

9 People and Communities – All Travellers

This chapter assesses the impact of the proposed scheme on pedestrians, cyclists, equestrians (referred to as Non-Motorised Users or NMUs), and also on vehicle travellers in terms of changes to views from the road, and driver stress.

The assessment considered all paths within 500m of the proposed scheme and identified outdoor areas and paths including core paths, rights of way, National Cycle Routes, equestrian routes and local paths. A total of 24 paths were identified as well as three informal crossing points of the existing A9. Changes to NMU journey lengths and amenity value were used to determine potential severance impacts on access to the outdoors, taking into account mitigation embedded in the proposed scheme design such as overbridges and new cycleways/footways.

The proposed scheme design maintains existing use while providing safer access across the A9 for NMUs. Significant adverse impacts of the proposed scheme on NMUs have largely been avoided as a result of maintaining existing NMU routes. Safer access across the A9 for NMUs within the study area is achieved by the provision of an overbridge between Dowally and Guay.

During construction, there would be significant impacts (Moderate to Substantial) for NMUs using two crossing points (two paths) and for NMUs using nearby paths due to potential diversion lengths and impacts on amenity value. There are also temporary but significant (Moderate to Substantial) residual impacts during construction due to diversion lengths and changes in amenity and for cyclists using a regional cycle route (RCR 83) between Rotmell and Westhaugh of Tulliemet and for NMUs accessing the River Tay.

With the proposed scheme in place, Moderate significance adverse impacts will remain for one NMU route due to increased journey length and decreased amenity value, and one NMU route due to severance of an informal crossing point, both with limited opportunities for mitigation. Generally, journey lengths are not significantly affected with the proposed scheme and no significant impacts are expected for NMU access to outdoor areas during operation.

Two bus stops are included on the proposed mainline carriageway: on the northbound carriageway north of Dowally Farm and the southbound carriageway south of Guay. These two bus stops replace the bus stops on the existing A9 at Kindallachan. During construction there would be significant impacts (Moderate to Substantial) due to disruption to access for NMUs accessing these bus stops. As reported in Chapter 8 (People and Communities – Community and Private Assets), during operation provision of replacement bus stops on the main alignment between Dowally and Guay (existing bus stops are at Kindallachan) are expected to result in increased journey distances for pedestrians travelling from Kindallachan with Substantial (adverse) impacts for vulnerable groups and non-vulnerable groups. Pedestrians travelling from Dowally and Guay would have reduced journey distance with Substantial (beneficial) impacts assessed for pedestrians (vulnerable and non-vulnerable groups) travelling from Dowally to the northbound and southbound bus stops and from Guay to the southbound bus stop. There is a Slight (beneficial) impact arising from a reduction in journey distance for access to the northbound bus stop from Guay. The proposed scheme includes provision of bus stops along the side road at Kindallachan and Dowally, and a hail-and-ride option will be available for boarding/alighting at Guay. The proposed scheme therefore facilitates improved public transport services, in line with Programme Objective 4, by providing connections for the communities of Dowally, Guay, and Kindallachan with Ballinluig and Pitlochry.

Views from road for vehicle travellers were assessed for the existing A9 and for the proposed scheme during winter year of opening and summer 15 years after opening. The existing A9 runs through the Strath Tay: Lower Glen and Mid Glen Local Landscape Character Areas (LLCAs) within the Highland Glens Landscape Character Type. Moderate significance impacts are predicted during winter year of opening on the Strath Tay: Mid Glen LLCA, due largely to proposed new and revised earthworks. By summer 15 years after opening, establishment of mitigation planting will help reduce impacts such that they would no longer be significant.

Driver stress can be caused by frustration, fear of accidents and route uncertainty. Current levels of driver stress for the A9 between Tay Crossing and Ballinluig during peak hours are assessed as moderate to high based on DMRB methodology. Traffic levels are forecast to increase over time, and in the absence of the proposed scheme it is anticipated that higher levels of driver stress during peak hours would be experienced. With the proposed scheme it is predicted that driver stress will decrease from current levels along this section of road for travellers in both the northbound (from moderate to low) and southbound (from high to moderate/low) directions.

9.1 Introduction

- 9.1.1 This chapter presents the DMRB Stage 3 assessment of the impacts of the proposed scheme on the journeys made by pedestrians, cyclists, equestrians and vehicular travellers.
- 9.1.2 The assessment is based on guidance presented in DMRB Volume 11. As explained in Chapter 8 (People and Communities – Community and Private Assets), DMRB Interim Advice Notes (IAN) 125/09 and 125/15 (Highways Agency et al., 2009; Highways England, 2015), recommend that the Volume 11 three topic areas of ‘Land Use’, ‘Pedestrians, Cyclists, Equestrians and Community Effects’ and ‘Vehicle Travellers’ (Volume 11: Parts 6, 8 and 9 respectively) are considered under a single topic area: ‘People and Communities’, for which updated DMRB topic guidance has not yet been published. Due to the volume and complexity of data covered under ‘People and Communities’ in relation to the A9 dualling corridor, the findings are reported in two linked chapters; this chapter (Chapter 9) covering ‘Effects on All Travellers’, and the previous chapter (Chapter 8) covering ‘Community and Private Assets’.
- 9.1.3 This chapter focuses on the potential impacts on NMUs due to changes to paths and access to outdoor areas in the study area as a result of the proposed scheme. Chapter 8 (People and Communities - Community and Private Assets) assesses more general community severance and impacts of the proposed scheme on: access to residential and commercial land; community facilities; development land; agricultural land; and sporting and forestry interests for both NMUs and vehicle travellers. Chapter 14 (Visual) provides a detailed assessment of views of the proposed scheme from viewpoints along the existing A9 corridor. An assessment of the proposed scheme’s compliance with national, regional and local planning policy, for example Scotland’s National Planning Framework 3 (NPF3) 2014 (Scottish Government, 2014) is provided in Chapter 19 (Policies and Plans).
- 9.1.4 This chapter assesses and reports potential construction and operational impacts separately. Impacts due to construction are considered to be those resulting from the breaking up of sections of the existing A9 and the construction of the new carriageways, overbridge and other associated works. Impacts due to operation are considered to be those resulting from the presence of the new carriageways and associated junctions following completion of construction.
- 9.1.5 This chapter is supported by the following appendices and figures:
- Appendix A9.1 (Impact Assessment for NMU Routes and Access to Outdoor Areas);
 - Figure 9.1 (Existing NMU Routes);
 - Figure 9.2 (Potential Impacts on NMU Routes and Proposed Mitigation);
 - Figure 9.3 (View from Existing A9); and
 - Figure 13.2 (Landscape Character Plan).

Non-Motorised Users (NMUs)

Land Reform (Scotland) Act 2003

- 9.1.6 The Land Reform (Scotland) Act 2003 Part 1 (the Act) came into effect in February 2005 and established statutory rights of responsible access on and over most land and inland water in Scotland. The legislation offers a general framework of responsible conduct for both those exercising rights of access and for landowners. The outdoor areas identified in paragraph 9.3.15 therefore include areas of privately owned land that may be used informally by the community.
- 9.1.7 Under the Act, local authorities were granted new powers and duties to uphold and facilitate responsible access rights. There is a duty on local authorities to prepare a plan for a path network and to keep a list of ‘core paths’. Sections 13 and 19 of the Act state:

‘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’; and

'The local authority may do anything which they consider appropriate for the purposes of maintaining a core path and keeping a core path free from obstruction or encroachment'.

- 9.1.8 Section 10 of the Act states that it is the duty of SNH to prepare and issue a Scottish Outdoor Access Code, setting out guidance in relation to access rights and responsibilities. Furthermore, it is the duty of SNH and local authorities to publicise the Code and for SNH to promote understanding of it. The Scottish Outdoor Access Code was approved by the Scottish Parliament in July 2004.
- 9.1.9 In accordance with DMRB Volume 11, Section 3, Part 8 (Highways Agency et al., 1993a), the assessment of impacts on NMUs focuses on three main aspects:
- changes in journey lengths and times;
 - changes in the amenity of journeys; and
 - changes in access for NMUs to the outdoors.
- 9.1.10 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 shops, places of business and schools; and opportunities to integrate access and land management.
- 9.1.11 The use of paths can help to improve health, reduce social exclusion and, unlike other modes of transport, generally has few associated costs (e.g. fuel, travel tickets). A good path network can also inspire visitors to enjoy the outdoors and to visit places of landscape, historical and wildlife interest. This can encourage financial expenditure and support the local rural economy. Furthermore, well planned paths can potentially assist landowners and farmers to successfully integrate recreational use with land management operations.
- 9.1.12 In accordance with SNH guidance on EIA (SNH, 2013), an assessment specifically considering the impacts on access to outdoor areas has been undertaken and is included in this chapter with reference to Chapter 8 (People and Communities - Community and Private Assets) as required. This draws on the findings of the DMRB assessment of impacts on NMUs and community access.

Vehicle Travellers

View from the Road and Lay-bys

- 9.1.13 For the purposes of this assessment, the view from the road is defined as the extent to which vehicle travellers are exposed to different types of scenery while travelling on the proposed scheme. In areas of high quality scenic landscape, the road may allow travellers to appreciate their location in relation to distinctive landscape features by creating appropriate views. Views from a road may potentially help to alleviate driver stress, although views are not considered in the driver stress assessment. Conversely, where views from a road are restricted by new construction, this may create monotonous conditions for the driver.

Driver Stress

- 9.1.14 For the purposes of assessment, driver stress is defined as the mental and physiological effects experienced by a driver using a road network. Factors influencing the level of driver stress include the road layout and geometry, surface riding characteristics, junction frequency and the speed and flow per lane. In general, drivers will choose the route that they believe to give the shortest reliable journey time, taking account of expected variability and coping with associated stress.
- 9.1.15 The three main components of driver stress are frustration, fear of a potential accident and uncertainty of the route which is being followed (Highways Agency et al., 1993b). These components are discussed below:
- Frustration: caused by a driver being unable to drive at a desired speed based on the road conditions. Frustration levels increase as travelling speed falls relative to expectation.

- **Fear of Potential Accident:** the main factors leading to this are the presence of other vehicles, inadequate sight distances and the likelihood of pedestrians stepping on to the road. Other factors include complex junctions and roundabouts, and poorly maintained road surfaces. Fear is highest when speeds, flows and the proportion of heavy vehicles are all high.
- **Route Uncertainty:** caused primarily by signage that is inadequate for the individual's purposes. Poor lighting may also cause uncertainty as turnings and junctions may not be seen in advance.

9.2 Approach and Methods

Non-Motorised Users (NMUs)

Study Area

- 9.2.1 The study area for the assessment of impacts on NMUs includes paths within 500m of the proposed scheme. However, the assessment was also informed by consideration of the wider area, which is particularly important in identifying potential limitations to accessing outdoor areas.

Baseline Conditions

- 9.2.2 Baseline data were collected through desk-based studies, site survey and consultation.

Desk-based Assessment

- 9.2.3 In line with IAN 125/09 and DMRB (Highways Agency et al., 1993a), the desk-based assessment consisted of a review of the following resources:
- A review of digital Ordnance Survey (OS) Maps.
 - Review of aerial photography provided by Transport Scotland (BLOM Survey, 2013).
 - A review of relevant local plans and strategies:
 - TAYplan: Strategic Development Plan (2016-2036) (TAYplan, 2017);
 - Perth & Kinross Council (PKC) Local Development Plan (PKC, 2014); and
 - PKC Core Paths Plan (PKC, 2012).
 - A web based search to identify:
 - existing and proposed paths (recreational and functional), and rights of way used by pedestrians, cyclists and equestrians;
 - key views and areas of scenic quality from the existing A9;
 - outdoor access facilities as specified in Appendix 5, Table 1 of 'A Handbook on Environmental Impact Assessment' (SNH, 2013);
 - area based facilities (e.g. parks, Munro mountains, local open spaces, inland lochs and reservoirs, woodlands and linear facilities (e.g. paths, rights of way, cycleways)); and
 - public transport links including bus and train routes.

Site Walkover and Surveys

- 9.2.4 To verify the baseline data collected through desk-based assessment and consultation, a survey of the identified NMU routes was undertaken in October 2016 by environmental specialists.

Consultation

- 9.2.5 Consultation with the following groups/organisations has been considered in the assessment:
- consultation with the Environmental Steering Group (including PKC and SNH); and
 - PKC (Stakeholder consultation meeting September 2016).

- 9.2.6 Consultation with various stakeholders (including PKC, Sustrans, British Horse Society, ScotWays and Cycle UK) also took place through the A9 Dualling NMU Forum in May 2015 and May 2016. Information gained from stakeholders during these discussions was used to inform the baseline in this assessment and is recorded in the NMU Forum Reports (Capital Value and Risk, 2015; 2016). Two dedicated NMU Workshops were held in April 2016 (attended by PKC, CNPA, Sustrans, British Horse Society, ScotWays, John Muir Trust and Cycle UK) and June 2017 (attended by PKC, CNPA, Sustrans, British Horse Society, ScotWays and Cycling UK). These consultations were valuable in developing the detailed baseline compiled for this assessment, which required identification of routes and area based facilities used by NMUs, and determining their amenity value.
- 9.2.7 In addition to the NMU Forums and NMU Workshop, a public exhibition took place in Ballinluig in February 2017 for the preferred option announcement and a community engagement event in Ballinluig took place on 06 and 07 December 2017. These sessions provided an opportunity for the public to view and comment on the emerging proposed scheme design. Consultation with the Accessibility Forum (including People Friendly Design and Mobility and Access Community for Scotland (MACS)) took place in March and October 2017 to ensure accessibility is fully considered within the design.
- 9.2.8 The consultation process informed the identification of potential conflict areas between NMUs and the proposed scheme. Further information on the consultation process is provided in Chapter 7 (Consultation and Scoping) and supporting Appendix A7.2 (Summary of Consultation Responses).

Number and Type of User

- 9.2.9 DMRB guidance recommends the use of origin/destination surveys where '*travel patterns [of pedestrian and other users] are complex and a scheme could have a major impact*'. These surveys could include the use of 'counts' to provide information including numbers and types of user.
- 9.2.10 As noted in paragraphs 9.1.6 to 9.1.8 the Land Reform (Scotland) Act 2003 imposes certain requirements on local authorities in terms of maintaining public access. In addition, Scottish Planning Policy (SPP) (Scottish Government, 2014) aims to maintain, enhance and promote access to open space, recreation opportunities and amenities and improve access for NMUs. It is therefore considered that regardless of levels of use and types of user, all routes should be maintained and/or improved where practicable. Origin/destination surveys were therefore not undertaken for the purposes of this assessment as based on the Land Reform (Scotland) Act 2003 and SPP, levels of usage should not influence path sensitivity.
- 9.2.11 For this assessment, the type of user (including use by vulnerable users) was determined from information provided during consultation with relevant bodies, the site survey undertaken in October 2016 and the NMU and Accessibility Audit undertaken as part of DMRB Stage 3 to verify the baseline.

Impact Assessment

- 9.2.12 The assessment of the potential impacts of the proposed scheme on NMUs was undertaken with reference to DMRB Volume 11, Section 3, Part 8 (Highways Agency et. al. 1993a) and SNH guidance on EIA (SNH, 2013), specifically Appendix 5: Outdoor Access Assessment.
- 9.2.13 The approach and method used includes assessment of impacts on those using:
- paths (journey length and amenity); and
 - area based facilities and community land (including ease of access and amenity).
- 9.2.14 The potential impact of the proposed scheme on NMUs was determined by considering changes in both journey length and amenity using the approach detailed below. Impacts on NMUs accessing the outdoors are also considered as described in paragraph 9.2.30.
- 9.2.15 The significance of potential impacts on NMUs was determined as a function of sensitivity and magnitude, as specified below. Unless otherwise stated, impacts are considered to be adverse. An assessment of residual impacts of the proposed scheme is also provided, taking into account the mitigation measures identified in Section 9.5 (Mitigation).

