potential to result in a significant adverse impact on NMUs utilising the path network and on access to outdoor areas, either as a result of an increase in journey length or a decrease in amenity. In addition, all route options would have some beneficial impacts on NMUs utilising the path network, as a result of improved amenity along paths nearby the A9 and A96, as traffic is re-routed away from the trunk roads.
- 16.7.4 Options 1A, 1B, 2A and 2B are anticipated to have the greatest number of adverse impacts on NMUs utilising the local path network, whilst Options 3A and 3B would be expected to have the least amount of adverse effects. For all route options, the majority of adverse effects are because of changes to the amenity value of paths, with a number also severed by the routes.
- 16.7.5 As all route options follow a similar route alignment, the number of beneficial impacts for each route option are the same. Options 3A and 3B would have the least amount of adverse effects. Options 1A, 1B, 2A and 2B would all extend south of U1058 Caulfield Road North and consequently sever path LP1, which is a key route through the community of Inshes. In contrast, Options 3A and 3B would not extend south of U1058 Caulfield Road North and therefore avoid this impact of severance on LP1.
- 16.7.6 Option 3B is located further away from a greater number of paths than Option 3A, resulting in an overall reduced adverse effect on amenity. Therefore, taking into account the overall adverse and beneficial impacts on the path network and access to outdoor areas, Option 3B is the most beneficial.

### **Public Transport**

- 16.7.7 Options 3A and 3B would have no impact upon any of the bus stops within the study area, with no change in journey length for NMUs. Therefore they are the most beneficial options in terms of public transport.

### **Vehicular Travellers – Driver Stress**

- 16.7.8 Options 1A, 1B, 2A and 2B would result in the lowest levels of driver stress along the surrounding road network as a result of the Scheme, in particular around the Raigmore Interchange. There would be no difference in driver stress levels along each of the route options, with stretches of high and moderate stress experienced. It must be stated that these results highlight levels of driver stress before embedded mitigation is applied. It is anticipated that with the mitigation measures proposed in paragraphs 16.6.1 to 16.6.4, that levels of driver stress would reduce along each of the route options.

### **Overall Summary**

- 16.7.9 Overall, taking into account the effects each route option would have on NMUs and vehicle travellers, this assessment has concluded that Option 3B would be the most beneficial option to take forward for the DMRB Stage 3 Assessment. Although options 1A, 1B, 2A and 2B would result in slightly

lower levels of driver stress than options 3A and 3B, this is only a very minor difference. Option 3B is the most beneficial option for NMUs as it is located further away from a greater number of paths.

### **Mitigation**

- 16.7.10 The mitigation measures outlined in paragraphs 16.6.1 to 16.6.4 are expected to reduce the impacts on NMUs for all the route options from the potential impacts reported above. However, at this stage it is not possible to determine by how much these mitigation measures would reduce the impacts and as such, this is not currently taken into account in the assessment of the route options.
- 16.7.11 There is potential within the route options for mitigation of severance to utilise existing structures or implement safe pedestrian, cyclist and equestrian crossing points, thus reducing the magnitude of impact. Similarly, carefully planned landscaping could potentially reduce the adverse effect of changes to amenity value of NMu routes. The inclusion of mitigation measures will be considered further during the DMRB Stage 3 Assessment of the most beneficial route option.

## **16.8 Scope of DMRB Stage 3 Assessment**

- 16.8.1 The DMRB Stage 3 Assessment should be carried out in line with guidance set out in DMRB Volume 11, Section 3, Part 8 Pedestrians, Cyclists, Equestrians and Community Effects and DMRB Volume 11, Section 3, Part 9 Vehicle Travellers, with supplementary guidance set out in IAN125/09 referred to.
- 16.8.2 The DMRB Stage 3 Assessment should:
- confirm the baseline information gathered and reported in this chapter from the relevant statutory bodies, local council, desk-based studies and site visits;
  - undertake additional consultation with the relevant statutory bodies, including Sustrans, The Highland Council and the BHS;
  - update and define the level of impact significance for changes in journey length and amenity, taking into account embedded mitigation;
  - complete a comprehensive assessment of driver stress, based upon 'Do-Minimum' and 'Do-Something' traffic model scenarios;
  - verification of all existing bus stops and bus routes through field surveys and consultation;
  - complete a comprehensive assessment of views from the road using a qualified landscape architect; and
  - consider further and finalise the mitigation plans.

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