

11. Visual

Summary

This chapter presents the results of the DMRB Stage 3 assessment of the potential effects resulting from the proposed scheme on views experienced by people from buildings, outdoor public areas, local roads and routes used by pedestrians, cyclists and equestrians (collectively referred to as receptors). The assessment has been undertaken following guidance provided by DMRB guidance and Guidelines for Landscape and Visual Impact Assessment 3rd Edition (GLVIA3), taking into account the results of scoping and consultation.

In this section of the A9 (Pass of Birnam to Tay Crossing) and its associated study area, buildings are generally concentrated in and around the settlements of Dunkeld, Birnam, Little Dunkeld and Inchmagrannachan. Outdoor receptor locations, including the Highland Main Line railway, roads and pedestrian or cycle routes, occur throughout the study area. The existing A9 is already a notable feature in views across and along the valley of the River Tay as it follows the floor of the strath, although established forestry plantations and mature woodland areas on either side of the valley help to provide some screening of the road and vehicles on it. The largely wooded hills enclosing the valley generally limit more distant views towards the strath and the A9.

The design of the proposed scheme has been developed through a process involving engineering, environmental and landscape specialists, to reduce its visual impacts and integrate it with the surrounding landscape. As part of the design, landscape mitigation proposals were also developed to reduce visual impacts. These include embedded mitigation measures developed through an iterative design process (such as the vertical and horizontal route alignment), grading out of embankment and cutting slopes to blend with existing landforms, steepening of slopes and introduction of retaining walls to minimise woodland loss, and new planting to screen the proposed scheme and help further integrate it with the surrounding landscape. The landscape design also considered opportunities to maintain or enhance existing open views of the surrounding landscape, where these are currently a key landscape/visual characteristic. The effectiveness of any new woodland/scrub/boundary planting is expected to increase over time as vegetation matures.

A Design Forum was set up to help ensure a consistency of approach that will reinforce the overall identity of the A9 between Perth and Inverness. The Design Forum has provided specialist aesthetic advice to inform the design of elements of the proposed scheme, such as bridges, retaining walls and planting, providing details of how specific mitigation measures, including those to reduce visual impacts, should be implemented.

Visual effects of the proposed scheme have been compared against the existing baseline views, in which the A9 is already visible from a number of locations. Impacts would typically occur where a receptor is close to the proposed scheme, or where open views are possible towards it, for example where existing roadside planting is removed. In some locations impacts would be limited by screening provided by existing landform, built elements and

vegetation. Visual impacts would generally be associated with physical aspects of the proposed scheme, or from the movement of traffic upon it.

People at 73 building locations and 35 outdoor locations are predicted to experience significant visual effects during construction. During operation, in the winter of the year of opening, people at 43 building locations and 28 outdoor locations are predicted to experience significant visual effects. These effects would be due to the loss of existing roadside vegetation and the increased prominence of new road infrastructure (including earthworks, bridges and retaining walls).

By the summer, 15 years after the opening of the proposed scheme, mitigation planting – mostly in the form of new woodland and scattered individual trees that would have become established – is predicted to have reduced impacts such that people's views at three building locations and five outdoor locations would experience significant effects.

11.1 Introduction

- 11.1.1 This chapter presents the DMRB Stage 3 assessment of the proposed scheme in relation to the effects on the visual amenity and views experienced by people from publicly accessible viewpoints and nearby buildings, including residential properties. The assessment also considers the effects of the proposed scheme upon the views experienced by travellers on the A9.
- 11.1.2 A landscape assessment, which considers the impacts on the landscape resource, is reported in Chapter 10 (Landscape).
- 11.1.3 The chapter is supported by Appendix A11.1 (Assessment of Visual Effects - Buildings), Appendix A11.2 (Assessment of Visual Effects – Outdoor Locations) and Appendix A11.3 (View from the Road Impact Assessment), in addition to the following figures:
- Figure 11.1: Zone of Theoretical Visibility – Existing A9;
 - Figure 11.2: Zone of Theoretical Visibility – Proposed Scheme;
 - Figure 11.3: Visual Effects - Buildings;
 - Figure 11.4: Visual Effects - Outdoor Locations;
 - Figure 11.5: Viewpoint Locations;
 - Figures 11.6 to 11.14: Visualisations;
 - Figure 11.15: View from Existing A9;
 - Figure 10.6: Landscape and Ecological Mitigation; and
 - Figure 10.7: Cross-sections.

Legislative and Policy Framework

- 11.1.4 Section 10.1 (Introduction - Legislative and Policy Framework) of Chapter 10 (Landscape) provides a summary of policies and plans that are relevant to landscape and visual aspects of the Proposed Scheme.

11.2 Approach and Methods

General

- 11.2.1 The visual assessment was undertaken in accordance with [DMRB LA 107 'Landscape and Visual Effects' Revision 2](#) (National Highways et al., 2020a), and with reference to [Guidelines for Landscape and Visual Impact Assessment 3rd Edition \(GLVIA3\)](#) (The Landscape Institute 2013).
- 11.2.2 In addition, the approach to the assessment and design of the landscape and visual mitigation proposals has also been informed by the following documents:
- [DMRB LA 104 'Environmental Assessment and Monitoring'](#) (National Highways et al., 2020b);
 - [DMRB LD 119 'Roadside Environment Mitigation and Enhancement'](#) (National Highways et al., 2020c);
 - [DMRB LD 117 'Landscape Design'](#) Version 0.1.0 (National Highways et al., 2024);
 - [Fitting Landscapes: Securing more Sustainable Landscapes](#) (Transport Scotland, 2014a);
 - [Planning Advice Note \(PAN\) 1/2013: Environmental Impact Assessment Revision 1](#) (Scottish Government, 2017);
 - [The SuDS Manual C753](#) (Construction Industry Research and Information Association (CIRIA), 2015); and
 - [SuDS for Roads](#) (SuDS Scottish Working Party, 2009).
- 11.2.3 A staged approach to the assessment was adopted, comprising the following:
- scoping and consultation, including agreement of the approach to the assessment and the extent of the study area;
 - baseline assessment, which is a description of the visual receptors within the study area following desk study and fieldwork;
 - assessment of the value of views and susceptibility and sensitivity of the visual receptors;
 - description of potential impacts;
 - development of proposed mitigation measures;
 - assessment of temporary residual effects and their significance during the construction phase; and
 - detailed assessment of residual effects and their significance during the operational phase (year 1 winter and year 15 summer).
- 11.2.4 The assessment identifies and assesses the effects of change brought about by the proposed scheme on specific views and on the general visual amenity experienced by people. In accordance with DMRB LA 107, separate assessments were undertaken for the following scenarios:
- during the construction period, assuming a maximum visibility or maximum perceived change situation (i.e. when construction activity is at its peak for any given view);

- in the winter of the proposed year of opening, taking account of the completion of the proposed scheme and the traffic using it, which represents a maximum-impact situation, before any planted mitigation can take full effect; and
- in the summer of the fifteenth year after the proposed year of opening, taking account of the completion of the proposed scheme and the traffic using it, which represents a least-impact situation, where any planted mitigation measures can be expected to be reasonably effective.

11.2.5 In addition, qualitative commentary has been provided on the likely longer-term changes in impact significance beyond 15 years. This is in recognition that in many areas the proposed planting is expected to take considerably longer to reach a level of maturity equivalent to that of areas of woodland affected by the proposed scheme.

11.2.6 The approach and methods have been informed by the recommendations made in the [A9 Dualling Programme Strategic Environmental Assessment \(SEA\) Report](#) (Transport Scotland, 2013). In relation to the Visual Assessment, the SEA recommended that opportunities for additional on-site and off-site screening to reduce the impact of the proposed scheme are explored and that the existing dramatic landscape experience/narrative should be maintained and, where possible, enhanced.