Sensitivity

- 9.2.16 In recognition of the duties placed on local authorities by the Land Reform (Scotland) Act 2003 (refer to paragraphs 9.1.6 to 9.1.8), sensitivity was determined primarily based on importance (the level of formal recognition of a pathway) rather than on numbers of users. However, the sensitivity criteria were refined to take account of the types of main user (e.g. some pedestrian footpaths are considered to be more sensitive than cyclist routes).
- 9.2.17 Table 9.1 outlines sensitivity criteria applied in this assessment. Where a path or community land could be attributed to more than one category (e.g. a core path may also be a claimed right of way) the highest sensitivity rating was applied.

Table 9.1: Sensitivity criteria

Sensitivity	Characteristics/Types of NMU Routes and Community Land
High	<ul style="list-style-type: none"> • Vindicated rights of way • Asserted rights of way • Core paths/proposed core paths • Nationally important community land (e.g. national parks, Munro mountains, national nature reserves)
Medium	<ul style="list-style-type: none"> • Claimed rights of way • National Cycle Routes • Regional Cycle Routes • Regionally important community land (e.g. Country Parks, forests, smaller hills such as the Corbetts and Grahams)
Low	<ul style="list-style-type: none"> • Local routes/other paths outwith the above categories • Locally important community land (e.g. local parks and playing fields)

Note: a definition of vindicated, asserted and claimed rights of way is provided in paragraph 9.3.7.

- 9.2.18 Community facilities used by vulnerable groups, such as schools, care homes and doctors' surgeries, where applicable, have been identified in Chapter 8 (People and Communities - Community and Private Assets) and are shown on Figure 8.1. The sensitivity rating of paths known to be used by vulnerable groups, such as those which serve these types of community facilities were reviewed. Where applicable, the sensitivity was adjusted using professional judgement to take into consideration the vulnerability of the users. Table 9.11 lists and describes the paths in the study area, and also notes which paths are known routes for vulnerable users.

Changes in Journey Length and Accessibility

- 9.2.19 Changes in journey length can result from direct impacts (e.g. closure of paths/cycleways and/or diversion routes as a result of the proposed scheme) or indirect impacts (e.g. as a result of increases in traffic flows on roads crossed by or adjacent to paths, which may result in NMUs deciding to use an alternative route).
- 9.2.20 Desk-based assessment, consultation and on-site verification were used to identify where paths currently cross the existing A9 (marked as 'Crossing Points' or 'CP' on Figure 9.1). These crossing points helped to identify potential impacts on paths as a result of the proposed scheme (i.e. paths which could be severed or lose sections of their length). The existing journey lengths for paths were derived from the PKC Core Path Plan, Rights of Way data from ScotWays and local paths identified by Jacobs and through consultation. Where possible, alternative routes for the affected paths were defined in order to maintain a link between potential origin and destinations and a comparative journey length calculated using GIS. All paths where a change in journey length was anticipated as a result of the proposed scheme were marked as Journey Length Assessment (JLA) points, as shown on Figure 9.2.
- 9.2.21 NMUs may be deterred from making trips along or across existing roads which are likely to be more heavily used by traffic in the first full year of operation (2026) and therefore alternative routes may be taken. In accordance with DMRB, changes in traffic flows based on Average Annual Daily Traffic over 18 hours (AADT18) are reported for the first full year of operation (2026) with and without the proposed scheme.

9.2.22 Taking into account guidance provided in DMRB and SNH (SNH, 2013), criteria were developed to determine magnitude of impact resulting from changes to journey length as shown in Table 9.2.

Table 9.2: Magnitude of impact criteria for changes to journey length

Magnitude	Characteristics
High	500m or greater of closure or loss of NMU route. Alteration of a route to nationally important community land. Alteration to a route regularly used by vulnerable users.
Medium	250 to <500m of closure or loss of NMU route. Alteration of a route to regionally important community land.
Low	100 to < 250m of closure or loss of NMU route. Alteration of a route to locally important community land.
Negligible	<100m of closure of NMU route.

9.2.23 The significance of impacts on journey length was then determined using the matrix in Table 9.3.

Table 9.3: Significance of impact on journey length

Magnitude \ Sensitivity	Negligible	Low	Medium	High
High	Slight	Moderate	Moderate/Substantial	Substantial
Medium	Negligible/Slight	Slight	Moderate	Moderate/Substantial
Low	Negligible	Negligible/Slight	Slight/Moderate	Moderate

9.2.24 For the purposes of this assessment, impacts were considered to be ‘significant’ in the context of the EIA Regulations where the assessment results indicated impacts of **Moderate** or higher significance. Significant impacts are shown in bold throughout the chapter.

Changes in Amenity

9.2.25 The amenity of a journey is defined in DMRB as ‘*the relative pleasantness of a journey*’. This relates in particular to the exposure of NMUs to traffic and associated noise, air quality and safety aspects. Visual impacts and path/cycleway widths are also considerations. It is acknowledged that any changes in amenity would be subjective. However, for the purposes of this assessment it has been assumed that where NMUs would experience a reduction in traffic or road-related noise, and/or reduction in visual impact and/or improvement in air quality, there would be a possible perceived improvement in amenity. Conversely, an increase in any such traffic or road-related impacts or a possible perceived reduction in safety has been assumed to constitute a reduction in amenity. Therefore, changes in amenity were considered where:

- existing paths would be crossed by the proposed scheme;
- traffic flows would potentially affect paths along a NMU route or at a crossing point;
- noise and air quality on existing paths would potentially significantly increase or decrease; or
- the proposed scheme would be visible from existing paths.

9.2.26 In line with DMRB guidance, the assessment of change to amenity on NMU routes does not make use of sensitivity or magnitude criteria, or an assessment matrix to determine significance of impacts. Impact significance is determined qualitatively, using professional judgement and taking into account the magnitude of change with respect to existing views, air quality, traffic flows and noise levels. Taking into account SNH guidance on outdoor access (SNH, 2013), this assessment also considers amenity impacts on community land and/or outdoor based facilities.

9.2.27 Full landscape, visual, air quality and noise assessments are reported in Chapters 13 (Landscape), 14 (Visual), 16 (Air Quality) and 17 (Noise and Vibration) respectively. Traffic data were obtained from the strategic traffic model for the proposed scheme and Average Annual Daily Traffic over 18 hours (AADT18) reported for the first full year of operation (2026) with and without the proposed scheme. It

is important to note that traffic flows provided in this chapter only relate to sections of the selected road where paths intersect, and are therefore not necessarily representative of the full length of the road. Community severance resulting from increased traffic flows is assessed separately in Chapter 8 (People and Communities - Community and Private Assets).

9.2.28 The significance of impact criteria for change in amenity are described in Table 9.4.

Table 9.4: Significance of impact on amenity

Significance	Characteristics
Substantial	Where there is a substantial change in the existing view and/or air quality and/or a major change in noise levels and/or substantial change in traffic flows resulting in change in safety.
Moderate	Where there is moderate or noticeable change in the existing view and/or air quality and/or a moderate change in noise levels and/or moderate change in traffic flows resulting in change in safety.
Slight	Where there is slight or barely perceptible change in the existing view and/or air quality and/or a slight change in noise levels and/or slight change in traffic flows resulting in change in safety.
Negligible	Very little or no discernible change from baseline conditions equating to a no-change situation.

Overall Impacts on NMUs (journey length and amenity)

9.2.29 To determine overall significance of impacts on NMUs, the significance for changes in journey length and amenity were considered together using professional judgement. Overall significance was determined based on these two factors having an equal weighting of importance. Where an impact is only identified for one factor, the degree of overall significance was reduced accordingly.

Access to Outdoor Areas

9.2.30 The objective of the outdoor access assessment is to determine any likely significant effects on access to outdoor areas (SNH, 2013). This includes the ability to make use of an outdoor area or path and the ease with which access can be gained. The assessment was undertaken for linear and area based facilities identified in the DMRB assessment as outlined above.

Vehicle Travellers (View from the Road and Lay-bys)

9.2.31 The view from the road assessment was undertaken in accordance with the guidance provided in DMRB Volume 11, Section 3, Part 9: Vehicle Travellers (Highways Agency et. al. 1993b). The view from the road assessment takes into account the types of scenery or landscape character, the extent to which travellers using the proposed scheme would be able to view the scene, the quality of the landscape and features of particular interest or the prominence of the view and the sequence in which they are seen. Whilst DMRB Volume 11 does not specifically require an assessment of the sequence in which views are perceived by travellers, this has been included as the unfolding experience of the journey is considered to be an important factor in helping to determine whether and to what degree changes are beneficial or not.

9.2.32 DMRB Volume 11, Section 3, Part 9 requires consideration of ‘any especially good or bad potential views along the route’. To this end the assessment considers the scenic quality of views – i.e. the attractiveness of the landscape as determined through professional judgement by the combination of elements such as landform, water, ground cover/vegetation and built development. In order to systematically record this, the quality of the visual experience of the landscape through which the existing A9 and the proposed scheme pass was considered. Both the immediate landscape and wider surrounds were taken into account to determine value as being high, medium or low. This involved consideration of the landscape character, the presence of designated landscapes (such as the River Tay (Dunkeld) National Scenic Area) and the scenic quality of the landscape. Further description of the landscape baseline of the area is contained in Chapter 13 (Landscape).

9.2.33 The extent to which travellers will be able to perceive the landscape will vary with the relative level of the road, surrounding topography and vegetation. The categories used in assessing this are:

- no view – road in very deep cutting or contained by earth bunds, environmental barriers or adjacent structures;

- restricted view – road in frequent cuttings, or with deep cuttings across slopes, with frequent environmental barriers or adjacent structures blocking the view;
- intermittent view – road generally at grade but with shallow cuttings, environmental barriers or structures at intervals; and
- open view – road generally at grade or on embankment with views extending over the wider landscape or only restricted by existing landscape features.

9.2.34 The assessment also considered the presence of features which might be of particular interest or prominence within the view. These may include natural landmarks such as hills, watercourses or distinctive stands of trees or manmade elements such as built heritage features which provide visual interest and/or a point of reference associated with the journey being undertaken.

Study Area

9.2.35 The study area for the assessment of changes to views from the road was defined as the route of the existing A9 and the proposed scheme. As the proposed scheme is a dualling of the existing road, a direct comparison between the existing A9 and the proposed scheme could be made.

Baseline Conditions

9.2.36 The identification of the character and scenic qualities of the landscape through which the existing A9 and the proposed scheme passes was established as part of the baseline conditions for the landscape assessment (Chapter 13: Landscape).

9.2.37 Additional baseline data were collected through desk-based studies including the following:

- review of aerial photography to identify existing planting, earthworks and landform;
- review of web-based panoramic photographs (Google Street View) to understand the level of screening provided by existing vegetation, earthworks and landform; and
- a web-based search to identify key views and areas of scenic quality from the existing A9.

9.2.38 The extent of the views was established as part of the field studies undertaken for the landscape and visual assessments (Chapters 13 and 14 respectively) and identification of where views of the surrounding scenery/landscape are possible and the duration of these views as part of the journey.

9.2.39 To verify the desk-based assessment results in relation to view from the road, a site survey was undertaken in January 2017. The site survey consisted of driving along the existing A9 in both directions to identify areas of likely changes due to revised earthworks and realigned local roads.

Impact Assessment

9.2.40 DMRB Volume 11, Section 3, Part 9, does not set out any criteria for the assessment of sensitivity, magnitude or significance of changes to the view from the road. Typical key criteria developed for use in this assessment are included in Tables 9.5 to 9.7. The assessment is not formulaic and the tables only indicate general criteria for assisting in determining impact significance. Significance is determined based on professional judgement applied to each scenario.

Sensitivity Evaluation

9.2.41 The criteria used for evaluation of sensitivity of existing views from the A9 take into account the character and quality of the existing scenery and the degree to which it would be visible, taking into account the categories of views experienced, as detailed in Table 9.5.

Table 9.5: Sensitivity criteria for the existing views from the road

Sensitivity	Criteria
High	The traveller experiences extensive views of a high quality landscape, area of unique landscape character, or prominent features of particular interest.
Medium	Traveller experiences partial/intermittent views of a high quality landscape (or extensive views of a medium quality landscape), area of unique/distinctive landscape character, or features of interest.
Low	Traveller experiences views of low quality landscape/unremarkable or degraded landscape character, or has heavily restricted views/no view of surrounding landscape regardless of quality.

Magnitude of Change

9.2.42 The magnitude, of change to views from the road as result of the proposed scheme in comparison to the existing views from the A9 was evaluated in accordance with the criteria in Table 9.6. The nature of the change can be adverse or beneficial.

Table 9.6: Magnitude criteria for view from the road

Magnitude	Criteria
High	A major alteration in views from the road such that the driving experience is significantly affected.
Medium	An alteration in views from the road such that the driving experience would be diminished or enhanced – but to a minor degree.
Low	Minimal alteration in views from the road such that there would be a perceptible change but this would not significantly affect the driving experience either positively or negatively.
Negligible	Very little appreciable change in views from the road and not considered to have any noticeable effect on the driving experience.

Impact Significance

9.2.43 Significance of impacts on views from the road was determined through consideration of both the sensitivity of the receptors and the magnitude of change as a result of the proposed scheme. Significance is defined as being Negligible, Slight, Moderate or Substantial, as well as being either adverse or beneficial as shown in Table 9.7. Where an impact of **Moderate** significance or greater is identified, this is considered to be a significant impact in the context of the EIA Regulations.

Table 9.7: Impact significance criteria for view from the road

Impact	Typical Criteria
Substantial	A major deterioration or improvement in views from the road. Adverse: The project would cause major deterioration to views or loss of views from the road where travellers currently experience extensive views of a high quality landscape, area of unique landscape character, or a varied sequence of prominent features of particular interest. Beneficial: The project would lead to a major improvement in a view where travellers would experience new extensive views of a high quality landscape, area of unique landscape character, or a varied sequence of prominent features of particular interest.
Moderate	A notable deterioration or improvement in views from the road. Adverse: The project would cause a notable deterioration to, or loss of views from the road where travellers currently experience partial/intermittent views of a high quality landscape (or extensive views of a medium quality landscape), area of unique/distinctive landscape character, or features of interest. Beneficial: The proposals would cause a notable improvement to views from the road where travellers would experience new partial/intermittent views of a high quality landscape (or extensive views of a medium quality landscape), area of unique/distinctive landscape character, or features of interest.
Slight	Minor deterioration or improvement in views from the road. Adverse: The project would cause limited deterioration to, or loss of views from the road where travellers currently experience views of low quality landscape/unremarkable or degraded landscape character, or has heavily restricted views/no view of surrounding landscape regardless of quality. Beneficial: The project would cause limited improvement to views from the road where the traveller would experience new views of unremarkable landscape, or has heavily restricted views/no view of surrounding landscape regardless of quality.
Negligible	No discernible deterioration or improvement in views from the road.

9.2.44 In terms of view from the road, mitigation is predominantly incorporated into the design of the proposed scheme (through refinement of the alignment and earthworks, and landscaping) and therefore potential changes to views from the road before mitigation are not considered in the assessment. However, because planting mitigation proposals are not considered to be fully effective during the winter of the opening year, as it takes time for the planting to become established, this period can be considered similar to a scenario without mitigation planting. Therefore, both views from the road at winter year of opening and summer 15 years later (when mitigation planting is fully effective) are reported.

Vehicle Travellers (Driver Stress)

Study Area

9.2.45 The study area for driver stress is the same as that for view from the road as described above.

Baseline Conditions and Impact Assessment

9.2.46 Driver stress was assessed in accordance with DMRB Volume 11, Section 3, Part 9 (Vehicle Travellers) (Highways Agency et al., 1993b), using a three-point descriptive scale of high, moderate and low rather than assigning significance. This assessment is based on estimating the average peak hourly flow per lane in ‘flow units’ and the average journey speed of each section of the road. Flow units are calculated whereby a car or light van is equal to one flow unit and a commercial vehicle is equal to three flow units. Traffic speed is based on average speed of traffic, excluding delays at downstream junctions.

9.2.47 Driver stress during construction was based on traffic volumes for first full year of operation of 2026 and assumed one lane in each direction will be in operation and vehicle speed will be restricted to 40mph. The assessment of driver stress during proposed scheme operation was undertaken based on the difference between traffic flows without the proposed scheme and those with the proposed scheme for a design year (2041).

9.2.48 Tables 9.8 and 9.9 present the guidance provided by DMRB on the appropriate category of stress levels for varying flow, speed and standard of road for single carriageway and dual carriageway roads respectively. The categories only apply to those sections of road where traffic flows and speeds are known for over 1km of the route.

Table 9.8: Driver stress levels on single carriageways

Average peak hourly flow per lane (flow units/hour)*	Average journey speed km/h		
	Under 50	50-70	Over 70
Under 600	high**	moderate	low
600-800	high	moderate	moderate
Over 800	high	high	high

Table 9.9: Driver stress levels on dual carriageways

Average peak hourly flow per lane (flow units/hour)*	Average journey speed km/h		
	Under 60	60-80	Over 80
Under 1200	high**	moderate	low
1200-1600	high	moderate	moderate
Over 1600	high	high	high

* A car or light van equals one flow unit. A commercial vehicle (>1½ tonnes unladen weight) or public service vehicle equals 3 flow units.

** 'moderate' in urban area.

9.2.49 Forecast traffic composition and speeds, used as the basis for the numerical assessment of driver stress, were derived from the A9 Dualling Traffic Model (A9DTM15). This utilises the forecast demands from the Transport Model for Scotland (TMfS14) as issued 9 December 2016, for the first

year of the full programme operation (2026) and the design year (2041). This is the version of the traffic model being used for the DMRB Stage 3 appraisal of all projects in the A9 corridor. Driver stress was considered taking into account the relative change in traffic levels for the design year (2041), either with (Do-Something) or without (Do-Minimum) the proposed scheme. As noted in Chapter 5 (The Proposed Scheme), the traffic data used include an assumption of the wider A9 dualling being completed, to represent a worst-case scenario in terms of traffic numbers.

9.2.50 The three main components of driver stress are identified in paragraph 9.1.15. To support the A9 Dualling Programme Case for Investment (Transport Scotland, 2016b), Transport Scotland commissioned research which considered the impact of a lack of guaranteed overtaking opportunities on the A9 between Perth and Inverness on levels of driver frustration. This work concluded that there were a number of factors that contribute to driver frustration on this route, in particular:

- not being able to drive at the desired speed;
- whether there is on-coming traffic; and
- the number of HGVs in the platoon ahead.

9.2.51 The research concluded that the presence of these conditions along the single carriageway sections of the A9 between Perth and Inverness is contributing to driver frustration. Based on the scale and prevalence of these factors along the route, the recommendation was that all projects forming part of the A9 Dualling Programme should be assessed as having at least a moderate level of driver frustration with a moderate to high level in areas where there are longer stretches of single carriageway without opportunities to overtake.

Limitations to Assessment

9.2.52 The journey length assessments in this chapter rely on the accuracy of the baseline data provided by consultees in relation to lengths of paths, for example PKC supplied the GIS shapefiles for the core paths in the study area.

9.2.53 Journey lengths are calculated using GIS on discrete sections of the NMU routes affected rather than the entire length, and are not intended to be representative of the entire NMU route.

9.2.54 The locations of temporary construction activities, including site compounds, are not known at this stage as these are the responsibility of the contractor. Therefore, the assessment of construction impacts of the proposed scheme was based on general assumptions about the location and intensity of construction activities. Typical construction methods and the construction assumptions made for the purposes of this ES are provided in Appendix A5.1 (Construction Information).

9.3 Baseline Conditions

Non-motorised Users (NMUs)

9.3.1 The crossing points and paths used by NMUs within the study area are described in this section and have been assigned a project specific reference, e.g. Path 57. These are listed in Table 9.10 and Table 9.11 respectively and are also shown on Figure 9.1.

Core Paths

9.3.2 Core paths may include the following: 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. The core path network is meant to cater for all types of users including walkers, cyclists, horse riders, canoeists and people with disabilities, and is a key part of outdoor access provision.

9.3.3 As set out in paragraph 9.1.7, local authorities have a duty to prepare a Core Paths Plan under the Land Reform (Scotland) Act 2003. In establishing the Core Paths Plan consideration of likely usage and desirability of paths is balanced with landowner interests. The local authority responsible for access within the study area is PKC.

9.3.4 The PKC Core Paths Plan was adopted on 25 January 2012 and aims to satisfy the basic needs of local people and visitors for general access and recreation, and provide links to the wider path network (PKC, 2012).

9.3.5 There are nine paths designated as core paths within the study area, as shown on Figure 9.1 and described in Table 9.11. Photograph 9.1 is of one of the core paths within Atholl Woods.

Photograph 9.1: Core Path within Atholl Woods linking to Regional Cycle Route (RCR) 83, leading towards Mill Dam



Public Rights of Way

9.3.6 A public right of way is a defined route which has been used by the general public for at least 20 years and which links two public places (usually public roads). Public rights of way vary from long hill routes (often historical drove or kirk roads) to local routes; or as shortcuts to shops, schools and other local amenities.

9.3.7 ScotWays maintains the National Catalogue of Rights of Way (CROW), in partnership with SNH. In addition, many local authorities also have their own records. CROW classifies rights of way into three status categories:

- vindicated – routes declared to be rights of way by the courts or through another legal process;
- asserted – routes which have been accepted as rights of way by the landowner or where local authorities have indicated that they would take legal action to protect them if necessary; and
- claimed – other routes which appear to meet the common law conditions necessary to be regarded as rights of way, but which have not been formally vindicated or asserted.

9.3.8 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.

9.3.9 There is one path designated as a public right of way within the study area (Path 57), as shown on Figure 9.1 and described in Table 9.11. This path is also designated as a core path.

Local Paths

9.3.10 Unlike core paths and public rights of way, local paths hold no statutory designation. Local paths can either be pavements adjacent to roads or offroad paths.

- 9.3.11 There are 12 paths that have been identified as local paths within the study area, as shown on Figure 9.1 and described in Table 9.11. Photograph 9.2 shows one of the local paths alongside the River Tay.

Photograph 9.2: Local Path alongside River Tay (Path 58)



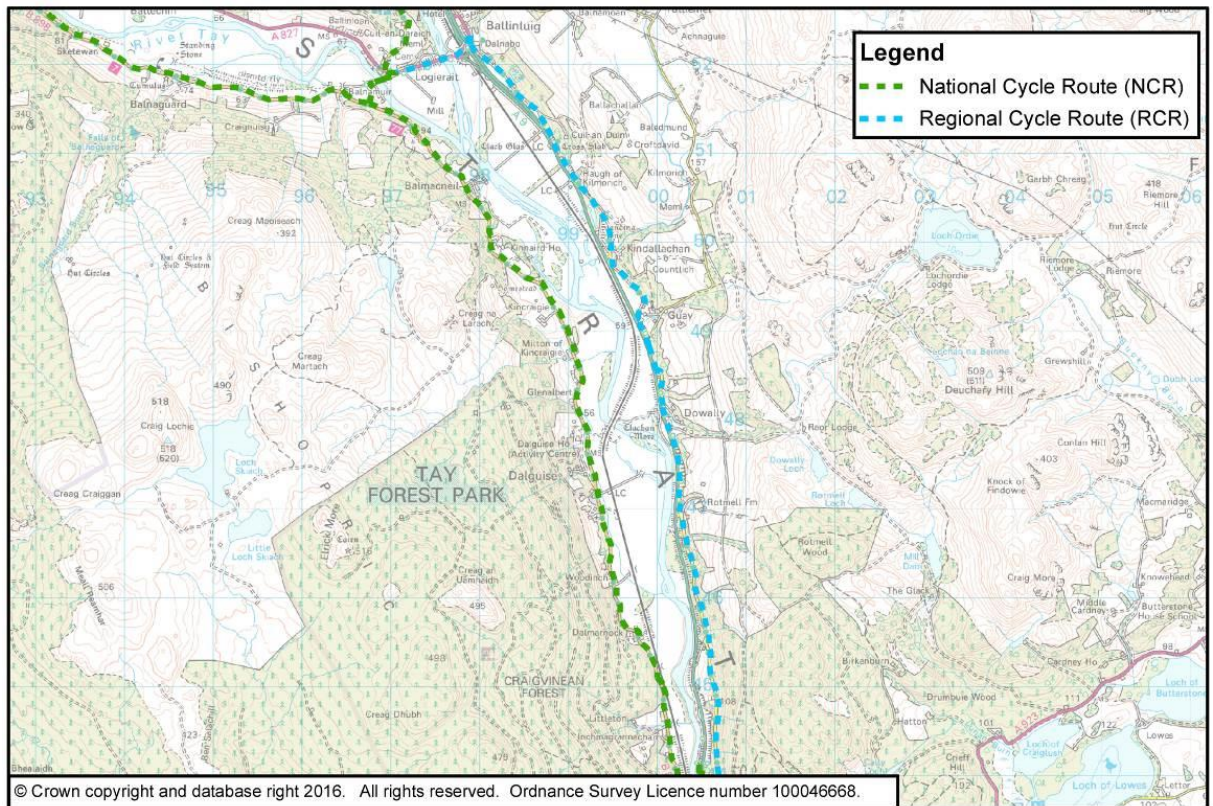
National and Regional Cycle Routes

- 9.3.12 The National Cycle Network is a UK network of cycle routes (national and regional) and was created by Sustrans. The routes are a combination of pedestrian routes, disused railways, minor roads, canal towpaths and traffic calmed routes. In some cases, National Cycle Routes (NCRs) and Regional Cycle Routes (RCRs) are also designated as core paths or public rights of way. NCRs form part of the National Long Distance Cycling and Walking Network, a National Development in the Scottish Government's Third National Planning Framework.
- 9.3.13 There is one National Cycle Route (NCR 77) and one Regional Cycle Route (RCR 83) that pass through the study area, as shown on Figure 9.1, Photograph 9.3 and Image 9.1. NCR 77 forms the 'Salmon Run' NCR between Dundee and Pitlochry.

Photograph 9.3: Path 63/RCR 83 view at Kindallachan south towards Guay



Image 9.1: Route of NCR 77 and RCR 83 through study area



Existing A9 NMU Crossing Points

9.3.14 No formal NMU crossing points (CP) of the existing A9 such as underpasses or overbridges have been identified within the study area (Transport Scotland, 2014a). It is noted however, that as the existing A9 is single carriageway in each direction, NMUs are currently able to informally cross the road at any point. Three separate locations, one to access a bus stop on the northbound carriageway at Kindallachan (ch5970), and two locations to access local paths (ch5240 and ch7050), have been identified as informal crossing points of the existing A9 as detailed in Table 9.10, shown on Figure 9.1 and in Photographs 9.4 to 9.6. As CP02 is used to access the northbound bus stop only, potential impacts on CP02 are assessed under public transport.

Table 9.10: NMU crossing points within study area

Reference	Main Users*	Type of existing crossing point	Description of Crossing Point	Baseline Amenity**
CP01 Figure 9.1c and Photograph 9.4	Pedestrians	At-grade	NMUs cross the existing A9 via an at-grade crossing at Guay. This provides connectivity between Path 60 on the west side of the A9 and Paths 56 and 63/RCR 83 on the east.	No dedicated NMU provision. NMU route crosses the existing A9 at-grade where traffic flows are approximately 17,215 AADT. NMUs experience noise from traffic using the A9 and have to negotiate fast moving traffic to cross the road. Good visibility of approaching traffic at this crossing.
CP02 Figure 9.1d and Photograph 9.5	Pedestrians	At-grade	NMUs cross the existing A9 via an at-grade crossing at Kindallachan. NMUs cross the A9 to access the bus stop on the northbound carriageway.	No dedicated NMU provision. NMU route crosses the existing A9 at-grade where traffic flows are approximately 17,206 AADT. NMUs experience noise from traffic using the A9 and have to negotiate fast moving traffic to cross the road. Good visibility of approaching traffic at this crossing.

Reference	Main Users*	Type of existing crossing point	Description of Crossing Point	Baseline Amenity**
CP03 Figure 9.1d-e and Photograph 9.6	Pedestrians	At-grade	NMUs cross the existing A9 via an at-grade crossing at the Haugh of Kilmorich. This provides connectivity between Path 66 on the west side of the A9 and Paths 65/RCR 83 on the east.	No dedicated NMU provision. NMU route crosses the existing A9 at-grade where traffic flows are approximately 17,208 AADT. NMUs experience noise from traffic using the A9 and have to negotiate fast moving traffic to cross the road. Good visibility of approaching traffic at this crossing.

* Although predominant users of the paths are identified, it should be noted that access is not limited to a single user group.

** Traffic Flows are AADT 18hr, 2026 without the proposed scheme.

Photograph 9.4: At-grade informal crossing point CP01 at Guay



Image from Google Street View captured September 2016 © 2018 Google

Photograph 9.5: At-grade informal crossing point CP02 at Kindallachan



Image from Google Street View captured September 2016 © 2018 Google

Photograph 9.6: At-grade informal crossing point CP03 at Haugh of Kilmorich



Image from Google Street View captured September 2016 © 2018 Google

Table 9.11: Path network within study area

Path	Designation	Main Users*	Description	Access to Outdoor Areas**	Baseline Journey Length (m)	Baseline Amenity
NCR 77 (Figures 9.1a-e)	National Cycle Route 77	Cyclists	NCR 77 is located on the west side of the River Tay. Within the study area the route follows the B898 road.	Provides direct access to the River Tay and the Craigmear Forest (part of the Tay Forest Park).	1,334	Within the study area NCR 77 passes through both rural and urban settings and is on road. Users experience traffic noise both from local road and also on approach to existing A9.
RCR 83 (South of Rotmell) (Figures 9.1a-b)	Regional Cycle Route 83	Cyclists	RCR 83 (South of Rotmell) is located parallel to the existing A9 and follows the C503 (Rotmell to Dunkeld road). RCR 83 (South of Rotmell) connects into Path 56/RCR 83.	No direct access to the outdoor areas listed in Section 9.3.	3,110	Rural on-road route. Runs parallel to the existing A9. NMUs experience noise from traffic using the existing A9 and the C503 (Rotmell to Dunkeld road). Existing jug-handle arrangement for cyclists at Rotmell/A9 junction at the connection to Path 56/RCR 83.
RCR 83 (North of Westhaugh of Tulliemet) (Figure 9.1e)	Regional Cycle Route 83	Cyclists	RCR 83 (North of Westhaugh of Tulliemet) is located parallel to the existing A9. The route follows General Wade's Military Road between Westhaugh of Tulliemet and Ballinluig. RCR 83 (North of Westhaugh of Tulliemet) connects into Paths 65/RCR 83 and 67.	Provides access to the woodlands surrounding Cuil-an-Duin.	850	Rural paved route with local vehicle access. Runs parallel to the existing A9. NMUs experience noise from traffic using the existing A9.
38/NCR 77 (Figure 9.1a)	Core Path DUNK/145 National Cycle Route NCR 77	Pedestrians Cyclists	Forms part of the Fiddlers Path. Provides access to the A9 footway/cycleway over bridge at Newton Craig. Connects into Path 48/NCR 77 and Path 53.	Provides access to the River Tay. Part of the 'Fiddler's Path' walking route and NCR 77.	2,692	Track through woodland and open fields. Adjacent to the River Tay. NMUs experience noise from traffic using the existing A9.
48/NCR 77 (Figure 9.1a)	Core Path DUNK/100 National Cycle Route NCR 77	Pedestrians Cyclists	A9 footway/cycleway over Tay Crossing adjacent to existing A9 and forms part of the Fiddlers Path. Connects into Path 38/RCR 83.	Provides access across the River Tay. Part of the 'Fiddler's Path' walking route and NCR 77	513	Within the study area, Path 48/NCR 77 is a shared use footway/cycleway alongside the existing A9 across the River Tay. NMUs experience noise from traffic using the existing A9.
49 (Figures 9.1a-b)	Core Path DUNK/26	Pedestrians Cyclists	Path 49 takes NMUs through Atholl Woods, Kings Pass, west of Craig a Barns, south of Rotmell Wood and on to Mill Dam. Links into Path 51 and Path 54.	Path 49 is part of the Atholl Woods Walk, Roar to Rotmell cycle route and Roar to Guay circuit walking route promoted by Atholl Estates. Provides access to and through Atholl Woods, Rotmell Wood and to Polney Loch in the south.	1,866	Rural recreational path through Atholl woods. NMUs experience minimal traffic noise.
51 (Figure 9.1a)	Local Path (non-designated)	Pedestrians	Path 51 is part of the Atholl Woods path network. Provides a link to Path 49.	Provides access to Atholl Woods.	156/252	Rural recreational path through Atholl woods. NMUs experience minimal traffic noise.
53 (Figure 9.1a)	Local Path (non-designated)	Pedestrians	Path 53 provides direct access to the River Tay from the existing A9. Provides links to Paths 38/NCR 7 and 48/NCR 77	Provides access to the River Tay.	902	Track through wooded area adjacent to the River Tay and runs parallel to the existing A9. NMUs experience noise traffic from the existing A9.