11.2.7 The approach to the development of mitigation proposals has also been informed by professional judgement and experience, and liaison with other relevant disciplines.

Scoping and Consultation

11.2.8 The principal aim of the scoping and consultation was to enable agreement of the approach to the assessment of the key issues to be addressed by the DMRB Stage 3 assessment.

11.2.9 A scoping report was submitted in April 2024, while consultation has also been undertaken throughout the Stage 2 and 3 assessment processes, including with the Environmental Steering Group (ESG). Members of the ESG and consultees of the scoping report with particular relevance to this chapter include NatureScot, Perth & Kinross Council (PKC) and Historic Environment Scotland (HES). In addition, consultation has also been undertaken through the Landscape Forum established for the overall A9 Dualling Programme, which includes NatureScot and PKC. This has included consultation across all A9 dualling projects on the approach to assessment, identification of viewpoint locations, and a review of aspects of the proposed scheme including proposals for landscape and visual mitigation (including consideration of aspects such as slope gradients and replacement woodland opportunities).

11.2.10 Further information is provided in Chapter 7 (Consultation and Scoping).

Study Area

11.2.11 The study area for the assessment was informed by desk studies and fieldwork, in addition to the preparation of visibility mapping for the proposed scheme. A study area comprising a 5km offset from the proposed scheme was considered following professional judgement of the likely impacts, to reflect the area in which the visual amenity of people may be affected significantly.

11.2.12 Within this 5km study area, Zones of Theoretical Visibility (ZTVs) were prepared for the existing A9 and for the proposed scheme, as shown on Figures 11.1 and 11.2. These ZTVs were produced using a bare-earth Digital Terrain Model (DTM) and, as such, illustrate the maximum extent of the area from which the existing A9 and the proposed scheme (including vehicles) may be visible. The ZTVs add 4.5m to the existing A9 or proposed scheme, to represent the potential visibility of traffic, including HGVs. The ZTVs do not, however, take account of screening or filtering of visibility by local landform, built features or vegetation, which were considered during subsequent site survey work and taken account of in this assessment.

Baseline Conditions

11.2.13 The first stage of the assessment is to establish the baseline visual amenity and views against which subsequent change resulting from the proposed scheme can be identified.

11.2.14 Baseline conditions are those that exist at the time of desk and site survey, but also take into account both future changes that are assumed certain (e.g. a proposed development alongside the existing A9 with planning permission or under construction that would result in changes to existing views, or where the receptors would have views of the proposed scheme), as well as considering likely future changes to the landscape that could affect existing visual amenity (e.g. harvesting and re-stocking of commercial forestry plantations).

11.2.15 Baseline information was collected through desk study which included review of the following information sources:

- 1:25,000 and 1:50,000 Ordnance Survey (OS) maps;
- Google Earth web-based photography;
- aerial photography (Bluesky Imagery, 2020);
- Jacobs' GIS environmental constraints datasets (obtained through consultation with relevant stakeholders);
- [A9 Dualling Programme. Strategic Environmental Assessment \(SEA\) Environmental Report](#) (Transport Scotland, 2013);
- A9 Dualling Programme. Strategic Environmental Assessment (SEA). Environmental Report Addendum. Appendix F – Strategic Landscape Review Report (Transport Scotland, 2014b);
- [Perth & Kinross Council: Core Paths Plan](#) (PKC, 2012);
- [Perth & Kinross Council: Highland Area Local Plan](#) (PKC, 2000);
- [Landscape Supplementary Guidance](#) (PKC, 2020);
- [Perth & Kinross Council Local Development Plan 2](#) (PKC, 2019);
- [The Special Qualities of the National Scenic Areas, NatureScot Commissioned Report No.374](#) (NatureScot, 2010);
- [Tayside Landscape Character Assessment: NatureScot Review 122](#) (NatureScot, 1999); and
- [NatureScot, Landscape Character Assessment in Scotland web page and Landscape Character Types Map and Descriptions](#), (NatureScot, 2019).

- 11.2.16 Field surveys were carried out during both winter and summer scenarios between 2020 and 2024 by a team of Jacobs' landscape architects on foot and by car. Information on landscape features and characteristics was collected, as well as photographs of landscape features likely to be physically affected and photographs to/from key receptor locations and viewpoints where people would have visibility of the proposed scheme.

Assessment of Effects

- 11.2.17 The assessment of effects has been undertaken using the approach outlined below, where the level of significance is assessed based on the sensitivity to change of the visual receptor location, taking account of the value of views and susceptibility to change, as well as the magnitude of impacts that would be experienced during construction and operation of the proposed scheme.

Sensitivity

- 11.2.18 In accordance with GLVIA3 and DMRB LA 107, the assessment of sensitivity combines the susceptibility of the receptor (people) to changes in visual amenity arising from the specific type of development proposed, and the value attributed to the existing views.

Value of Views

- 11.2.19 Value attached to views can be indicated by the presence of heritage assets and planning designations or expressed through published or interpretive material. The criteria in Table 11.1 were used, along with professional judgement, to help determine the value of the views experienced at each location.

Table 11.1: Value of views

Value	Views
High	Views from within or looking towards landscapes of international or national importance, typically recognised by designation or from a highly popular visitor attraction where the view forms an important part of the experience, or where the view has important cultural associations.
Medium	Viewpoints from within or looking towards landscapes of regional/district importance typically recognised by designation, or from a moderately popular visitor attraction where the view forms part of the experience, or where the view has a local cultural association.
Low	Viewpoints within landscapes with no designation, and where a view is not associated with a visitor attraction and has little or no cultural associations.

Visual Receptor Susceptibility

- 11.2.20 The susceptibility of visual receptors (people) to change, as defined in GLVIA3, is mainly a function of *'the occupation or activity of people experiencing the view at particular locations; and the extent to which their attention or interest may therefore be focused on the views and the visual amenity they experience at particular locations'* (Landscape Institute and IEMA,

2013, p.113). The criteria in Table 11.2 (based on GLVIA3) were applied, along with professional judgement, to evaluate the susceptibility of different types of receptors.

Table 11.2: Visual receptor susceptibility criteria

Susceptibility	Receptor Type
High	- Residents. - People engaged in outdoor recreation, including users of public rights of way and promoted cycle routes, whose attention is likely to be focused on the landscape and on particular views. - Visitors to heritage assets or other attractions where views of the surroundings are an important part of the experience. - Communities where views contribute to the landscape setting and are enjoyed by residents. - Travellers on scenic routes where awareness of views is likely to be higher than on other routes.
Medium	- Travellers on road, rail or other transport routes. - People at their place of work whose focus may be on the setting or surroundings as part of their work.
Low	- People engaged in outdoor sport or recreation, which does not involve appreciation of views. - People at their place of work, whose attention may be focused on their work and where the setting is not important to the quality of working life.

Evaluation of Visual Receptor Sensitivity

11.2.21 The sensitivity of visual receptors (people) to changes in their views was based on consideration of both the susceptibility of the receptor and the value of views. Table 11.3 presents the criteria used, along with professional judgement, to inform the assessment of sensitivity. All residential receptors were assessed to be of high or very high sensitivity as they are considered particularly susceptible to changes in their visual amenity. Occupants of properties with views of the proposed scheme are more likely to experience views for longer periods of time than other receptors and therefore have a higher value. Where two or more outdoor locations of different sensitivity follow the same route (e.g., a road and a cycle path), they were assessed as one outdoor location and were assigned whichever sensitivity was the higher/highest to identify the scenario with the greater/greatest potential for a significant effect on a given route.

Table 11.3: Visual receptor sensitivity criteria

Sensitivity	Criteria
Very High	Locations where the changed view is of very high value and where the receptor (people) would experience a considerable change to visual amenity by reason of the nature of activity and their expectations.