Path	Designation	Main Users*	Description	Access to Outdoor Areas**	Baseline Journey Length (m)	Baseline Amenity
54 (Figures 9.1b)	Core Path DUNK/110	Pedestrians Cyclists	Path 54 is a path from local access road east of Guay to path junction by Dowally Burn. Path 54 connects into Path 57 and Path 59.	Path 54 is part of the Atholl Woods Walk, Roar to Rotmell cycle route and Roar to Guay circuit walking route promoted by Atholl Estates. Provides access to and through Atholl Woods.	1,941	Woodland path. NMUs experiences limited noise from traffic on the existing A9.
55 (Figure 9.1b)	Local Path (non-designated)	Pedestrians	Path 55 provides direct access to the River Tay from the existing A9 and is likely to be used for fishing access.	Provides access to the River Tay.	533	Rural route with local access vehicles only. NMUs experience noise from traffic using the existing A9.
56/RCR 83 (Figures 9.1b-c)	Core Path DUNK/141 Regional Cycle Route 83	Pedestrians/ Cyclists	Path 56/RCR 83 is a paved path between Rotmell (approximately ch3150) and Guay (approximately ch5250) and runs parallel to the existing A9 on the eastern side. Provides a link to RCR 83 in the south and Path 63/RCR 83 and Path 63a in the north. Between Rotmell and Dowally it is a shared use path for NMUs, separated from the existing A9 by a grass verge with no vehicle restraint system. From Dowally to the junction with the A9 at ch4650 it is a rural paved route along General Wade's Military Road with local access vehicles only. Then from ch4650 to Guay it is a shared use path for NMUs separated from the existing A9 by a grass verge with no vehicle restraint system.	Provides access to woodland immediately adjacent to the existing A9.	2,141	This route runs parallel to the existing A9. NMUs experience noise from traffic using the existing A9. Sections of rural paved route with local access vehicles only and shared use paths for NMUs only adjacent to the A9 separated by grass verge with no vehicle restraint system.
57 (Figure 9.1c)	Core Path DUNK/109 Right of Way TP64	Pedestrians/ Cyclists	Path 57 provides a connection between Dowally and the existing A9. Provides a link to Path 54 in the east and Path 56 /RCR 83 adjacent to the existing A9.	Path 57 is part of the Atholl Woods Walk and Roar to Rotmell cycle route promoted by Atholl Estates. Provides access to Dowally Loch, Rotmell Loch and Mill Dam from Guay.	714	Rural paved route with local vehicle access. NMUs experience noise from traffic using the existing A9.
58 (Figures 9.1c-e)	Local Path (non-designated)	Pedestrians	Path 58 provides access along the River Tay from Dowally Farm. Provides a link to Path 60 and Path 66.	Provides access to the River Tay.	6,139	Grass path and unsurfaced access track through fields, adjacent to the River Tay. NMUs experience noise from traffic using the existing A9.
59 (Figures 9.1c-d)	Core Path DUNK/138	Pedestrians	Path 59 is a continuation of the route for NMUs using Path 54.	No direct access to the outdoor areas listed in Section 9.3.	415	Rural paved route with local access vehicles only. NMUs experience noise from traffic using the A9.

Path	Designation	Main Users*	Description	Access to Outdoor Areas**	Baseline Journey Length (m)	Baseline Amenity
60 (Figure 9.1c)	Local Path (non-designated)	Pedestrians	Path 60 provides access from the existing A9 to Path 58 via the railway crossing at Guay.	Provides access to the River Tay.	147	Unpaved track leading across the railway line, NMUs experience noise from traffic using the existing A9.
61 (Figures 9.1c-d)	Local Path (non-designated)	Pedestrians	Path 61 provides direct access through Guay to both Path 63/RCR 83 and Path 62.	No direct access to the outdoors provided but links to Path 62 that provides access to the woodland north of Guay.	274	Paved track through Guay. Minimal noise from traffic using the existing A9.
62 (Figures 9.1c-d)	Local Path (non-designated)	Pedestrians	Path 62 provides access through the woodland north of Guay. Links into Path 61 in the south and Path 64 and Path 65/RCR 83 in the north.	Provides access to the Woodland north of Guay.	1,033	Grass path leads to unpaved track through woodland. Minimal noise from traffic using the existing A9.
63/RCR 83 (Figures 9.1c-d)	Core Path DUNK/140 Regional Cycle Route 83	Pedestrians/ Cyclists	Path 63/RCR 83 is a paved path between Guay (approximately ch5250) and Kindallachan (approximately ch5900). Provides a link to Path 56/RCR 83 and Path 63a	Provides access to the Woodland north of Guay.	753	Rural paved route with local access vehicles only. This route runs parallel to the existing A9. NMUs experience noise from traffic using the existing A9.
63a (Figures 9.1c-d)	Local Path (non-designated)	Pedestrians	Paths 63a is a paved footway adjacent to the existing A9 southbound carriageway between Kindallachan (approximately ch5920) and Guay (approximately ch5300). It provides an alternative route to Path 63/RCR 83 between Path 56/RCR83 and Path 65/RCR 83 and provides access to the southbound bus stop at Kindallachan from Guay.	No direct access to the outdoor areas listed in Section 9.3.	656	Footway alongside existing A9 southbound carriageway between Guay and Kindallachan. NMUs experience noise from traffic using the existing A9. Kerb provides segregation between vehicle travellers and NMUs.
64 (Figure 9.1d)	Local Path (non-designated)	Pedestrians	Path 64 provides link from Path 62 to Kindallachan Burn and waterfalls.	Provides access to Kindallachan Burn and waterfalls.	676	Unpaved track through woodland. Minimal traffic noise.
65/RCR 83 (Figures 9.1d-e)	Core Path MASG/127 Regional Cycle Route 83	Pedestrians/ Cyclists	Path 65/RCR 83 is a paved route between Kindallachan (approximately ch5900) and a point opposite Westhaugh of Tulliemet. (approximately ch7900) where it then links with Path 67.	Provides access to the Kindallachan Burn and waterfalls.	2,036	Rural paved route with local access vehicles only. This route runs parallel to the existing A9. NMUs experience noise from traffic using the existing A9.
66 (Figures 9.1d-e)	Local Path (non-designated)	Pedestrians	Path 66 is a track from the existing A9 to Path 58 via a railway crossing.	No direct access to the outdoor areas listed in Section 9.3.	404	Track used to access the River and Path 58. NMUs experience noise from traffic using the existing A9.
67 (Figures 9.1d-e)	Local Path (non-designated)	Pedestrians	Path 67 provides access through the woodlands surrounding Cuil-an-Duin. Links into Path 65/RCR 83 in the south and RCR 83 in the north.	Provides access to the woodlands surrounding Cuil-an-Duin.	1,498	Unpaved dirt track leading through fields and woodland on east side of A9. NMUs experience noise from traffic using the A9.

Path	Designation	Main Users*	Description	Access to Outdoor Areas**	Baseline Journey Length (m)	Baseline Amenity
67a (Figure 9.1e)	Local Path (non-designated)	Pedestrians	Path 67a provides access through the woodlands surrounding Cuil-an-Duin. Links into Path 65/RCR 83 opposite Westhaugh of Tulliemet and Path 67.	Provides alternative link between Path 65/RCR 83 and Path 67.	215	Unpaved dirt track leading through woodland on east side of A9. NMUs experience noise from traffic using the A9.

* Although predominant users of the paths are identified, it should be noted that access is not limited to a single user group.

** Refer to Chapter 8 (People and Communities - Community and Private Assets) and Figure 8.1 for further details on community facilities.

Access to Outdoor Areas

9.3.15 Outdoor areas comprise local open space and green space that are used by the public for recreational purposes. For further details of community land reference should be made to Chapter 8 (People and Communities - Community and Private Assets). The key outdoor areas considered within this assessment are listed below and shown on Figure 9.1:

- Area based facilities:
 - Atholl Woods (Lover’s Leap and the Cliffs of Craig A’ Barns) (Figure 9.1a);
 - Craigvinean Forest (part of the Tay Forest Park) (Figure 9.1a);
 - Dowally Loch (Figure 9.1c);
 - Kindallachan Burn and waterfalls (Figure 9.1d);
 - Mill Dam (Figure 9.1b);
 - the River Tay (Figure 9.1);
 - the River Tummel (Figure 9.1e);
 - Rotmell Loch (Figure 9.1c);
 - Rotmell Wood (Figure 9.1b);
 - woodland north of Guay (Figures 9.1c-d); and
 - woodlands surrounding Cuil-an-Duin (Figure 9.1e).
- Linear access facilities (identified in Table 9.11):
 - All rights of way, core paths and local paths;
 - NCR 77; and
 - RCR 83.

9.3.16 The NMU paths that provide access to these outdoor areas are listed in Table 9.11 and shown on Figure 9.1.

Public Transport

9.3.17 Local bus services that currently operate in the study area are operated by Stagecoach Perth and Citylink. Table 9.12 provides detail in relation to the itinerary of these services, correct as of January 2018.

Table 9.12 Existing bus services

Service No.	Operator	Origin	Destination	Routes	Frequency (times a day)
23	Stagecoach Perth	Aberfeldy	Perth	A9	Hourly Monday-Saturday, one journey in each direction on Sundays.
27	Stagecoach Perth	Ballinluig	Perth	A9	Three journeys in each direction Monday-Friday, One journey in each direction on Saturdays.
27X	Stagecoach Perth	Kindallachan	Perth	A9	One journey in each direction Monday – Saturday.
M91	Citylink	Edinburgh	Inverness	A9	One northbound journey Monday-Sunday, Two southbound journeys Monday-Sunday.

9.3.18 There are two permanent bus stops located in the study area on the existing A9 carriageway at Kindallachan as shown on Figure 9.1, providing links between Kindallachan, Ballinluig, Pitlochry and Perth.

9.3.19 Following a consultation meeting between Jacobs, Transport Scotland and PKC on 24 March 2016, it was confirmed that no formal school bus stops are located along the existing A9 within the study area.

It is understood that most children living in properties immediately adjacent to the A9 are currently driven by private vehicle or collected by taxi.

- 9.3.20 The Highland Main Line railway runs between Perth and Inverness through the study area as shown on Figure 9.1. There are no railway stations within the study area, the closest stations being either Pitlochry to the north (approximately 8km) or Dunkeld and Birnam to the south (approximately 4km).

Vehicle Travellers

Views from the Existing A9 and Lay-bys

- 9.3.21 The following baseline conditions section provides a summary of the view experienced by travellers on the existing A9. Chapter 14 (Visual) provides a detailed assessment of views of the proposed scheme from viewpoints along the existing A9 corridor.
- 9.3.22 The existing A9 runs through the Highland Glens Character Type. This Landscape Character Type is subdivided into Local Landscape Character Areas (LLCAs) including Strath Tay: Lower Glen LLCA, Strath Tay: Mid Glen LLCA and Strath Tummel LLCA which are shown on Figure 13.2. Two of the LLCAs, namely Strath Tay: Lower Glen LLCA and Strath Tay: Mid Glen LLCA, contain elements of the proposed scheme. Further description of the landscape baseline of the area is contained in Chapter 13 (Landscape). Views from the existing A9 are shown on Figure 9.3.

Strath Tay: Lower Glen LLCA (ch0 to ch560)

- 9.3.23 The sensitivity of this LLCA is considered to be high, with no significant detractors to its scenic quality.
- 9.3.24 Travelling north of the River Tay Crossing (ch0) to where the existing A9 passes Inchmagrannachan (ch560), the views on the northbound side are intermittent due to the existing roadside riparian woodland. To the southbound side, views are restricted by steep cutting and woodland.
- 9.3.25 Travelling southbound from where the existing A9 passes Inchmagrannachan (ch560) to north of the River Tay Crossing (ch0), the view from the road is restricted by steep cutting and woodland on the southbound side and is filtered and intermittent due to riparian trees and roadside woodland along the northbound side. The river is visible on the northbound side north of the Tay Crossing and the view ahead is towards the wooded slopes of Craigvinean.

Strath Tay: Mid Glen LLCA (ch560 to end of proposed scheme)

- 9.3.26 The sensitivity of this LLCA is considered to be medium/high, with no significant detractors to its scenic quality.
- 9.3.27 As the existing A9 continues north towards Tom Ban, the views on the northbound side are intermittent. On the southbound side, a short stretch of steep cutting with patchy scrub backed by woodland and rising ground restricts views. After travelling past Tom Ban (ch1300), there is a picturesque view of the strath and the Tay meandering into the distance on the northbound side (Photograph 9.7).

Photograph 9.7: View northwest across the Tay from near Tom Ban



Image from Google Street View captured September 2016 © 2018 Google

- 9.3.28 Continuing northbound on the approach to Dowally, views across and along the strath are intermittent to the northbound side with attractive glimpses of the River Tay through gaps in the riparian woodland (ch1300 to ch2000). To the southbound side, the road is flanked by thickly wooded valley slopes, which restrict views. As the route passes Dowally (ch4100), to the northbound side views are filtered by trees screening Dowally Farm (ch4150), against a backdrop of the wooded hills across Strath Tay. Continuing north towards Guay (ch5200), attractive expansive views open out to the west across the strath towards Craigvinean Forest and northwards towards Logierait and Dunfallandy Hill (Photograph 9.8). The Highland Main Line railway is visible as part of these open views. Views to the southbound side remain restricted by woodland close to the road edge and the rising landform of the valley side.

Photograph 9.8: View travelling north towards Guay



Image from Google Street View captured September 2016 © 2018 Google

- 9.3.29 At Guay on the northbound side, the existing A9 runs parallel to the Highland Main Line railway towards Kindallachan, with the River Tay visible meandering across the flat valley floor in the farmland beyond. Views remain open across the fields, edged with mature trees towards the River Tay, backed by wooded hills beyond. Between Guay (ch5200), and Kindallachan (ch6000), open views to the southbound side are over small arable fields backed by woodland in the middle distance, which restricts longer distance visibility, and are punctuated by the vernacular architecture of the two small settlements. As the road bends northward along the edge of the valley floor, away from the Highland Main Line railway towards the north of the study area, aside from short stretches where there are small groups of trees close by restricting visibility, the views to the northbound side remain open across the flat valley floor farmland, with the vista closed by Dunfallandy Hill, Logieriat Wood and distant hills. To the southbound side, the road continues to follow the thickly wooded eastern side of the strath, with consistently restricted views. The views of the strath continue with Dunfallandy Hill to the northwest looming closer as Ballinluig is approached at the confluence of the Tay and Tummel.