Sensitivity	Criteria
High	Locations where the changed view is of high value and/or where the receptor (people) would experience an appreciable change to visual amenity by reason of the nature of activity and their expectations.
Moderate	Locations where the changed view is valued but not critical to amenity and/or the nature of the view is valued but not a primary consideration of the users (locations where users are likely to spend time outside of participation in their activity looking at the view and users of workplaces with windows that take advantage of views).
Low	Locations where the changed view is of limited importance and/or users are of limited susceptibility to change (receptors unlikely to consider the views an important element of their activity will generally be assessed to be of low sensitivity).
Negligible	Locations where the changed view is unimportant and users are not susceptible to change because of the nature of the activity in which they are engaged.

Magnitude

- 11.2.22 As noted in GLVIA3, the magnitude of change that would be experienced by the identified visual receptor (people) relates to the size or scale of change, its geographical extent, and the duration and reversibility of impact. DMRB LA 107 notes that the nature of change, distance, screening and the direction and focus of the view are also important considerations in addition to the removal of past mitigation or existing vegetation and whether the receptor is static or moving.
- 11.2.23 Magnitude of visual impact was assessed on a five-point scale, taking account of the degree of visual change that would result from the proposed scheme using the criteria provided in Table 11.4, along with professional judgement. The permanent operation-phase impacts of the proposed scheme are of long-term duration and largely irreversible and, therefore, have a higher magnitude. Temporary construction-phase impacts such as those arising from haul roads, are typically short-term and reversible and, therefore, may have a lower magnitude.

Table 11.4: Magnitude of visual impact

Magnitude	Criteria
Major	Where the proposed scheme or elements of it would dominate the view and fundamentally change its character and components over a large geographic area.
Moderate	Where the proposed scheme or elements of it would be noticeable in the view, affecting its character and altering some of its components and features over a notable geographic area.
Minor	Where the proposed scheme or elements of it would be perceptible in the view, but not alter the overall balance of components and features which characterise the view over a small geographic area.

Magnitude	Criteria
Negligible	Where the proposed scheme or elements of it will be a very small part of the overall view, over a small geographic area, and may be missed by the casual observer and/or scarcely appreciated.
No change	No perceptible change in the overall view.

Significance of Effects

- 11.2.24 The significance of visual effects has been determined through professional judgement, with reference to the significance matrix provided below in Table 11.5 (and as set out in Table 3.8.1 of DMRB LA 104). The determination of the significance of effect has been based on consideration of both the sensitivity of the visual receptors to changes in their views and the predicted magnitude of impacts resulting from the proposed scheme. Significance is defined as Neutral, Slight, Moderate, Large or Very Large, in addition to being either adverse or beneficial as shown in Table 11.5.

Table 11.5: Significance matrix

Magnitude Sensitivity	No change	Negligible	Minor	Moderate	Major
Very High	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large
High	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
Moderate	Neutral	Neutral or Slight	Slight	Moderate	Moderate or Large
Low	Neutral	Neutral or Slight	Neutral or Slight	Slight	Slight or Moderate
Negligible	Neutral	Neutral	Neutral or Slight	Neutral or Slight	Slight

- 11.2.25 Effects assessed as being of **Moderate** significance or greater are considered significant in the context of this assessment and mitigation would generally be required to reduce these where practicable. Effects of Moderate significance or greater are also considered as being significant in the context of the EIA Regulations.

Table 11.6: Significance of visual effects

Significance of Effect	Criteria
Very Large	Adverse: The proposed scheme would cause major deterioration to a view or loss of a view from a very highly sensitive receptor and would constitute a major discordant element in the view.

	▪ Beneficial: The project would lead to a major improvement in a view from a very highly sensitive receptor.
Large	▪ Adverse: The proposed scheme would cause major deterioration to a view or loss of a view from a highly sensitive receptor and/or would constitute a major discordant element in the view. ▪ Beneficial: The project would lead to a major improvement in a view from a highly sensitive receptor.
Moderate	▪ Adverse: The proposed scheme would cause obvious deterioration to a view from a moderately sensitive receptor, or perceptible damage to a view from a more sensitive receptor. ▪ Beneficial: The proposed scheme would cause obvious improvement to a view from a moderately sensitive receptor, or perceptible improvement to a view from a more sensitive receptor.
Slight	▪ Adverse: The proposed scheme would cause limited deterioration to a view from a receptor of medium sensitivity or cause greater deterioration to a view from a receptor of low sensitivity. ▪ Beneficial: The proposed scheme would cause limited improvement to a view from a receptor of medium sensitivity or would cause greater improvement to a view from a receptor of low sensitivity.
Neutral	▪ No perceptible change in the view.

11.2.26 For the purposes of this assessment, effects on visual amenity are considered adverse unless otherwise stated.

Cumulative Effects

11.2.27 Potentially significant cumulative effects of the proposed scheme, and those of the proposed scheme in combination with other reasonably foreseeable developments, are assessed in Chapter 21 (Assessment of Cumulative Effects).

Limitations to Assessment

11.2.28 Some parts of the DMRB Stage 3 field assessment work were undertaken during the summer months with the trees in leaf, so professional judgment was required at these locations to anticipate the likely visibility of the proposed scheme in the winter months.

11.2.29 Some visual receptor locations were not readily accessible, so it was necessary to estimate the likely visibility of the proposed scheme through walkover surveys of the surrounding areas assisted by use of ZTVs and web-based photography.

- 11.2.30 Construction impacts were assessed based on the probable scenario using professional judgement and experience, in addition to the constructability review undertaken by the engineering team. Limited information about the details of the construction phase was available at the time of assessment, bearing in mind that the proposed scheme would be procured under a design-and-build type contract. The locations and details of the construction compounds were not available during DMRB Stage 3 assessment as they would be subject to separate consents obtained by the Contractor.
- 11.2.31 Proposed roadside signs over 3m high, as shown on Figure 11.3, have been included in the assessment. The locations of these signs are approximate only.

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

- 11.2.32 A description of the approach and methods used in the View from the Road Impact Assessment is provided in Section 1.2 (Approach and Methods) of Appendix A11.3 (View from the Road Impact Assessment).

11.3 Baseline Conditions

- 11.3.1 As noted in GLVIA3, the assessment of landscape and visual effects are separate but linked procedures. The visual context and baseline description of the study area is therefore incorporated to a considerable extent in Chapter 10 (Landscape) and supporting Appendix A10.1 (Landscape Character).

Visual Receptors

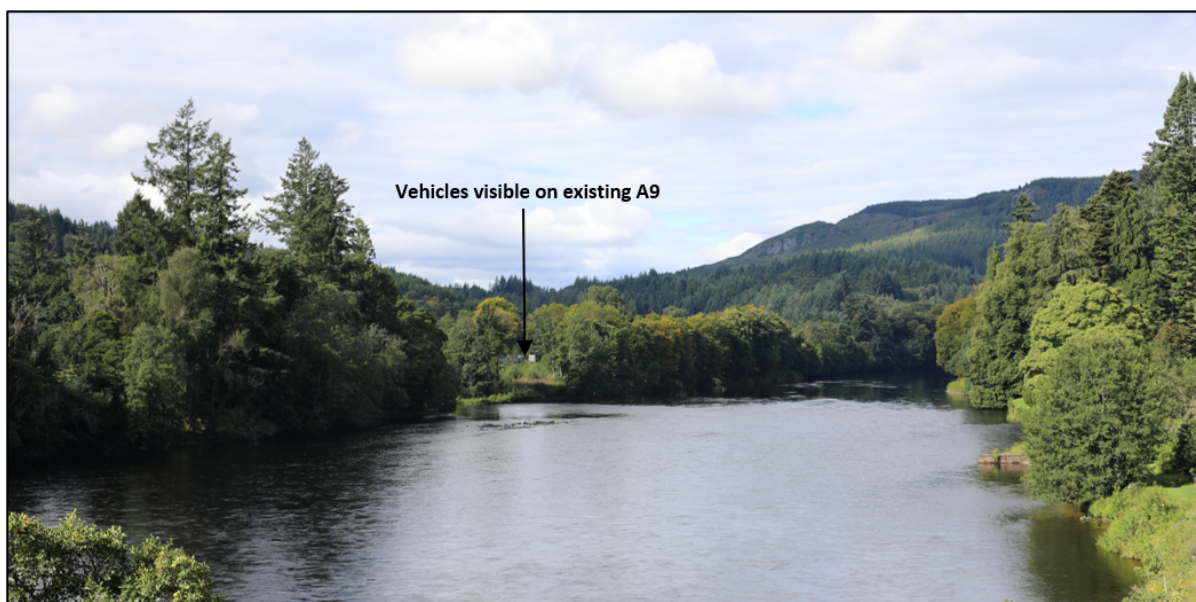
- 11.3.2 Visual receptor locations (places where individuals and/or groups of people have the potential to be affected by views of the proposed scheme) within the study area largely comprise residential properties within the settlements of Dunkeld, Birnam and Little Dunkeld, together with individual farmsteads and properties along the route corridor. In addition there are a number of sites used for outdoor recreation and travel routes including roads, the Highland Main Line railway, and recreational walking and cycling routes, which pass through scenic areas.
- 11.3.3 The existing A9 is a notable feature in many views across the Tay valley as it runs along the eastern edge of the valley floor, although established mature woodland areas provide some screening to/from the A9. The topography of the area generally limits views to within the valley itself, with the rising valley sides adjoined by gradually increasing hills to the east and west helping to screen more distant views into the area.
- 11.3.4 Following a desk-based assessment, a draft list of potential visual receptor locations within the study area was compiled. These were then visited on site to verify the list as necessary, record and photograph the existing baseline views and consider likely changes to them resulting from the proposed scheme. As a result, 109 building locations and 38 outdoor locations and routes with potential for people to experience significant visual impacts were identified within the study area. The building locations are shown on Figure 11.3 and listed in Appendix A11.1. Outdoor locations and routes are shown on Figure 11.4 and listed in Appendix A11.2.

Building Locations

- 11.3.5 The main settlements within the study area comprise Dunkeld on the north bank of the River Tay, and Little Dunkeld and Birnam, which lie close to each other, on the south bank of the River Tay. The village of Inver lies to the west of Little Dunkeld and the hamlet of Inchmagrannachan in the north of the study area. In addition to these settlements, scattered clusters of properties and individual farmsteads are located on the lower hill slopes and along the valley floor.

Dunkeld

- 11.3.6 The town of Dunkeld lies on the northern bank of the River Tay. The town is set within mature woodlands, which cover the surrounding hills and line the river valley. It contains the historically important Dunkeld Cathedral, and the renowned 19th-century Dunkeld Bridge (designed by Thomas Telford) forms an important crossing point for the River Tay (refer to Photograph 11.1).



Photograph 11.1: View looking south-west towards the existing A9 from Dunkeld Bridge

- 11.3.7 The existing A9 lies approximately 0.5km south of the settlement. Views from the town are generally short-distance and internal in nature with more long-distance views obtained from locations close to the river where attention is focussed upon the wooded hills surrounding the town and along Strath Tay. Views of the existing A9 road corridor are generally screened by mature woodland that lines the banks of the River Tay. However, since the recent felling of a tall conifer plantation between the River Tay and the A9 to the immediate west of the River Braan (replanted with young broadleaved trees), filtered views of traffic on the A9 from the Cathedral grounds have been opened up (Viewpoint 8 in Figure 11.13).

Birnam and Little Dunkeld

- 11.3.8 The town of Birnam and the adjacent settlement of Little Dunkeld, lie on the southern bank of the River Tay to the south of Dunkeld. Birnam is bounded by the steep wooded Birnam Hill

to the south. The existing A9 and the Highland Main Line railway form a similarly aligned transport corridor delineating the southern boundary of the town, with Dunkeld & Birnam Station located at the base of Birnam Hill.

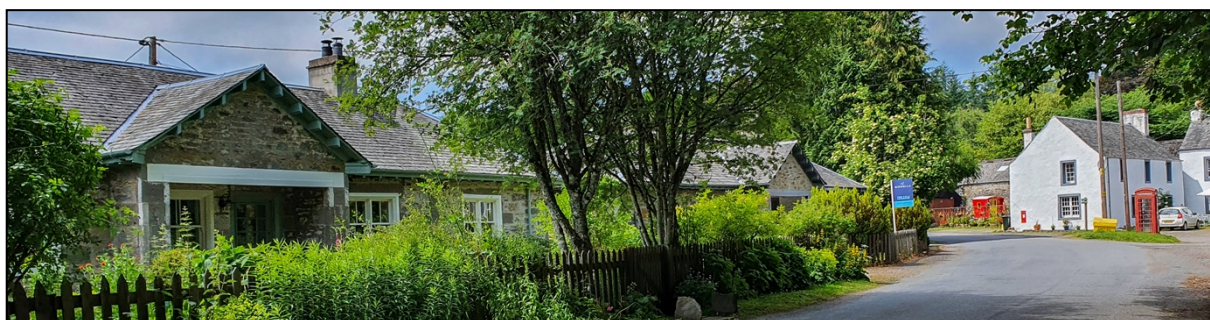
- 11.3.9 Views from the town are generally short range. Longer-distance views can be obtained close to the river, where views are focussed upon the wooded hills surrounding the town and along the River Tay. The A9 runs along the southern edge of the settlement and is set on embankment adjacent to Birnam and in cutting adjacent to Little Dunkeld. Views towards the A9 from the town are generally screened by landform, buildings and roadside trees. Representative views from Birnam and Little Dunkeld towards the existing A9 are provided in Photograph 11.2 and in Figures 11.10 - 11.12 (Viewpoints 5, 6 and 7).



Photograph 11.2: View looking south-east towards the existing A9 from Perth Road, Birnam

Inver

- 11.3.10 Inver is a small village located on a low-lying strip of land between the southern bank of the River Tay and the northern bank of the River Braan. The existing A9 corridor runs to the immediate north of the village on embankment at approximately 0.1km away, with views of the existing A9 largely screened by the intervening roadside woodland (refer to Photograph 11.3), although some properties on the northern edge of the settlement experience relatively open views of the road corridor.



Photograph 11.3: View looking north-west from Inver

Inchmagrannachan

- 11.3.11 The linear hamlet of Inchmagrannachan is located to the north of the study area set along the western side of the B898. The properties within the hamlet are typically orientated eastwards with open, long-distance views across Strath Tay. Views of traffic on the existing A9 are in part filtered or screened by roadside vegetation. The existing Tay Crossing is also obliquely visible from the settlement, seen within the setting of the wooded valley to the south (refer to Photograph 11.4)



Photograph 11.4: View looking south-east towards the existing Tay Crossing from Inchmagrannachan

Scattered Properties

- 11.3.12 Scattered individual residential properties and farms are also found within the study area. A number of these properties are oriented to take advantage of long-distance views along and across Strath Tay.
- 11.3.13 Deans Park, Roman Bridge Cottage, Ringwood Cottage, Rowan Cottage, Willow Tree Cottage, Oak Tree Cottage and Inkpot Cottage are within and to the west of Murthly Castle Garden and Designed Landscape (GDL). These properties are set within woodland, which reduces their existing visibility of the A9.
- 11.3.14 Properties at Ladywell and Ladywell Cottage to the west of Little Dunkeld, are set within a more open landscape; however, the ZTV in Figure 11.1 indicates that views towards the A9 from these locations are limited by intervening landform.