- 9.3.30 Travelling southbound from where the existing A9 passes the confluence of the Tay and Tummel (ch8100) to where the road passes Kindallachan (ch6000), the view on the southbound side is restricted by the thickly wooded eastern side of the strath, plus a short section of cutting vegetated with low-lying scrub. The view on the northbound side is open throughout this section looking across the flat valley floor farmland towards the wooded slopes on the western side of the strath, aside from short stretches where there are small groups of trees close by restricting visibility. Continuing southbound where the road approaches Kindallachan, the view becomes restricted on both sides by roadside vegetation before becoming intermittent then open where the road passes Kindallachan. The Highland Main Line railway runs parallel with the road at this location and remains visible in the foreground of views across the strath along the northbound side between Kindallachan (ch6000) and Guay (ch5200). After passing Kindallachan, the view along the southbound side opens up where the road passes a small arable field backed by coniferous woodland which restricts longer distance visibility (Photograph 9.9). The view ahead looks along the strath, flanked by wooded slopes on either side.

Photograph 9.9: View south of Kindallachan



Image from Google Street View captured September 2016 © 2018 Google

- 9.3.31 Where the existing A9 passes Guay (ch5200), the view on the southbound side is towards Guay Farm. The railway line remains visible in the foreground of the view looking across the strath on the northbound side. Between Guay and Dowally (ch4100) the view on the southbound side is restricted by mature conifers followed by dense mixed species woodland. The view on the northbound side is open, across the fields on the valley floor towards the wooded slopes of Tay Forest Park. As the road approaches Dowally, the view remains restricted by roadside woodland on the southbound side before opening up to reveal a view of Dowally Craft Centre (ch4200) and residential properties. After passing Dowally the view is open on both sides for a short distance before becoming restricted by the thickly wooded valley slopes on the southbound side and by roadside riparian woodland on the northbound side. Continuing south, the view remains restricted by woodland on the southbound side and becomes intermittent looking towards Tay Forest Park through gaps in the roadside trees on the northbound side. South of Rotmell Farm (ch3100) the view opens up on the northbound side looking across Strath Tay towards the wooded slopes of Craigvinean Forest in Tay Forest Park. The view on the southbound side remains restricted by dense roadside woodland and the view ahead is towards the distant hills including Craig a Barns. From where the road passes Ledpetty Lodge (ch1500) travelling south to where the road passes Woodlands (ch900) the view remains restricted along the southbound side by woodland and by a steep cutting with patchy scrub backed by woodland and rising ground. The view on the northbound side is filtered by riparian trees and roadside woodland partially screening the River Tay and the wooded hills across the strath. Between where the road passes Woodlands to north of the River Tay Crossing the view from the road is restricted by steep cutting and woodland on the southbound side and is filtered and intermittent due to riparian trees and roadside woodland along the northbound side. The river is visible on the northbound side north of the Tay Crossing and the view ahead is towards the wooded slopes of Craigvinean.

Views from existing A9 Laybys: Strath Tay: Mid Glen LLCA (ch560 to end of proposed scheme)

- 9.3.32 The locations of the 11 existing A9 laybys in the Strath Tay: Mid Glen LLCA are indicated on Figures 9.3a-e and the existing views from each lay-by are described in Table 9.13.

Table 9.13: Existing lay-bys within Strath Tay: Mid Glen LLCA

Lay-by	Chainage	Existing views
1	ch1350	View restricted on both sides by cutting and roadside vegetation.
2	ch1750	Attractive open view west over the River Tay and across the valley floor farmland towards the wooded hills beyond (Photograph 9.10 shows representative view from Layby 2; image captured from Google Street View from existing A9 southbound carriageway).
3	ch2950	Filtered view in winter across the strath through roadside riparian woodland on the northbound side. Dense woodland and rising valley side slopes restrict visibility on the southbound side.
4	ch3400	As per Lay-by No.3.
5	ch4350	Wide, attractive open views north and west across the strath towards distant hills, with views on the southbound side restricted by dense woodland and rising ground.
6	ch4550	As per Lay-by No.5.
7	ch5200	Open view west across the strath towards wooded hills. View on southbound side restricted by mature roadside conifers; Guay Farmhouse and cattle shed visible.
8	ch5400	Wide, attractive open views on northbound side looking west across the strath towards distant hills; River Tay visible. Open view on southbound side across small arable field backed by coniferous woodland.
9	ch6450	Wide, attractive open views north and west across the strath towards distant hills, with views on the southbound side restricted by woodland.
10	ch6650	Filtered view through northbound roadside vegetation looking west across the strath. View on the southbound side restricted by dense woodland.
11	ch7350	Wide, attractive open views north and west across the strath towards distant hills, with views on the southbound side restricted by dense woodland and rising ground.

Photograph 9.10: Lay-by Ref no 2



Image from Google Street View captured September 2016 © 2018 Google

Driver Stress

- 9.3.33 Current levels of driver stress for the section of the A9 corridor between Tay Crossing and Ballinluig have been identified as moderate to high in accordance with the methodology set out in DMRB Volume 11, Section 3, Part 9 (Highways Agency et al., 1993b). Average peak hourly flows, average vehicle speeds and driver stress levels for the existing road corridor in 2015 are shown in Table 9.14.

Table 9.14: Driver stress levels on existing road network (2015)

Link description	Direction	Road class	Average peak hourly flow per lane (flow units/hour)	Average vehicle speed (km/h)	Driver stress
A9 corridor					
Tay Crossing to Ballinluig	northbound	Single Carriageway	765	78	moderate
	southbound		1,011	83	high

* Average speed will be influenced by the presence of Average Speed Cameras along the single carriageway sections of the existing A9

9.4 Potential Impacts

9.4.1 Potential impacts of the proposed scheme on NMUs and vehicle travellers are described in this section. These are impacts that could occur in the absence of mitigation as set out in Section 9.5 (Mitigation). However, it should be noted that the proposed scheme assessed within this chapter is the result of an iterative design process which incorporated provision for maintaining and enhancing NMU journeys and takes into account the objectives for access provision set out in the A9 Dualling NMU Access Strategy (Transport Scotland, 2016a). As such, the proposed scheme already includes embedded mitigation including an overbridge, footpaths/cycleways (shown on Figure 9.2) and landscape planting (shown on Figure 13.5). Further details of embedded mitigation are provided in Section 9.5 (Mitigation) and Chapter 4 (Iterative Design Development).

9.4.2 The potential impacts identified in this section are therefore those that remain following the incorporation of embedded mitigation and for which specific mitigation measures to further reduce impacts (such as signage) are identified in Section 9.5 (Mitigation). Potential impacts on amenity value are based on the worst case scenario, i.e. winter year of opening, following establishment of mitigation planting over time, amenity impacts for some NMU routes are expected to reduce.

Non-Motorised Users (NMUs)

9.4.3 This section describes the potential impacts on NMUs identified as being significant according to the criteria set out in Section 9.2 (Approach and Methods). Full details of potential impacts on NMUs are described in Appendix A9.1 (Impact Assessment for NMU Routes and Access to Outdoor Areas).

Footpaths/Cycleways and Other Routes

Construction

9.4.4 During construction of the proposed scheme, disruption of NMUs using paths within the immediate vicinity of the A9 is anticipated due to temporary severance and diversions. Most of the paths identified as being affected by construction activities are those that intercept the proposed scheme or the roads connecting to the proposed scheme (refer to Table 9.11).

9.4.5 During the construction period, pedestrians and other NMUs have the potential to be disrupted by:

- temporary diversions of paths, cycleways or minor roads which may increase journey times;
- removal of existing informal at-grade crossing;
- creation of new paths and cycleways;
- construction traffic on local roads which may create busier crossing points;
- location of site compounds on recreation areas which would reduce accessibility;
- changes to the amenity value of the path and cycleway network due to noise, dust, and visual intrusion of the works. This could lead to temporary severance where construction works disrupt or deter NMUs from using paths and residents from accessing local facilities; and
- changes to local bus services, for example, relocation of bus stops, increase in journey times and re-timetabling of services.

- 9.4.6 The above potential impacts are described in general terms as they will depend on the detail and timing of activities undertaken by the Contractor which are not available at this time. The temporary disturbance to NMUs during construction are considered to be potential impacts of **Moderate to Substantial** significance.

Operation

- 9.4.7 The needs of NMUs have been considered throughout the development of the proposed scheme, with various access features incorporated into the design to maintain and improve NMU routes.
- 9.4.8 The proposed scheme includes access provision for NMUs, and as explained in paragraph 9.4.1, this is considered to be 'embedded mitigation' that forms part of the assessed design. The following impact assessment therefore identifies potential impacts that remain during operation despite the embedded mitigation, with specific measures to avoid or reduce these potential impacts identified in Section 9.5 (Mitigation), where appropriate.
- 9.4.9 In terms of beneficial impacts, the existing A9 within the study area is currently informally crossed at-grade by NMUs at three locations (identified in Table 9.10) which, given the high speeds of the traffic (speed limit of 60mph), creates a potentially unsafe environment for both NMUs and vehicle travellers. The Dowally – Guay South Overbridge provided as part of the proposed scheme at ch4700 will improve general safety at its location as NMUs will no longer have to cross the A9 at-grade.
- 9.4.10 Potential significant impacts on journey length and amenity value are detailed in Table 9.15 and Table 9.16 respectively, and summarised in Table 9.17. It should be noted that baseline journey lengths used in this assessment may differ from those shown in Table 9.11 when considering the routes used by NMUs to cross the existing A9.
- 9.4.11 As detailed in Table 9.15, there are significant journey length increases for NMUs using Path 60 (CP01), and severance of CP03 (Path 66). The inclusion of an NMU underpass at these locations was considered. However, flood protection for NMUs within the NMU underpass would not be able to be provided for the design event (0.5% Annual Exceedance Probability (1 in 200-year) flood event).
- 9.4.12 Full assessment results for NMUs in terms of journey length and amenity value are provided in Appendix A9.1 (Impact Assessment for NMU Routes and Access to Outdoor Areas).

Table 9.15: Potential significant impacts on journey length during operation

Journey Length Assessment (JLA) ref.	NMU path	Path type	Crossing point	Potential impacts	Key impact on NMUs	Baseline journey length	Potential new journey length	Potential change	Sensitivity	Potential Impact	
										Magnitude	Significance
JLA 2	Path 60	Local Path	CP01	Increase in journey length	NMUs no longer able to use Path 60 to cross the existing A9 at-grade. Rerouted via new Dowally – Guay South Overbridge to cross the A9 then join Path 56/RCR 83.	219m	1,443m	+1,224m	low	high	Moderate
JLA 4	Path 66	Local Path	CP03	Severance of crossing point.	NMUs no longer able to use Path 66 to cross the existing A9 at-grade. Whilst there are alternative routes either south via Path 58, Path 66, new Dowally – Guay South Overbridge and Path 56/RCR 83, or north via Path 58, RCR 83 and Path 66/RCR 83, the new journey lengths would be between 4.5km and 5km. Therefore, for the purpose of this assessment, CP03 is considered to be severed by the proposed scheme.	430m	North: 4,768m South: 5,115m	North: +4,338m South: +4,685m	low	high	Moderate

Table 9.16: Potential significant impacts on amenity value (without mitigation) during operation

NMU path	Path type	Crossing point	Potential impact on safety resulting from changes in traffic flows	Potential Change			Significance (amenity value)
				Visual	Air Quality	Noise	
Path 53	Local Path	n/a	Not considered in the traffic assessment for safety because does not directly intersect the main A9 carriageway.	moderate/substantial* (moderate**)	not significant	negligible	Moderate
Path 56/ RCR 83	Core Path DUNK/141 and Regional Cycle Route	n/a	NMUs travelling along Path 56/RCR83 will experience an increase in traffic compared to baseline conditions. Traffic flows have been calculated at approximately 162 AADT (northbound) and 261 AADT (southbound) Do Something 2026 increasing to 190 AADT (northbound) and 270 AADT (southbound) Do Something 2041. The proposed scheme includes provision of a footpath adjacent to the Dowally to Kindallachan Side Road between Dowally and Guay. On that basis, due to the low traffic flows and the provision of a footpath, the increase in traffic along the route is not considered to be significant for NMUs using Path 56/RCR 83.	substantial* (moderate**)	not significant	negligible	Moderate
Path 58	Local Path	n/a	Not considered in the traffic assessment for safety because does not directly intersect the main A9 carriageway.	substantial* (moderate**)	not significant	negligible	Moderate
Path 60	Local Path	CP01	Improved safety. Informal at-grade crossing of the existing A9 would be stopped up and NMUs rerouted via new Dowally – Guay South Overbridge to cross the A9.	moderate/substantial* (slight/moderate**)	not significant	negligible	Moderate

NMU path	Path type	Crossing point	Potential impact on safety resulting from changes in traffic flows	Potential Change			Significance (amenity value)
				Visual	Air Quality	Noise	
Path 63/ RCR 83	Core Path DUNK/140 and Regional Cycle Route	n/a	NMUs travelling along Path 63/RCR83 will experience an increase in traffic compared to baseline conditions. Traffic flows have been calculated at approximately 162 AADT (northbound) and 257 AADT (southbound) Do Something 2026 increasing to 184 AADT (northbound) and 262 AADT (southbound) Do Something 2041. The proposed scheme includes provision of a footpath adjacent to the Dowally to Kindallachan Side Road between Guay and Kindallachan. On that basis, due to the low traffic flows and the provision of a footpath, the increase in traffic along the route is not considered to be significant for NMUs using Path 63/RCR 83.	substantial* (moderate**)	not significant	negligible	Moderate
Path 65/ RCR 83	Core Path MASG/127 and Regional Cycle Route	n/a	The difference in traffic levels along Path 65/RCR 83 between Do Minimum 2026 and Do Something 2026 are not considered to be significant.	substantial* (moderate**)	not significant	negligible	Moderate
Path 66	Local Path	CP03	NMUs no longer able to use Path 66 to cross the existing A9 at-grade. Whilst there are alternative routes either south via Path 58, Path 66, new Dowally – Guay South Overbridge and Path 56/RCR 83, or north via Path 58, RCR 83 and Path 66/RCR 83, the new journey lengths would be between 4.5km and 5km. Therefore, for the purpose of this assessment, CP03 is considered to be severed by the proposed scheme.	moderate/substantial* (moderate**)	not significant	negligible	Moderate

* The visual impact is based on the worst case scenario, i.e. winter year of opening. Following embedded mitigation such as planting, these impacts are expected to decrease by summer 15yrs.

** Potential impact in summer 15yrs after opening (Chapter 14: Visual)

- 9.4.13 Table 9.17 provides a summary of the overall potential impacts on paths where potentially significant impacts on either journey length or amenity value were identified in Table 9.15 or 9.16 respectively. As set out in paragraph 9.2.29, potential impacts on journey length and amenity value were then considered together using professional judgement to determine overall potential impacts on NMU paths and where an impact is only identified for one factor, the degree of overall significance was reduced accordingly. Table 9.17 therefore contains NMU paths that may overall, have an impact that is not significant, but for which significant impacts were identified in Table 9.15 or 9.16. Path 60 is considered to have significant overall potential impacts due to increased journey length however NMU safety will be improved through the provision of an overbridge in place of an informal at-grade crossing. Path 66 is considered to have significant overall potential impacts due to severance of informal crossing point CP03 and decreased amenity value. As detailed in paragraph 9.4.11, the provision of an underpass at CP01 and CP03 would not be desirable as it would not provide the necessary flood protection during flood events on the River Tay.