Outdoor Locations

A9 Road Users

- 11.3.15 The existing A9 is one of the main roads within the study area. Impacts on views experienced by travellers on the A9 road users are described in Appendix A11.3 (View from the Road Impact Assessment).

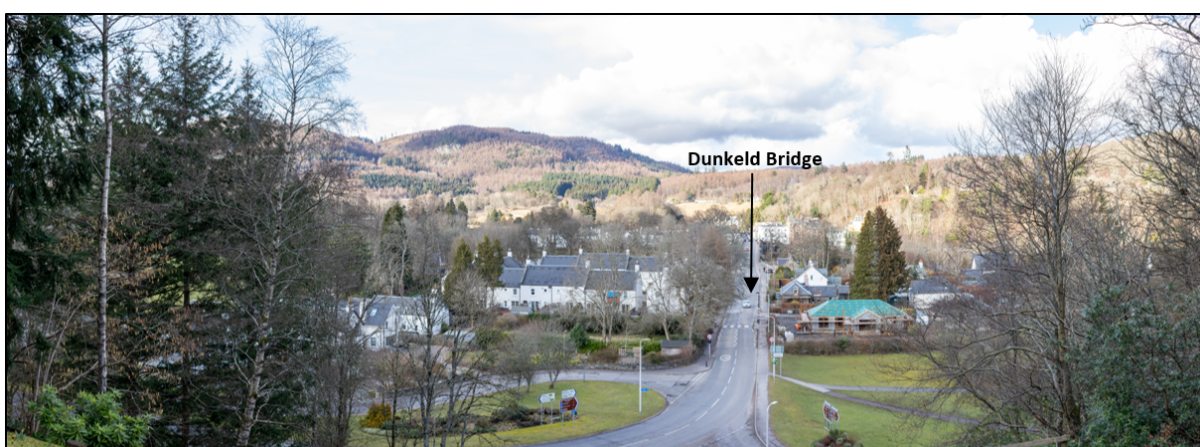
A822 Road Users

- 11.3.16 The A822 follows the historic route of the Old Military Road along Strathbraan and joins the existing A9 approximately 0.3km to the west of Little Dunkeld. The route rises from the Tay valley and passes through farmland set to pasture, which allows for largely open views.

However, on the section of the A822 closest to the existing A9 route corridor, from the rail bridge to Ladywell, the undulating landform limits views towards the existing A9.

A923 Road Users

- 11.3.17 The A923 is the main route from Dunkeld to Blairgowrie and joins the existing A9 at Little Dunkeld. The route crosses the River Tay at Dunkeld Bridge, passes through the centre of Dunkeld, and continues uphill through woodland and farmland lined with roadside trees (refer to Photograph 11.5). Filtered views of the A9 may be obtained from some locations close to the river by southbound travellers but in general views towards the existing A9 from the A923 are screened by intervening vegetation.



Photograph 11.5: View looking north along the A923 from the Dunkeld and Little Dunkeld War Memorial

A984 Road Users

- 11.3.18 The A984 runs east from the centre of Dunkeld along the northern bank of the River Tay to Caputh. The ZTV in Figure 11.1 indicates potential visibility of the existing A9 corridor from much of the A984; however, from Dunkeld to Newtyle the land to the south of the A984 is heavily wooded and thus views of the existing A9 are screened by the intervening vegetation. To the east of Newtyle the landscape becomes more open but here views are limited by the roadside vegetation bounding the A9. A representative view from the A984 towards the existing A9 is provided in Photograph 11.6.



Photograph 11.6: View looking south-west towards the existing A9 from the A984 near Newtyle Farm

B867 Road Users

- 11.3.19 Prior to construction of the existing A9, the B867 was the original main route between Perth and Dunkeld through the Pass of Birnam. The road passes under the Highland Main Line railway bridge to the north of the Pass, and then runs parallel with both the railway to the south and the existing A9 to the north for approximately 2km until terminating at a wide at-grade T-junction with the existing A9, 0.4km to the south of Birnam (Viewpoint 3 in Figure 11.8). The B867 is edged by woodland and views to both the rail line and the existing A9 are filtered by trees.

B898 Road Users

- 11.3.20 The B898 joins with the existing A9 immediately to the south of the Tay Crossing within the northern part of the study area and continues north along the western bank of the River Tay passing the linear hamlet of Inchmagrannachan. The road follows the edge of the flat River Tay floodplain and passes through woodland at its southern end, which opens out to fields set to pasture surrounded by low wooded hills. Views to the existing A9 are partial and glimpsed through intervening vegetation, with the Tay Crossing seen in oblique views along Strath Tay to the south.

Minor Roads Users

- 11.3.21 Perth Road runs through Birnam and Little Dunkeld and is enclosed by buildings within these settlements, roadside vegetation, dense woodland and the surrounding hills (Viewpoints 6 and 7 in Figures 11.11 and 11.12). Views along the road are directed by the built form and vegetation towards more distant hills in the west and visibility of traffic on the existing A9 is limited.
- 11.3.22 King's Pass minor road runs west out of Dunkeld, past Polney Loch and curves northwards around the lower slopes of Craig a Barns. Visibility of the existing A9 (including the Tay Crossing) is filtered during winter and largely screened during summer in views looking west across Strath Tay due to intervening woodland.

Rail Users

- 11.3.23 The Highland Main Line railway follows a broadly similar route to the existing A9, running in parallel with it and alternating to the north and south of the road corridor through the study area.
- 11.3.24 From the Pass of Birnam to the foot of Creag na Buire, the routes of the A9 and the Highland Main Line railway are separated by a strip of dense woodland, which restricts views. North of this point, the Highland Main Line railway and existing A9 run in close parallel for approximately 2km, passing the settlements of Birnam and Little Dunkeld, which are served by Dunkeld & Birnam Station (Category A Listed Building). Over this stretch of the shared route corridor, the proximity of the two routes ensures that there are clear views of the existing A9 for rail travellers and vice versa.

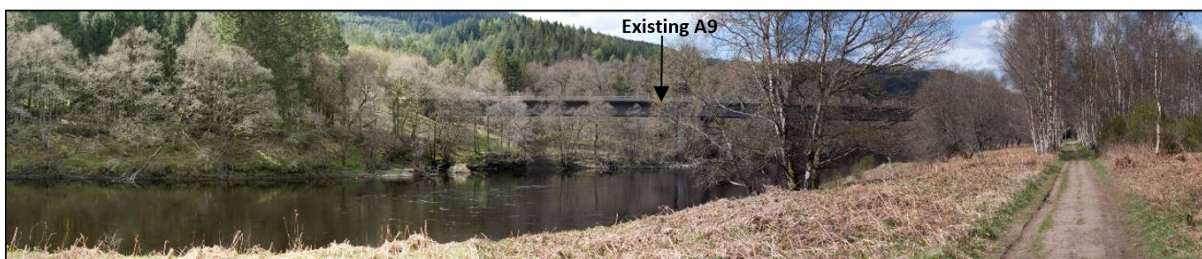
- 11.3.25 To the north of Little Dunkeld the two routes then diverge, with the Highland Main Line railway taking a route to the south of Inver, passing over the River Braan and through a tunnel that cuts under the existing A9. The two routes then converge and run close together along the western side of the Tay valley, with the existing A9 on the more elevated route, until just south of the Tay Crossing. The route corridor is shared over a section of approximately 2km, allowing rail passengers to obtain mostly uninterrupted views of the A9. A representative view towards the existing A9 from the footbridge at Dunkeld & Birnam Station is provided in Photograph 11.7.



Photograph 11.7: View looking north towards the existing A9 from the Dunkeld & Birnam Station Footbridge

Cyclists on NCR 77

- 11.3.26 National Cycling Route (NCR) 77, which forms part of the National Cycle Network, runs between Dundee and Pitlochry via Perth and is known as the Salmon Run route. In the southern part of the study area the route follows the B867 north from the Pass of Birnam to the junction with the existing A9 (Viewpoint 3 in Figure 11.8). NCR 77 then changes to an off-road cycle path, which runs adjacent to the existing A9 and Highland Main Line railway and passes underneath the existing A9 at Birnam Glen beside Dunkeld & Birnam Station, turning east to follow the A923 across Dunkeld Bridge. At Stanley Hill in Dunkeld the cycle route leaves the main road and follows an off-road path through Cathedral Park and downhill to the grounds of the Dunkeld House Hotel. The route then skirts the east bank of the River Tay on an off-road path, surrounded by dense woodland, and reaches the northern boundary of the study area by passing underneath the Tay Crossing.
- 11.3.27 Direct views to the existing A9 are obtained from NCR 77 along a short section that runs adjacent to the existing A9, from the junction with the B867 to the turning for Birnam. Views are open, with the sparse roadside vegetation allowing cyclists clear views of the main carriageway and traffic. Over much of the rest of the route, views to the existing A9 are filtered by intervening vegetation either surrounding the cycle route or by the roadside trees adjacent to the A9. In the northern section of the route, direct views of the Tay Crossing are obtained by users of NCR 77 as it approaches the bridge before passing underneath. Representative views from NCR 77 towards the existing A9 where it crosses the River Tay are provided in Photograph 11.8.



Photograph 11.8: View looking north-west towards the existing A9 from NCR 77, south of the Tay Crossing

Cyclists on RCR 83

- 11.3.28 Regional Cycle Route (RCR) 83 runs from the north of Dunkeld to beyond the northern extents of the study area. It is in part located within Dunkeld House GDL and the majority of RCR 83 runs through dense woodland, limiting visibility beyond the route extents.

Walkers on Designated Routes and Local Paths

- 11.3.29 Within the study area, Core Paths generally coincide with local roads and tracks, and cover the hills and the banks of the Rivers Tay and Braan. Core Paths on hill slopes within the study area largely pass through woodland (for example DUNK/65), where views of the existing A9 are therefore limited. Similarly, views from the Core Paths that follow the banks of the River Tay (such as DUNK/145) are generally restricted, with glimpsed views to the route corridor from some locations that are more open in nature.



Photograph 11.9: View looking south towards the existing A9 from Core Path DUNK/145, between Dunkeld Cathedral and Dunkeld House Hotel

- 11.3.30 Direct views towards the existing A9 are obtained from Core Path DUNK/142, which runs adjacent to the A9 from the junction with the B867 to the turning for Birnam. From this path views are open, allowing walkers to experience clear views of the main carriageway. Direct views of the existing A9 will also be experienced from some locations by walkers on the Core Paths surrounding Inver.

Recreational Locations

- 11.3.31 Murthly Castle Estate is a historically important, Inventory Garden and Designed Landscape (GDL) and also a visitor attraction with fishing and shooting in addition to woodland walking routes. Views from the estate to the existing A9 are possible in some locations but tend to be limited by dense woodland.
- 11.3.32 Dunkeld Cathedral (Viewpoint 8 in Figure 11.13) is a historically important cathedral where the setting and visual amenity experienced are an aspect of the visit. It falls within the Dunkeld House GDL, the grounds of which include many footpaths from which views across the River Tay can be experienced. Views to the existing A9 west of where it crosses the River Braan are obtained looking south across the River Tay from the cathedral grounds with further views of the existing A9 where it passes below Craig Vinean experienced west of what is now the Dunkeld House Hotel.
- 11.3.33 Birnam Highland Games Park lies on the western edge of the town, bordered by the River Tay to the north, the River Braan to the west and the existing A9 to the south. The park encompasses tennis courts and a bowling green and is also used for general recreation and as the site of the annual Birnam Highland Games. Filtered views of the existing A9 can be experienced from the Park (refer to Photograph 11.10).



Photograph 11.10: View looking south towards the existing A9 from Birnam Highland Games Park

- 11.3.34 The Hermitage is a GDL, managed by the National Trust for Scotland and is a popular visitor attraction incorporating a folly, waterfall and woodland walks. The Hermitage car park is located within the woodland, adjacent to the existing A9. Glimpsed views of the existing A9 are possible from the car park, however, from locations further into the GDL views tend to be screened by woodland.
- 11.3.35 The Pine Cone Viewpoint (Viewpoint 9 in Figure 11.14) is a modern folly situated on the northern slopes of Craig Vinean within Craigvinean Forest and has an elevated view along

Strath Tay. The viewpoint overlooks the existing A9 route to the north and has views filtered by trees to the east.

Views from the Existing A9 and Lay-bys

- 11.3.36 A description of the baseline conditions to the View from the Road is provided in Section 1.3 (Baseline Conditions) of Appendix A11.3 (View from the Road Impact Assessment), which describes the sequence of views experienced by vehicle travellers for both northbound and southbound journeys between the Pass of Birnam and the Tay Crossing, with reference to the special qualities of the River Tay (Dunkeld) National Scenic Area (NSA).

11.4 Potential Impacts and Effects

Visual

- 11.4.1 This section provides a summary of the potential visual effects that could occur during construction and operation. Mitigation of visual impacts would be achieved predominantly through refinement of horizontal and vertical alignment, earthworks and landscaping measures, which are incorporated into the design as assessed and reported in this Environmental Impact Assessment Report (EIAR) and described in detail in Chapter 5 (Iterative Design Development) and Chapter 6 (The Proposed Scheme). The key mitigation measures, such as road alignment, limiting the extent of the cutting slopes (for example through use of retaining walls), minimising loss of woodland that provides screening, and design of the bridge structures are all embedded in the design. It is therefore not practicable to undertake an assessment of the potential visual impacts of the construction and the operational scheme in the absence of mitigation.

Construction

- 11.4.2 The following activities typically associated with the construction of road schemes generally cause temporary visual impacts on receptors:
- removal of vegetation close to receptor locations (e.g. residential properties at the settlements of Birnam, Little Dunkeld and Inver and NMU routes along the A9 corridor);
 - 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 site-compound areas including site accommodation and parking;
 - construction of a Compensatory Flood Storage Area, SuDS features and swales;
 - 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.

- 11.4.3 Potential impacts on visual amenity during construction are likely to result from the construction of the new grade-separated junctions at Birnam and Dalguise and associated large-scale earthworks, plus the new at-grade, five-spur elongated Dunkeld Junction roundabout. The removal of mature woodland and substantial new earthworks (including revisions to existing wooded cuttings) would open up views of the construction works along much of the proposed scheme.
- 11.4.4 Construction of the proposed Dunkeld & Birnam Station Car Park and new Pedestrian Underpass structure providing access to the station (ch3350), plus the temporary pedestrian footbridge across the widened mainline, would also result in potential impacts on visual amenity.
- 11.4.5 The introduction of a temporary River Tay Bridge launching platform would result in excavation, the removal of existing woodland and substantial new earthworks (including rock cutting and soil nailed slopes) during the construction phase, together with temporary tall vertical elements including plant and structures such as King posts.
- 11.4.6 A number of other structures, such as bridges, culverts and retaining walls, would also be constructed in phases, taking between less than a month and up to approximately 24 months to be completed, depending on the structure, with the average time per structure estimated between approximately six and 12 months. The total time period for construction of the proposed scheme is estimated to be approximately 3 to 4 years.
- 11.4.7 Drainage (SuDS) features (in the form of retention ponds, detention basins, swales and geocellular storage systems) would also be required to provide a level of treatment for any surface water runoff during the construction of the proposed scheme. A Compensatory Flood Storage Area would also be excavated during the construction period. It is anticipated that these temporary construction features would be in similar locations to those associated with the operation of the proposed scheme, as shown on Figure 10.6.
- 11.4.8 Visual effects on people at buildings and outdoor locations resulting from the construction activities are detailed in Appendix A11.1 and Appendix A11.2 respectively. All effects during construction would be temporary and adverse. The significant visual effects (Moderate or greater) resulting from the construction activities are summarised in Table 11.6. Mitigation measures including programming of works to minimise disruption, careful selection of plant and machinery, limiting night-time working and encouraging appropriate siting of plant and material storage areas to minimise their visual impact were taken into account in the assessment.