Table 9.17: Summary of potential significant impacts on NMU paths (without mitigation) during operation

NMU path	Path type	Crossing point	Significance of potential impact		
			Journey length	Amenity value	Overall
Path 53	Local Path	n/a	Negligible (<10m decrease)	Moderate	Slight/Moderate
Path 56/RCR 83	Core Path DUNK/141 and Regional Cycle Route	n/a	Slight	Moderate	Slight/Moderate
Path 58	Local Path	n/a	No change	Moderate	Slight/Moderate
Path 60	Local Path	CP01	Moderate	Moderate	Moderate
Path 63/RCR 83	Core Path DUNK/140 and Regional Cycle Route	n/a	No change	Moderate	Slight/Moderate
Path 65/RCR 83	Core Path MASG/127 and Regional Cycle Route	n/a	No change	Moderate	Slight/Moderate
Path 66	Local Path	CP03	Moderate	Moderate	Moderate

Access to Outdoor Areas

- 9.4.14 Potential significant construction impacts identified for paths are described in paragraphs 9.4.4 to 9.4.6. The assessment of operational impacts on access to outdoor areas is based on the findings of the impact assessment on paths as outlined in Tables 9.15, 9.16 and 9.17, and detailed in Appendix A9.1 (Impact Assessment for NMU Routes and Access to Outdoor Areas).

Construction

- 9.4.15 In the absence of mitigation during construction, potential significant impacts (**Moderate** or above) would be present for NMUs using RCR 83 and for NMUs accessing the River Tay via Paths 53, 55, and using CP01 (Path 60) CP03 (Path 66) due to impacts on amenity and potential diversion lengths or temporary closure of the routes. However, as set out in paragraph 9.4.6, these potential impacts are described in general terms as they will depend on the detail and timing of activities undertaken by the Contractor which are not available at this time. NMUs will however still be able to access the River Tay via Path 58 from Ballinluig.

Operation

- 9.4.16 During operation, potential significant impacts (**Moderate**) are predicted for NMUs using CP01 (Path 60) or CP03 (Path 66) to access the River Tay due to increased journey length and decreased amenity value (Path 60) and severance of path (Path 66) as reported in Table 9.15. No significant potential impacts are anticipated for NMUs accessing the River Tay via Paths 38/NCR 77, 53, 55, and 58. Therefore overall, there is considered to be a Slight/Moderate potential impact on NMUs accessing the River Tay.

Public Transport

Construction

- 9.4.17 As identified in Table 9.12, there are a number of bus services operating in the study area. These services may be disrupted during construction due to temporary road closures, diversions and increased traffic on the A9 and surrounding roads.
- 9.4.18 In the absence of mitigation during construction, potential significant impacts (**Moderate to Substantial**) would be present for NMUs accessing the two bus stops at Kindallachan. These potential impacts are described in general terms as they will depend on the detail and timing of activities undertaken by the Contractor which are not available at this time.
- 9.4.19 Mitigation measures for public transport during construction are set out in Section 9.5 (Mitigation).

Operation

- 9.4.20 During operation, two bus stops, one on the northbound carriageway north of Dowally Farm (approximately ch4450) and one on the southbound carriageway south of Guay (approximately ch5150), are included as part of the proposed scheme. These replace the two existing bus stops located in the vicinity of Kindallachan at approximately ch5900 (northbound) and approximately ch5800 (southbound). For residents in Kindallachan, NMU's would be required to travel south via Path 63/RCR83, involving an increase in journey distance of approximately 1.6km for both northbound and southbound bus stops. As a result of the two bus stops being located between Dowally and Guay, residents in Dowally and Guay would no longer be required to travel to the bus stops in the vicinity of Kindallachan, resulting in a reduced journey distance for NMU's. As assessed in Chapter 8 (People and Communities – Community and Private Assets) during operation, provision of replacement bus stops on the main alignment between Dowally and Guay (existing bus stops are at Kindallachan) are expected to result in increased journey distances for pedestrians travelling from Kindallachan with Substantial (adverse) impacts for vulnerable groups and non-vulnerable groups. Pedestrians travelling from Dowally and Guay would have reduced journey distance with Substantial (beneficial) impacts assessed for pedestrians (vulnerable and non-vulnerable groups) travelling from Dowally to the northbound and southbound bus stops and from Guay to the southbound bus stop. There is a Slight (beneficial) impact arising from a reduction in journey distance for access to the northbound bus stop from Guay.
- 9.4.21 Bus stops are included along the Dowally to Kindallachan Side Road as part of the proposed scheme at Kindallachan and Dowally and a hail-and-ride option will be available for passengers boarding/alighting at Guay. This will enable buses to serve the communities of Dowally, Guay and Kindallachan, providing connections to Ballinluig and Pitlochry and PKC have confirmed that it is the Council's intention to utilise the proposed new side road to Kindallachan and Dowally for a local bus service and school transport provision (if entitled pupils reside in these settlements) (PKC pers comms, 2018; details provided in Appendix A7.2: Summary of Consultation Responses). The link to Pitlochry will also enable connections to be made to long distance routes such as Perth, Edinburgh, Glasgow and Inverness. Whilst bus stops and a turning area (at Dowally) have been provided, the overall impact on NMUs using public transport to/from Dowally, Guay and Kindallachan will depend on the frequency of the service by the public transport provider, details of which are to be determined in consultation with the local authority (refer to Section 8.5: Mitigation).
- 9.4.22 Consultation findings from the A9 Dualling Programme: Public Transport Strategy identified that during operation, *“Operators considered that the A9 Dualling would bring major operational benefits, particularly relating to improved safety (as a result of improved overtaking opportunities) and reduced journey times along the route”*. The dualling provides an opportunity to improve the overall service offer for passengers living along the route (Transport Scotland, 2015b). Details of both the national and local context for dualling, including safety considerations and improved journey time reliability, are provided in Chapter 2 (Need for the Scheme).
- 9.4.23 There is the potential for beneficial impacts, however, the significance will depend on the frequency of the bus service operating between the communities of Dowally, Guay, and Kindallachan. As described

in paragraph 9.4.18, full details of the services are not currently known, however, the proposed scheme includes provision to facilitate improved services.

Vehicle Travellers

View from the Road and Lay-bys

Construction

- 9.4.24 Potential adverse impacts on drivers' views from the road are predicted due to the visual impact of construction works, including the works themselves and the associated traffic management and temporary signage. The following aspects of the construction phase will have a short-term non-significant impact on the views from the road:
- removal of vegetation along the A9 corridor, thereby opening views to the wider landscape;
 - vehicles moving machinery and materials to and from the site;
 - machinery, potentially including heavy excavators and earth moving plant;
 - exposed bare earth over the extent of the proposed works;
 - structures, earthworks, road surfacing and ancillary works during construction;
 - temporary soil storage heaps and stockpiles of construction materials;
 - lighting associated with night-time working and site accommodation;
 - temporary works associated with bridge construction operations; and
 - traffic management measures.
- 9.4.25 Traffic that is diverted due to the temporary closure of the C502 junction during its construction would experience a temporary alternative view from that of the proposed scheme in the year of opening.

Operation

- 9.4.26 Potential impacts on drivers' views from the proposed scheme during operation are described below. All impacts are considered adverse unless otherwise stated. The majority of impacts would be caused as a result of one or more of the following:
- loss of existing vegetation along the A9 corridor;
 - changed appearance of the landform along the road corridor as a result of large scale earthworks and/or rock cuttings and the potential requirement for reinforced slopes and/or retaining structures within the rural landscape;
 - increased extents of road infrastructure including the widened mainline and proposed local access tracks;
 - introduction of SuDS along the route of the proposed scheme; and
 - introduction of proposed overbridge and associated side roads and earthworks between Dowally and Guay.
- 9.4.27 The potential impacts on views from the road in the absence of mitigation measures aside from those 'embedded' within the proposed scheme proposals are essentially similar to residual impacts for the winter year of opening before mitigation planting has become established. The significance of potential impacts is as reported for winter in the year of opening in Section 9.6 (Residual Impacts).
- 9.4.28 The 11 existing lay-bys will be removed as no lay-bys are to be included as part of the proposed scheme.

Driver Stress

Construction

9.4.29 Taking cognisance of IAN 125/15, driver stress during construction has been assessed. For the purposes of assessment, traffic flows during construction have been taken to be the same as those modelled for the first full year of operation (2026). For the purposes of this assessment, it is assumed that carriageway width will be reduced to 6.75m for two-way working (3.375m running lanes), there will be an interim roundabout at the southern extent of the proposed scheme (the A9 Southern Tie-in Interim Roundabout) between ch600 and ch700, and vehicle speed reduction to 40mph. Whilst there will be a 40mph (64km/h) speed limit in place, it is assumed that the average vehicle speed will be 58km/h.

Table 9.18: Driver stress during construction (design year – 2026)

Link description	Direction	Road class	Average peak hourly flow per lane (flow units/hour)	Average vehicle speed (km/h)	Driver stress
A9 corridor					
Tay Crossing to Ballinluig	northbound	Single Carriageway	1,174	58	high
	southbound		1,476	58	high

9.4.30 Table 9.18 indicates that driver stress during construction will temporarily increase from moderate to high for vehicle travellers on the northbound carriageway and will remain high for vehicle travellers on the southbound carriageway. This potential increase in driver stress for travellers in the northbound direction is temporary and would be restricted to particular limited periods within the construction phase.

Operation

9.4.31 In the absence of the proposed scheme, driver stress is predicted to increase between present day levels and 2041, due to traffic growth. As the road standard does not change, the increased traffic volume can exceed the traffic volume thresholds which apply in the present day assessment, and can result in re-classification of the levels of driver stress.

9.4.32 The traffic flows in Table 9.19 are based on the scenario that the existing A9 will remain on its current alignment as a single carriageway i.e. the Do-Minimum scenario.

Table 9.19: Driver stress in Do-Minimum (design year – 2041), predicted future baseline without proposed scheme

Link description	Direction	Road class	Average peak hourly flow per lane (flow units/hour)	Average vehicle speed (km/h)	Driver stress
A9 corridor					
Tay Crossing to Ballinluig	northbound	Single Carriageway	1,053	76	high
	southbound		1,330	81	high

9.4.33 As indicated in Table 9.19, in the absence of the proposed scheme, the level of driver stress experienced by vehicle travellers is predicted to increase in the northbound direction (from moderate to high) and remain high in the southbound direction when compared to driver stress levels on existing road corridor in 2015 as described in paragraph 9.3.33.

9.4.34 The proposed scheme will be designed to current road design standards and it is considered that aspects of the design may contribute to reducing driver stress during operation, such as:

- improved operational reliability and resilience in respect of maintenance requirements to reduce driver frustration during periods of maintenance; and
- reduction in the frequency and impact of incidents on traffic flow to reduce driver frustration arising from delays due to unplanned events.

9.4.35 It is anticipated that the A9 Dualling Programme will result in increased traffic flows due to additional traffic being attracted to using the route once the entire Perth to Inverness section is dualled. The

traffic flows in Table 9.20 therefore take into account the upgrade of the A9 to dual carriageway over its entire length between Inverness and Perth. When compared to the Do-Minimum 2041 scenario (Table 9.19), Table 9.20 indicates that between Tay Crossing and Ballinluig, the level of driver stress will decrease from high to low for travellers in both lanes heading in the northbound direction and from high to moderate (lane 1) or high to low (lane 2) for travellers in the southbound direction with the proposed scheme in place.

Table 9.20: Driver stress in Do-Something (design year – 2041), predicted future baseline with proposed scheme

Link description	Direction	Lane	Road Class	Average Peak Hourly Flow per Lane *	Average Vehicle Speed (km/h)	Driver Stress
A9 corridor						
Tay Crossing to Ballinluig	A9 northbound	Lane 1	Dual Carriageway	1,007	84	low
		Lane 2		284		
	A9 southbound	Lane 1		1,218	89	moderate
		Lane 2		344		low

* Flow per lane is estimated based on 78% for Lane 1 and 22% for Lane 2 using the nearest dual carriageway traffic counter (Pitlochry)

9.5 Mitigation

- 9.5.1 This chapter makes reference to overarching standard measures applicable across A9 dualling projects ('SMC' mitigation item references), and also to project-specific measures ('P03' mitigation item references). Those that specifically relate to Chapter 9 (People and Communities – All Travellers) are assigned an 'AT' reference.
- 9.5.2 The development of mitigation is based on the approach as described in Planning Advice Note (PAN) 1/2013 (revision 1.0): Environmental Impact Assessment (Scottish Government, 2017), and to meet the legislation requirements of the Equality Act 2010 and the Land Reform (Scotland) Act 2003. Under the Equality Act 2010, it is 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 (including paths and trails). Therefore, where any new path or access point forms part of the proposed scheme, the requirements of the Equality Act 2010 were taken into account and potential barriers to disabled people such as gradient, verge width, radius of bends and surfacing were considered.
- 9.5.3 The NMU and Accessibility Audit (prepared under the guidance and standards contained in Transport Scotland's 'Cycling by Design' (2010) and 'Roads for All: Good Practice Guide for Roads' (2013) publications, was used to help verify, and improve where required, the DMRB Stage 3 design in accordance with the needs of users and best practice standards. Consultation with the Accessibility Forum in March and October 2017 was also undertaken during the development of the proposed scheme to ensure accessibility was fully considered in the design. However, cognisance was also taken of the existing conditions and current access provision beyond the tie-in of the proposed scheme and due to the rural and the existing topographical constraints, a number of the NMU diversions may not be suitable for disabled users. Furthermore, a number of the existing NMU routes comprise compacted soil or grass surfaces, which in all cases are proposed to be improved, however in most locations it is still not compliant with the standards contained in Roads for All: Good Practice Guide for Roads (Transport Scotland, 2013). Where the surfaces are not compliant, a Departure from Standard has been identified.
- 9.5.4 In addition to the mitigation specific to NMUs, mitigation for other environmental impacts in some cases will have the additional benefit of ameliorating impacts on NMUs, such as proposed landscape planting to provide screening (Chapter 13: Landscape), measures employed to reduce potential noise and improve air quality (Chapter 17: Noise and Vibration and Chapter 16: Air Quality respectively). As reported in Chapter 13 (Landscape), planting would be monitored for a minimum of five years after construction with annual replacement of any failed planting with stock of a suitable age so as to achieve full establishment and the required level of mitigation/impact reduction by summer 15 years after opening.

Embedded Mitigation

9.5.5 As noted in Section 9.4 (Potential Impacts) and Chapter 4 (Iterative Design Development), the proposed scheme design incorporates embedded mitigation such as an overbridge, provision of footpaths/cycleways and landscape planting to provide screening. Embedded mitigation for road travellers comprises careful consideration of the route alignment, the form and extents of earthworks along the length of the proposed scheme including those associated with junctions and the location of SuDS features. These measures were considered to reduce potential visual impacts on landscape features as seen by vehicle travellers, particularly those that contribute to the Special Qualities of the River Tay National Scenic Area. Embedded mitigation forming part of the proposed scheme (as shown on Figure 9.2) specifically related to provision for NMUs comprises:

- New overbridge providing a safe crossing point of the A9 for NMUs accessing the River Tay (identified in Table 9.16); and
- NMU route realignments (shown on Figure 9.2 and described in Table 9.21).