Operation

- 11.4.9 Potential impacts on visual amenity during operation are described below for the proposed scheme. 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:
- Increased visibility of traffic due to changes in horizontal and/or vertical road alignment.

- Loss of screening vegetation/property boundary features for residential properties at Birnam, opening up views to traffic (including headlights at night) and the proposed scheme.
- Changed appearance of the landform along the road corridor as a result of large-scale earthworks on the hillsides, the potential requirement for reinforced slopes and/or retaining structures, and the introduction of a Compensatory Flood Storage Area within the rural landscape.
- Increased extents of visible road infrastructure including the widened mainline, realigned side roads and local access and NMU track diversions.
- Introduction of the new grade-separated junctions and associated large-scale earthworks and structures at Birnam (ch1800-2300) and Dalguise (ch6300-7300).
- Introduction of the new at-grade, five-spur elongated Dunkeld Junction roundabout (ch4100), realigned side roads and associated cuttings, embankments and retaining walls.
- Introduction of new bridge crossings over Inchewan Burn (ch3450) the River Braan (ch4350) and the River Tay (ch7550).
- Introduction of SuDS features along the route.
- Introduction of a Compensatory Flood Storage Area.
- Introduction of mammal fencing along the route.
- Introduction of roadside signage including Advanced Direction Signs.
- Introduction of a noise barrier (approx. ch1240 – ch1340).
- Introduction of wattle screen fencing at Dunkeld & Birnam Station and a 2m high stone parapet wall at the Dunkeld & Birnam Station Replacement Car Park in Birnam.
- Introduction of road lighting at the Dunkeld Junction Roundabout.
- Alteration of vegetation patterns resulting from tree loss and stripping of groundcover vegetation and topsoil, followed by reinstatement and new planting.

11.4.10 Visual effects on building locations are detailed in Appendix A11.1 (Assessment of Visual Effects - Buildings) and outdoor locations in Appendix A11.2 (Assessment of Visual Effects – Outdoor Locations). The significant visual effects (Moderate or greater) are summarised in this chapter in Table 11.8. Mitigation measures incorporated within the design of the proposed scheme, including planting and grading of cutting and embankment slopes to shallower gradients to improve integration with the surrounding landform, are taken into account in the assessment.

Views from the Road

11.4.1 An assessment of potential adverse effect on drivers' views from the road during construction and operation (including reference to the special qualities of the River Tay (Dunkeld) National Scenic Area (NSA)) is provided in Section 1.4 (Potential Effects) of Appendix A11.3 (View from the Road Impact Assessment)

11.5 Mitigation

Embedded Mitigation

- 11.5.1 The alignment of the proposed scheme has been developed through an iterative design process (initiated as part of the DMRB Stage 2 assessment), involving both engineering and environmental specialists. The process has comprised seven design iterations, each of which has been informed and reviewed by landscape specialists in order to reduce potential landscape and visual impacts and integrate the road with the surrounding landscape. These inputs have influenced the following embedded mitigation measures:
- the route alignment;
 - the form and extents of earthworks along the length of the route; and
 - the location and form of SuDS features.
- 11.5.2 These measures have been adopted in order to reduce potential impacts on sensitive visual receptors such as residential properties and scenic recreational areas and routes.
- 11.5.3 Further details of embedded mitigation are provided in Chapter 5 (Iterative Design Development). Further details of the alternative options considered at DMRB Stage 2 are provided in Chapter 4 (Alternatives Considered).

Standard and Project-specific Mitigation

- 11.5.4 As explained above, much of the mitigation of visual impacts is embedded in the design of the proposed scheme. However, landscape mitigation proposals were also developed to further reduce visual impacts. These include: grading out of embankment and cutting slopes to blend with existing landforms; use of retaining structures or steepening new slopes where appropriate to reduce loss of mature woodland; sensitive contouring and planting of SuDS detention basins, retention ponds and swales; potential for returning Compensatory Flood Storage Areas to their former land cover/land use where practicable; and new woodland/scrub planting to screen the proposed scheme and help integrate it with the surrounding landscape. The landscape design also considered opportunities to maintain or enhance open views. The effectiveness of the new planting is expected to increase over time as vegetation matures.
- 11.5.5 Details of the visual mitigation measures for both construction and operational phases are as per the landscape mitigation set out in Section 10.5 of Chapter 10 (Landscape) and illustrated on Figure 10.6 and are not replicated here. Specialist aesthetic advice informed the design of elements of the proposed scheme, such as bridges, retaining walls, SuDS features and planting, providing details of how specific mitigation measures, including those to reduce visual impacts, are to be implemented.
- 11.5.6 Details of the mitigation measures that will help to reduce visual impacts at specific receptor locations are provided in Section 11.7, and in Appendices A11.1 and A11.2. The effects of proposed planting in mitigating impacts over time are also described in Section 11.7.

Lighting

- 11.5.7 The introduction of artificial lighting from road lighting and other fixtures may create or contribute to light pollution in the form of sky glow, glare and/or light trespass/spill. It is therefore beneficial to minimise these potential adverse effects on landscape character and protect views of dark skies in rural areas.
- 11.5.8 Where lighting is essential, it has been incorporated into the design of the proposed scheme such that the effect on the night sky is minimised. The proposed scheme will avoid excessive, unnecessary and obtrusive lighting through the appropriate selection, location and arrangement of lighting elements to achieve the necessary safety standards of useful light, while minimising intrusiveness in the form of spillage, glare and reflection.
- 11.5.9 Special attention will be given to minimising the landscape and visual impacts of the lighting columns and fixings and to prevent unnecessary glare or light spill. In order to limit light pollution from the proposed street lights, Light Emitting Diodes (LEDs) or similar, which can be dynamically controlled according to traffic flows, will be utilised on the proposed scheme. This form of lighting, known as Full Cut Off lighting, directs light of appropriate strength where it is needed and controls the unwanted dispersion of obtrusive artificial light by eliminating the emission of light upwards. This choice of luminaire also enables maximum spacing between lighting columns and ensures that the minimum amount of lighting is used, without compromising safety (**Mitigation Item P03-LV22**).
- 11.5.10 New road lighting is proposed at the Dunkeld Junction Roundabout (located between ch3900 and ch4300), at a location where there is currently no road lighting. The Dunkeld & Birnam Station Replacement Car Park and Pedestrian Underpass and the River Braan Bridge Underpass will also be lit. LED luminaires equipped with back shields would mitigate light spill as much as possible from these locations (**Mitigation Item P02-LV22**).

11.6 Residual Effects

- 11.6.1 Significant residual effects that would remain once the described mitigation measures have been implemented are described below.
- 11.6.2 For details of numerical references for building locations, see Figure 11.3 and Appendix A11.1 (Assessment of Visual Effects - Buildings). For outdoor locations, see Figure 11.4 and Appendix A11.2 (Assessment of Visual Effects - Outdoor Locations), and for additional details of all Walkers, Cyclists and Horse-riders (WCH)s including local paths, see Table 17.8 in Chapter 17 (Population - Accessibility) and Figures 17.1 and 17.2.