Table 9.21: NMU route realignments

Location (Path ref.)	Main Users*	Description of Realignment Proposed
Path 53	Pedestrians	Section of Local Path realigned along new SuDS access.
Path 56/RCR 83	Pedestrians/ Cyclists	Between Rotmell Junction and Dowally, Path 56/RCR 83 will be realigned along new segregated paved path. Between Dowally and Guay Path 56/RCR 83 will be realigned along the new access road with a paved segregated footpath for pedestrians. Between Dowally and Guay it is expected that cyclists using RCR 83 will remain on-road along this section. Traffic levels along this section are expected to increase when compared to existing conditions however this is not expected to result in a significant impact on the amenity of the route.
Path 60	Pedestrians	NMUs using Path 60 at informal crossing point CP01 will be rerouted along the new access track to the west of the proposed scheme, over the Dowally - Guay South Overbridge then north via Path 56/RCR 83.
Path 63/RCR 83	Pedestrians/ Cyclists	Section of path upgraded to provide paved segregated pedestrian footpath. Cyclists travelling along RCR 83 will continue to travel on-road through this section. Traffic levels along this section are expected to increase when compared to existing conditions however this is not expected to result in a significant impact on the amenity of the route.

* Although predominant users of the paths are identified, it should be noted that access is not limited to a single user group.

Standard Mitigation

9.5.6 Standard mitigation commitments to mitigate potential impacts on NMUs and Vehicle Travellers during construction are set out in Table 9.22. Mitigation regarding provision of temporary fences during construction for the health and safety of the public and animals is included separately in Chapter 8 (People and Communities - Community and Private Assets). With regards to **Mitigation Item SMC-AT3**, during construction of the proposed scheme, in the interests of the safety of road users and of NMUs wishing to access the existing bus stops at Kindallachan, it is not considered possible to relocate the bus stops within the extents of the proposed scheme. Instead, the safe access route provided for pedestrians is anticipated to be via a dial-a-bus service that will transport NMUs between Kindallachan and the relocated bus stops in the lay-bys along the existing A9 at Ballinluig, approximately 3.5km north of the existing locations.

Table 9.22: Standard mitigation commitments - All Travellers

Mitigation Item	Description
Standard Construction Mitigation	
SMC-AT1	The construction programme will minimise the length of closures or restrictions of access for NMUs as far as reasonably practicable.
SMC-AT2	Where practicable, temporary diversion routes and/or assisted crossings will be provided to maintain safe access for NMUs throughout the construction works. Any closure or re-routing of routes used by NMUs will take cognisance of the 'Roads for All: Good Practice Guides for Roads' (Transport Scotland, 2013). These will be agreed in advance with the relevant local authorities and will be clearly indicated with signage as appropriate.

Mitigation Item	Description
Standard Construction Mitigation	
SMC-AT3	In consultation with the relevant Roads Authority and public transport provider, bus stops affected by the works will be relocated safely with a safe access route provided for NMUs.
SMC-AT4	The Contractor will produce a traffic management plan that will include measures to avoid or reduce disruption to the road traffic, and in accordance with the Traffic Signs Manual (Department of Transport, 2009). The plan will include consideration of the timing of works, the location of haul roads to reduce site traffic on the public roads and a well maintained traffic management system with sweeping of roads to reduce construction debris on the carriageway.
SMC-AT5	Reasonable precautions will be taken by the Contractor to avoid or reduce road closures. One lane in each direction will be provided for A9 traffic during peak hours (Mon to Fri) except in exceptional circumstances and for closures which are pre-approved by Transport Scotland e.g. those required during blasting.
SMC-AT6	Road diversions will be clearly indicated with road markings and signage as appropriate. Any road closures will be notified in advance through road signage and appropriate signage will be provided for the duration of the closure. The Contractor will also be responsible for identifying any notable changes in patterns of road network use during construction, where such changes may cause significant disruption elsewhere (such as drivers re-routing away from the A9), and will review and update traffic management provisions as appropriate in discussion with Transport Scotland.
SMC-AT7	Appropriate lighting will be provided during any necessary night-time working, taking into account the requirements of Mitigation Items SMC-E10 and SMC-LV4 .
SMC-AT8	Access for NMUs will be maintained and improved in accordance with the following principles: <ul style="list-style-type: none"> • The requirements of the Equality Act 2010 and 'Roads for All: Good Practice Guides for Roads' (Transport Scotland, 2013) shall be incorporated into the proposed scheme wherever practicable; e.g. any bridges, ramps or footpaths will not present potential barriers to disabled people such as the gradient or surfacing. • NMU access shall be provided in accordance with the objectives set out in the A9 Dualling NMU Access Strategy (Transport Scotland, 2016a). • Surfacing of any new paths including alongside roads will be considered on a case by case basis taking into account factors such as safety, the type of user and should comply with current standards. • Safety of paths will be considered in accordance with the outcome of the Road Restraints Risk Assessment Process and may require provision of barriers. • New cycleways/footpaths will use non-frost susceptible materials to reduce risk of degradation.

Specific Mitigation

Non-Motorised Users

- 9.5.7 Development of the proposed scheme design has taken into account the need to maintain access for NMUs along and across roads and paths directly affected by the new road infrastructure. The proposed scheme design includes the provision of an overbridge and new footways and cycleways which maintain and improve access along existing NMU routes.
- 9.5.8 Mitigation proposals (**Mitigation Items P03-AT9 to P03-AT11**) to avoid or reduce remaining potential impacts for NMUs are outlined in Table 9.23 and Chapter 21 (Schedule of Environmental Commitments) and illustrated on Figure 9.2.

Table 9.23: Project specific mitigation for All Travellers

Item No.	Location (Path ref.)	Crossing Point	Users	Proposed Mitigation Description
Footways, cycleways and other routes (including access to outdoor areas)				
P03-AT9	RCR 83 (including RCR 83 (South of Rotmell), Path 56/RCR 83, Path 63/RCR 83, Path 65/RCR 83 and RCR 83 (North of Westhaugh of Tulliemet))	n/a	Cyclists	Provision of appropriate signage to direct NMUs along cycle route.
P03-AT10	Path 60, Path 67, RCR 83	CP03	Pedestrians	Provision of appropriate signage to direct NMUs to new overbridge.

Item No.	Location (Path ref.)	Crossing Point	Users	Proposed Mitigation Description
Public Transport				
P03-AT11	Public transport to service communities of Dowally, Guay and Kindallachan.	n/a	Users of public transport in the communities of Dowally, Guay and Kindallachan	Route and timings of public transport to service communities of Dowally, Guay and Kindallachan to be determined in consultation with local authority (PKC) and public transport provider.

Vehicle Travellers

View from the Road and Lay-bys

- 9.5.9 A number of the proposed measures to mitigate potential landscape and visual impacts would also have an influence on the nature and extent of views from the road. These are detailed in Chapter 13 (Landscape) and shown on Figure 13.5, and are taken into account in Section 9.6 (Residual Impacts). Measures include the planting of trees and other vegetation to screen views of the road and associated traffic from visually sensitive receptors such as nearby residents or to provide landscape or ecological mitigation.
- 9.5.10 In addition to addressing landscape, ecological and visual impacts, landscape mitigation measures have been developed giving consideration to the views which would be experienced by travellers on the proposed scheme. The planting design has been developed to influence views from the proposed scheme, providing travellers with a varied sequence of views of the surrounding countryside and landmark features while also providing attractive short range views within the route corridor and maintaining existing key views.

Driver Stress

- 9.5.11 Measures to mitigate potential impacts on driver stress during construction are set out in the Standard Mitigation Commitments (**Mitigation Items SMC-AT4 to SMC-AT7**) in Table 9.22 and Chapter 21 (Schedule of Environmental Commitments).
- 9.5.12 As the proposed scheme is predicted to result in driver stress classifications which will either remain the same or decrease compared to the Do-Minimum scenario (without the proposed scheme), no specific mitigation measures are proposed.

9.6 Residual Impacts

- 9.6.1 The residual impacts are those impacts remaining following the implementation of the proposed mitigation measures and are described in this section. As set out in Section 9.4 (Potential Impacts), potential impacts on amenity for some NMU routes are expected to reduce following the establishment of planting. This section (Section 9.6: Residual Impacts) therefore takes into account the mitigating effects of planting and presents residual impacts based on summer 15 years after opening.

Non-Motorised Users (NMUs)

Footpaths/Cycleways and Other Routes

Construction

- 9.6.2 During construction, the proposed mitigation measures will help reduce impacts on NMUs. However, disruption to journeys is still likely to be experienced as a result of temporary diversions. In addition, there are expected to be temporary amenity impacts in the vicinity of construction activities as a result of temporary views of construction activities, decreased air quality and/or increased noise (Chapter 14: Visual, Chapter 16: Air Quality, and Chapter 17: Noise and Vibration respectively).

- 9.6.3 Following implementation of proposed construction mitigation, it is expected that residual impacts on NMUs during the construction of the proposed scheme will be temporary but significant (**Moderate to Substantial**) for NMUs using:
- Path 53, Path 55 and the section of Path 58 between Dowally Farm and the existing A9 (approximately ch4150 to ch4200). Access to these paths will be temporarily closed during construction to allow access roads, SuDS ponds and the retaining wall at Dowally Farm to be constructed safely.
 - CP01 (Path 60), CP03 (Path 66), Path 53 and Path 67a due to impacts on amenity value and potential diversion lengths during construction.
 - RCR 83 (including RCR 83 (South of Rotmell), Path 56/RCR 83, Path 63/RCR 83, Path 65/RCR 83 and RCR 83 (North of Westhaugh of Tulliemet)) due to temporary closure or disruption to the NMU route.

9.6.4 For NMUs using RCR 83, it is proposed that during all construction phases, contact details are provided on signage to allow NMUs to contact the Contractor and arrange safe passage through the works along the construction site at exit/entries. It is envisaged that a form of transport will be made available by the Contractor to ferry NMUs through the construction works and dropping them at the particular exit they require. No diversions are recommended at these locations, due to surrounding construction work and vehicular movement in the vicinity.

Operation

9.6.5 Residual significant impacts resulting from the proposed scheme during operation on all crossing points and NMU routes are provided in Table 9.24. A complete assessment of residual impacts on NMUs, including non-significant impacts is detailed in Table 6 in Appendix A9.1 (Impact Assessment for NMU Routes and Access to Outdoor Areas). As detailed in paragraphs 9.4.11 and 9.4.13, the provision of an underpass at CP01 and CP03 would not be desirable as appropriate flood protection would not be able to be provided during flooding events on the River Tay.

Table 9.24: Summary of significant potential and residual impacts

NMU Path	Path type	Crossing point	Potential impact significance	Mitigation measure	Residual impact significance
Path 60	Local Path	CP01	Moderate	Established landscape mitigation	Moderate
Path 66	Local Path	CP03	Moderate	Established landscape mitigation	Moderate

Access to Outdoor Areas

Construction

9.6.6 During construction, significant impacts (**Moderate to Substantial**) would be present for NMUs using RCR 83 and for NMUs accessing the River Tay via Paths 53, 55, and using CP01 (Path 60) CP03 (Path 66) due to changes to amenity and potential diversion lengths or temporary closure of the routes. However, as set out in paragraph 9.4.6, these impacts are described in general terms as they will depend on the detail and timing of activities undertaken by the Contractor which are not available at this time. NMUs will be able to access the River Tay via Path 58 from Ballinluig. Residual impacts identified during construction for NMUs using RCR 83 are described in paragraph 9.6.4.

Operation

9.6.7 No significant residual impacts on access to outdoor areas are anticipated during operation.

Public Transport

Construction

9.6.8 During construction, significant impacts (**Moderate to Substantial**) would remain for NMUs accessing the two bus stops at Kindallachan due to disruption to access and additional distances NMUs may

have to travel to access public transport. As described in paragraph 9.4.17, these potential impacts are described in general terms as they will depend on the detail and timing of activities undertaken by the Contractor which are not available at this time.

Operation

- 9.6.9 Slight (beneficial) residual impacts on public transport are anticipated due to a decrease in traffic congestion thereby leading to fewer delays and improved journey times on the A9.
- 9.6.10 For residents in Kindallachan, NMU's have an increase in journey distance of approximately 1.6km for both northbound and southbound bus stops. Residents in Dowally and Guay would no longer be required to travel to the bus stops in the vicinity of Kindallachan, resulting in a reduced journey distance for NMU's. As detailed in paragraph 9.4.20, the significance of impacts in terms of Community Severance due to the relocation of these bus stops is assessed in Chapter 8 (People and Communities – Community and Private Assets).
- 9.6.11 The provision of bus stops and a bus turning area at Dowally will improve access to public transport for those travelling to Ballinluig and Pitlochry from the communities of Dowally, Guay and Kindallachan, (as described in paragraphs 9.4.20 to 9.4.22). However, as previously noted it is not possible to determine the significance of this improvement for NMUs as it will depend on the frequency of service provided and full details of the alternative arrangement are not available at this time.
- 9.6.12 The public transport provisions included within the proposed scheme is considered to beneficially contribute to Programme Objective 4: *"To improve integration with Public Transport Facilities"* as set out in the A9 Dualling – Case for Investment (Transport Scotland, 2016b).

Vehicle Travellers

View from the Road and Lay-bys

- 9.6.13 Table 9.25 summarises residual impacts on the view from the road at the winter of the year of opening, following the implementation of the proposed mitigation measures but before planting has become established. This table also summarises the significance of these impacts in the summer after 15 years to provide an indication of how the establishment of mitigation planting would reduce the impacts. A more detailed description of the landscape mitigation items referred to in Table 9.25 is provided in Section 13.5 (Mitigation) of Chapter 13 (Landscape) and shown on Figure 13.5.

Table 9.25: Summary of residual impacts on view from the road during operation

Description of Impacts	Winter, Year of Opening		Summary of Mitigation Proposals (Figure 13.5)	Summer, after 15 Years	
	Magnitude of Change	Significance of Impact		Magnitude of Change	Significance of Impact
Strath Tay: Lower Glen LLCA (ch0 to ch560)					
<p><i>Northbound views</i></p> <p>The view from the road travelling northbound and southbound would remain largely unchanged from that experienced by travellers on the existing A9 between ch0 and ch560, with the exception that the introduction of a proposed SuDS feature (ch200) would open up the immediate short-range view to the northbound side at this location. Two large proposed ADS signs would be visible on the northbound side at ch140 and at ch340.</p>	low	Negligible/ Slight	<ul style="list-style-type: none"> Riparian woodland and scattered larger individual trees to frame proposed SuDS at ch200 and to integrate with adjoining woodland (Mitigation Items P03-LV9, P03-LV14 and P03-LV15) 	low	Negligible
Strath Tay: Mid Glen LLCA (ch560 to end of proposed scheme (ch8280)					
<p><i>Northbound views</i></p> <p>The proposed SuDS feature (ch700) would open up the immediate short-range northbound view at this location. Views along the southbound side would remain restricted following the introduction of proposed new and revised cuttings associated with the widening of the mainline between ch560 and Rotmell Farm (ch3200). Proposed soil nailing may be visible on these cutting slopes (prior to vegetation establishment) between ch560-640, ch740-770, ch820-950 and ch1950-2090. The existing picturesque view (and subsequent glimpses) of the strath and the Tay would remain unchanged along the northbound side of the proposed scheme between ch1000 and ch2000.</p> <p>The two proposed retaining walls (up to 5m high) where the proposed scheme passes Rotmell Farm (ch3010-3540) and two revised cuttings (ch3200 and ch3700) would result in the view remaining restricted along the southbound side of the widened mainline. A proposed SuDS feature would be visible on the northbound side of the widened mainline (ch4000) on approach to Dowally.</p> <p>Dowally Farm Access Road and Dowally-Guay Link Road (ch4200-4800) and associated left-in left-out junction (ch4800) would be clearly visible in the foreground of open views looking west across the strath and looking north towards Logierait and Dunfallandy Hill. The introduction of the proposed Guay South Overbridge associated with these new side roads at ch4700 would notably alter the travellers' experience and would interrupt the existing open views at this location. The view to the southbound side of the widened mainline would remain restricted between ch4700 and ch5000 following the introduction of new cuttings associated with the proposed Dowally to Kindallachan Side Road. The view between ch5000 and ch5200 would open up following the loss of existing mature southbound roadside conifers. A proposed anti-glare barrier would be visible along the southbound side of the widened mainline where it passes Guay Farm (ch5300).</p> <p>Between Guay (ch5200) and Kindallachan (ch6000), the view would remain open on both sides of the proposed scheme. North of Kindallachan, a proposed ecological mitigation pond would be visible on the northbound side (ch6400) in the foreground of an open view across the Tay valley floor. An extensive revised cutting (ch7000-7300) associated with the southbound widening would result in the loss of an area of low-lying scrub and a block of mature woodland, and would result in the immediate view becoming more open. The proposed Haugh of Kilmorich Access Track (ch7050-7200) and associated left-in left-out junction (ch7200) would be visible in the foreground of the view to the</p>	medium	Moderate	<ul style="list-style-type: none"> Riparian woodland and scattered individual trees to frame proposed SuDS (and ecological mitigation pond) and to integrate with any adjoining woodland (Mitigation Items P03-LV9, P03-LV14 and P03-LV15) Tops of all revised and proposed cuttings to be rounded to improve landform fit (Mitigation Item P03-LV8) Where soil nailed cuttings are required, the soil nail heads are to be recessed so that they are not visible (Mitigation Item P03-LV8) Special aesthetic treatment to be applied on all visible retaining walls and hard-faced soil nailed slopes to reduce visual impacts (Mitigation Items P03-LV8 and P03-LV12) Special aesthetic treatment to be applied to soft-faced soil nailed slopes, such that they are fully vegetated and mesh and soil nail heads/plates are concealed from view (Mitigation Item P03-LV8) 	low	Slight

Description of Impacts	Winter, Year of Opening		Summary of Mitigation Proposals (Figure 13.5)	Summer, after 15 Years	
	Magnitude of Change	Significance of Impact		Magnitude of Change	Significance of Impact
<p>northbound side of the widened mainline north of Haugh of Kilmorich. A proposed Compensatory Flood Storage Area at ch7300 would further open the view to the northbound side due to the resultant loss of existing mature conifers at this location.</p> <p>The proposed Inch Farm Access Road, Westhaugh of Tulliemet Access Road and associated left-in left-out junction (ch7600) would be visible in the foreground of the open view to the northbound side between Haugh Cottages (ch7500) and Westhaugh of Tulliemet (ch7700). The view to the southbound side would remain restricted by the existing thickly wooded eastern side of the strath, and by a proposed hard-faced soil nailed 70° slope (up to 11.8m high) between ch7300 and ch7700. A proposed Compensatory Flood Storage Area and a proposed SuDS feature would be visible in the foreground of existing open views west at ch7900 and ch8200 respectively.</p> <p>Proposed mammal fencing would be visible along both sides of the proposed scheme adjacent to watercourse crossings. There will be an increase in the size and visual prominence of northbound roadside traffic signs associated with the proposed scheme throughout this stretch.</p> <p><i>Southbound views</i></p> <p>Travelling southbound from where the proposed scheme passes the confluence of the Tay and the Tummel, the view to the southbound side would remain restricted by the thickly wooded eastern slope of the strath, by a proposed soil nailed cutting slope (ch8170-7970) and by a proposed hard-faced soil nailed 70° slope (up to 11.8m high) between ch7700 and ch7300. The view of the strath to the northbound side would feature a proposed Compensatory Flood Storage Area (ch7900), the proposed Inch Farm Access Road, Westhaugh of Tulliemet Access Road (ch7700-7500) and associated left-in left-out junction (ch7600).</p> <p>Continuing southbound, an extensive revised cutting (ch7300-7000) associated with the southbound widening of the mainline would alter the character of the existing road corridor due to the loss of existing low-lying scrub and a block of mature woodland, and would result in the immediate view becoming more open at this location.</p> <p>South of Kindallachan, the open view to the southbound side would feature a new left-in left-out junction (ch5800) associated with the proposed Dowally to Kindallachan Side Road. A proposed SuDS feature would be visible in the foreground of the view to the southbound side (ch5400) on approach to Guay. A proposed anti-glare barrier would be visible along the southbound side of the widened mainline where it passes Guay Farm (ch5300). South of Guay, a proposed southbound roadside cutting would result in the loss of existing mature conifers (ch5200-5000), opening up the view looking east. A proposed (circa 100m long) 1.4m high noise barrier would be visible at this location (approximately ch5240-5140).</p> <p>Between ch5000 and Dowally (ch4100), the proposed Dowally to Kindallachan Side Road and associated earthworks would be introduced to the view on the southbound side. This view would however remain restricted by the remaining roadside woodland. The proposed Guay South Overbridge associated with this new side road at ch4700 would notably alter travellers' views. This proposed new overbridge plus associated Dowally-Guay Link Road and Dowally Farm Access Road</p>			<ul style="list-style-type: none"> Mixed woodland, scattered scrub and individual tree planting on proposed new and revised cuttings between ch560 and ch3800 to integrate with surrounding vegetation and screen proposed mammal fencing (Mitigation Items P03-LV14 and P03-LV17) Proposed stone wall noise barrier at ch4220-4050 to fit with existing stone walls in the area to reduce visual impacts (Mitigation Item P03-LV11) Mixed woodland, hedgerow and individual tree planting to help assimilate the proposed Guay South Overbridge and associated side roads and junction into the landscape (Mitigation Item P03-LV16) Attention to aesthetics of the proposed Guay South Overbridge (Mitigation Item P03-LV12) Mixed woodland planting on earthworks associated with proposed Dowally to Kindallachan Side Road to compensate for woodland loss and screen mammal fencing (Mitigation Items P03-LV14 and P03-LV17) Species rich grassland, scrub and mixed native woodland planting on revised and proposed new earthwork slopes associated with widened mainline north of Kindallachan (Mitigation Items P03-LV14, P03-LV19 and P03-LV20) Individual tree planting to 		

Description of Impacts	Winter, Year of Opening		Summary of Mitigation Proposals (Figure 13.5)	Summer, after 15 Years	
	Magnitude of Change	Significance of Impact		Magnitude of Change	Significance of Impact
<p>on embankment would together interrupt the existing open views looking west at this location.</p> <p>A proposed (circa 160m long) 1.5m high stone wall noise barrier would be visible along the southbound carriageway on approach to Dowally (approximately ch4220-4050). A proposed SuDS feature (ch4000) would be visible on the northbound side where proposed scheme passes Dowally.</p> <p>The introduction of two revised cuttings (ch3700 and ch3200), two proposed retaining walls (up to 5m high) between ch3540 and ch3010 and a proposed new left-in left-out junction (ch3200) would result in the view remaining restricted along the southbound side of the widened mainline where it passes Rotmell Farm. Between Rotmell Farm (ch3200) and Woodlands (ch900) the view to the southbound side would remain restricted following the introduction of proposed new and revised cuttings associated with the widening of the mainline. Proposed soil nailing may be visible on these cutting slopes (prior to vegetation establishment) between ch2090-1950 and ch950-820. The view to the northbound side would remain intermittent.</p> <p>South of Woodlands (ch900) two proposed SuDS features (ch700 and ch200) would be visible on the northbound side, and a revised cutting would be visible on the southbound side. Proposed soil nailing may be visible on this cutting slope prior to vegetation establishment between ch770-740 and ch640-560.</p> <p>Proposed mammal fencing would be visible along both sides of the proposed scheme adjacent to where it crosses existing watercourses. There will be an increase in the size and visual prominence of southbound roadside traffic signs associated with the proposed scheme throughout this stretch.</p> <p><i>Lay-bys</i> Notable changes to views due to removal of existing lay-bys comprise:</p> <ul style="list-style-type: none"> • Removal of Lay-by 1 would remove the opportunity for northbound travelers to experience restricted views from this location. • Removal of Lay-by 2 would remove the opportunity for southbound travellers to experience the attractive open view west over the River Tay and across valley floor farmland. • Removal of Lay-bys 3 and 4 would remove the opportunity for northbound and southbound travellers to experience the filtered view in winter across the strath. • Removal of Lay-bys 5 and 6 would remove the opportunity for northbound and southbound travellers to experience the attractive open views north and west across the strath. • Removal of Lay-by 7 would remove the opportunity for southbound travellers to experience the open view west across the strath. • Removal of Lay-by 8 would remove the opportunity for northbound travellers to experience the open view across the strath on the northbound side and to experience the open view across the small arable field on the southbound side. • Removal of Lay-by 9 would remove the opportunity for northbound travellers to experience the open views north and west across the strath. • Removal of Lay-by 10 would remove the opportunity for southbound travellers to experience the 			<p>integrate proposed Haugh of Kilmorich Access Track, Inch Farm Access Road, Westhaugh of Tulliemet Access Road and associated left-in left-out junctions at ch7200 and ch7600 (Mitigation Items P03-LV14 and P03-LV16)</p> <ul style="list-style-type: none"> • Potential return to agriculture at proposed Compensatory Flood Storage Areas to aid integration with the surrounding landscape (Mitigation Item P03-LV10) 		

Description of Impacts	Winter, Year of Opening		Summary of Mitigation Proposals (Figure 13.5)	Summer, after 15 Years	
	Magnitude of Change	Significance of Impact		Magnitude of Change	Significance of Impact
filtered view looking west across the strath. • Removal of Lay-by 11 would remove the opportunity for northbound travellers to experience the attractive open view north and west across the strath.					

Driver Stress

- 9.6.14 The residual impacts of the proposed scheme on driver stress have been assessed taking into account the identified mitigation measures. It is predicted that overall between Tay Crossing and Ballinluig the proposed scheme will decrease driver stress from current levels for travellers in both the northbound (from moderate to low) and southbound (from high to moderate/low) directions.
- 9.6.15 In contrast, for the Do-Minimum scenario (i.e. without the proposed scheme), driver stress is predicted to increase for travellers in the northbound (from moderate to high) due to predicted increased traffic flows exceeding the traffic volume thresholds of the existing road corridor and remain high for travellers in the southbound direction.

Compliance with A9 Dualling Programme SEA Strategic Aims

- 9.6.16 The A9 SEA identified anticipated significant benefits in relation to road safety and accident severity resulting from the A9 dualling programme, and as noted in this assessment safety benefits are predicted for NMU and vehicular travellers. The proposed scheme provides a safer crossing point for NMUs, and also maintains existing routes with predominantly negligible change or improved journey times in line with the recommendations of the SEA and the proposed scheme objectives, set out in Chapter 2 (Need for the Scheme).
- 9.6.17 The A9 Dualling Programme SEA (Transport Scotland, 2013a) set out Strategic Environmental Design Principles in relation to Population and Human Health, shown in Table 9.26.

Table 9.26: Strategic environmental design principles – population and human health

Population and Human Health	
P1	Continue to facilitate opportunities to access visitor attractions and recreational opportunities throughout the corridor.
P2	Retain, and where possible enhance, overall connectivity between non-motorised user (NMU) routes along and across the corridor.
P3	Incorporate effective rationalisation between NMU routes, safe crossing points and provisions for access to public transport.
P4	Ensure rationalisation of NMU routes and safe crossing points minimises the distance between crossings.
P5	Design any permanent diversions in NMU routes to provide the same, or improved, standard of pathway.
P6	Employ a preference for underpass crossings, where feasible, to minimise landscape and visual impacts.
P7	Consider the safety and quality of experience for non-motorised users of local roads when vehicle access to the A9 is being rationalised (e.g. the potential for traffic increases on the cycle route network).

- 9.6.18 As noted in this assessment, the proposed scheme provides a safer crossing point for NMUs accessing the River Tay via the Dowally - Guay South Overbridge, which also reduces the risk of vehicles having to make emergency stops or evasive manoeuvres for NMUs on the road, therefore potentially reducing the risk of accidents and injury to drivers as well as NMUs (Strategic Design Principles P1, P2, P4, and P5).
- 9.6.19 The proposed scheme also maintains existing routes with predominantly negligible change in journey times in line with the recommendations of the SEA and the proposed scheme objectives, set out in Chapter 2 (Need for the Scheme) and Strategic Design Principles P1 and P2.
- 9.6.20 The bus stops at Dowally and Kindallachan and hail-and-ride option at Guay along the Dowally to Kindallachan Side Road will improve access for those travelling to Ballinluig and Pitlochry from the communities of Dowally, Guay and Kindallachan by local public transport. The link to Pitlochry will also enable connections to be made to long distance routes such as Perth, Edinburgh, Glasgow and Inverness. The provision of the Guay South Overbridge to access the mainline bus stops between Dowally and Guay will improve public safety, as passengers will no longer need to cross the A9 at grade (Strategic Design Principle P3).
- 9.6.21 The assessment of impacts on amenity value (Appendix A9.1, Table A9.2) has considered the potential impact on safety resulting from changes in traffic flows on NMU routes such as the RCR 83

(Strategic Design Principles P7) and concluded that the changes in traffic levels between Do-Minimum 2026 and Do-Something 2026 are not considered to be significant.

9.7 Statement of Significance

Non-Motorised Users (NMUs)

Footpaths/Cycleways and Other Routes

- 9.7.1 With the proposed scheme in place, and taking into account mitigation measures as described in Section 9.5 (Mitigation), **Moderate to Substantial** significant residual impacts during construction are anticipated due to impacts on amenity value and potential diversion lengths for NMUs using:
- Path 53, Path 55 and the section of Path 58 between Dowally Farm and the existing A9 (approximately ch4150 to ch4200) due to temporary closure of access to these paths during construction;
 - CP01 (Path 60), CP03 (Path 66), Path 53 and Path 67a due to impacts on amenity value and potential diversion lengths during construction; and
 - RCR 83 (including RCR 83 (South of Rotmell), Path 56/RCR 83, Path 63/RCR 83, Path 65/RCR 83 and RCR 83 (North of Westhaugh of Tulliemet)) due to temporary closure or disruption to the route.
- 9.7.2 **Moderate** significant residual impacts during operation are anticipated due to increase in journey length and decrease in amenity value for NMUs using Path 60 (CP01) and Path 66 (CP03).
- 9.7.3 During operation, significant impacts (**Moderate**) are predicted for NMUs using CP01 (Path 60) due to increased journey length and decreased amenity value and for NMUs using CP03 (Path 66) due to severance of the path and decreased amenity value.

Access to Outdoor Areas

- 9.7.4 Due to the construction effects on Paths 53, 55, CP01 (Path 60), CP03 (Path 66) described in paragraph 9.7.1, significant impacts (**Moderate to Substantial**) would be present for NMUs accessing the River Tay during construction.
- 9.7.5 No significant impacts during operation have been identified for NMUs accessing the outdoor areas identified in paragraph 9.3.15.

Public Transport

- 9.7.6 During construction, significant impacts (**Moderate to Substantial**) would remain for NMUs accessing the two existing bus stops at Kindallachan due to disruption to access and additional distances NMUs may have to travel to access public transport.
- 9.7.7 The significance of impacts in terms of Community Severance due to the relocation of the two existing bus stops from Kindallachan to between Dowally and Guay during operation is reported in Chapter 8 (People and Communities – Community and Private Assets).

Vehicle Travellers

View from the Road and Lay-bys

- 9.7.8 Following the implementation of the mitigation measures described in Section 9.5 (Mitigation), the proposed scheme would result in **Moderate** significance residual impacts during winter year of opening at Strath Tay: Mid Glen LLCA. By the summer 15 years after opening, following the establishment of mitigation planting, this impact would reduce to non-significant.

Driver Stress

- 9.7.9 As set out in paragraph 9.2.46, driver stress is assessed using a three-point descriptive scale of high, moderate and low rather than assigning significance. With the proposed scheme in place it is predicted that overall between Tay Crossing and Ballinluig driver stress will decrease from current levels for travellers in both the northbound (from moderate to low) and southbound (from high to moderate/low) directions.

9.8 References

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