Visual Effects during Construction

- 11.6.3 The DMRB Stage 3 visual assessment has identified likely visual effects on people at building and outdoor locations associated with the construction of the proposed scheme, as shown in Appendices A11.1 and A11.2 respectively. All these effects would be temporary and adverse. Significant effects that would be experienced by people at these locations are summarised below.

Building Locations

- 11.6.4 **Large** residual effects are predicted during construction of the proposed scheme at Inkpot Cottage (receptor 4) and Rowan Cottage, Willow Tree Cottage & Oak Tree Cottage (receptor 6). These residual effects would result from nearby construction activities associated with the proposed mainline widening and earthworks, pre-earthworks drainage ditches, plus the removal of existing woodland along the A9 road corridor and the introduction of a 2m high, 100m long acoustic barrier (between approx. ch1240 and ch1340). Proposed verge widening activities and the resultant removal of existing roadside vegetation along the B867 would be partially visible in filtered views south from Inkpot Cottage.
- 11.6.5 At Ballincrieff, Oakwood, Tomcroy House, Barbed Wire and Poppies (receptor 11) residents are predicted to experience **Large** residual effects during construction of the proposed scheme. These residual effects would result from nearby construction activities associated with the proposed mainline widening and reinforced earthworks, pre-earthworks drainage ditches, the realignment of Perth Road and associated large-scale cuttings, the proposed new culvert and open channel (for watercourse WF7), plus the removal of existing roadside woodland.
- 11.6.6 Residual effects are also predicted to be **Large** during construction of the proposed scheme at Dunkeld Fuel Express (receptor 12), Dowiestone, 6 Perth Road, Carse-na-Tay, Shian, Rowanlea, Wychwood and Hollybank (receptor 14), Hazelby, Inchewan Cottage and Torlee (receptor 15), properties at 37, 39, 41 and 43 Inchewan (receptor 16), 18, 20, 22 and 24 Inchewan (receptor 19), 2, 4, 6, 8, 10 and 12 Inchewan (receptor 20), 1, 3 5, 7, 9 and 11 Inchewan (receptor 21), The Tanners and Ettrick (receptor 23), 1 - 10 Torwood Place (receptor 24) and Comraich and Kennard (receptor 25). These residual effects would result from nearby construction activities associated with the proposed mainline widening and reinforced earthworks, pre-earthworks drainage ditch, plus the removal of existing woodland along the A9 road corridor.
- 11.6.7 **Large** residual effects are predicted during construction at Erigmore Estate Leisure Park (eastern lodges) (receptor 26), due to the close proximity of construction activities associated with the proposed SuDS feature to the immediate east.
- 11.6.8 At Macbeth Cottage (receptor 28), Parkland and Viewpark (receptor 29), residents are predicted to experience **Large** residual effects during construction of the proposed scheme. These residual effects would result from the nearby construction activities associated with the proposed mainline widening, earthworks the Dunkeld & Birnam Station Replacement Car Park and new Pedestrian Underpass, plus the removal of existing vegetation along the A9 road corridor.
- 11.6.9 Residents at 1-10 Gladstone Terrace, The Smithy House, Kilblaan, Annfield and St Catherine's Cottage (receptor 36), Laiken and Byways (receptor 37), Rockfield, Balinoe, Schiehallion and Conival (receptor 38), Bheinne Mhor, School House, Armoury House and The Bungalow (receptor 39), Craigielea and Dunsville (receptor 40), Ivy Cottage, St Abbs and Cherry Trees (receptor 41) are predicted to experience **Large** residual effects during construction of the proposed scheme. These residual effects would result from the nearby construction activities associated with the proposed mainline widening, earthworks, the Dunkeld & Birnam Station

Replacement Car Park, new Pedestrian Underpass and SuDS feature (plus the temporary pedestrian footbridge across the widened mainline), and the removal of existing vegetation along the A9 road corridor.

- 11.6.10 Residual effects are also predicted to be **Large** during construction of the proposed scheme at Birnam Bank, The Lodge, Oakbank and Craigmore (receptor 42), Dunkeld & Birnam Station (receptor 43), 8 - 11 Birnam Terrace (receptor 44), 12 - 18 Birnam Terrace (receptor 45), The Merryburn Hotel (receptor 46), 1 - 2 Station Cottages, 8 and 10 Station Road and Rosemount (receptor 47), Glenburn (receptor 48), 1 - 3 Westwood, 1 - 3 Balgownie and 1 - 6 Parkview (receptor 49) and 1, 3, 4, 9 and 11 Murthly Terrace (receptor 51). These effects would result from the nearby construction activities associated with the mainline widening, earthworks, the Dunkeld & Birnam Station Replacement Car Park, new Pedestrian Underpass and SuDS feature (plus the temporary pedestrian footbridge across the widened mainline), and the removal of existing vegetation along the A9 road corridor.
- 11.6.11 Lagmhor Stables (receptor 76), Lagmhor (Dunkeld & Birnam Community Co-Working Space) (receptor 77), Gowrie Cottage, Braan Cottage and Caileagan (receptor 78), Craigvinean Surgery (receptor 79) and Dunkeld & Birnam Recreation Club (receptor 80) are predicted to experience **Large** residual effects during construction of the proposed scheme. These residual effects would result from nearby construction activities associated with the proposed mainline widening, earthworks, retaining structure and Dunkeld Junction Roundabout, plus the removal of existing vegetation along the A9 road corridor.
- 11.6.12 **Large** residual effects are predicted during construction of the proposed scheme at Invermill Holiday Park (receptor 94), Forestry and Land Scotland: Dunkeld Office (receptor 95), Invermill Farm Caravan Park (receptor 96), 3A and 3B Inver Cottages and Tigh Fada (receptor 100), Sunnybank Cottage, Rose Cottage, Inverbraan Cottage, Craigview and Niel Gow Cottage (receptor 101). These residual effects would result from views to construction activities associated with the proposed mainline widening, earthworks and SuDS feature, plus the removal of existing vegetation along the A9 road corridor.
- 11.6.13 Residual effects are also predicted to be **Large** during construction of the proposed scheme at Inch Cottage (receptor 103) and Inchmagrannachan Farmhouse, The Steading and The Coppers (receptor 104). These residual effects would result from views to construction activities associated with the proposed mainline widening, earthworks, SuDS feature and the River Tay Bridge launching platform, plus the resultant removal of existing vegetation along the A9 road corridor.
- 11.6.14 In addition to the above, 31 building locations (receptors 5, 8, 9, 10, 17, 18, 22, 27, 30, 31, 32, 33, 34, 35, 48, 50, 52, 53, 58, 61, 65, 67, 69, 70, 71, 72, 73, 74, 75, 99 and 102) are predicted to experience **Moderate** residual effects during construction of the proposed scheme.
- 11.6.15 Further information is provided in Table 1 of Appendix A11.1.

Outdoor Locations

- 11.6.16 Travellers on the Highland Main Line railway (receptors O1A and O1B), cyclists on NCR77 (receptor O2) and road users on the B867 (receptor O5), Perth Road (receptor O13), A923

(receptor O19), A822 (receptor O25) and B898 (receptor O36) are predicted to experience **Large** residual effects during construction of the proposed scheme. These effects would result from construction activities associated with the proposed mainline widening, the proposed new junctions at Murthly, Birnam, Dunkeld and Dalguise, SuDs features, the Dunkeld & Birnam Station Replacement Car Park, new Pedestrian Underpass and temporary pedestrian footbridge across the widened mainline, new bridge structures across the Rivers Braan and Tay and Inchewan Burn, the River Tay Bridge launching platform, all associated earthworks and retaining structures, pre-earthworks drainage ditches, plus the removal of existing vegetation along the A9 road corridor.

- 11.6.17 18 other outdoor locations (receptors O8, O10, O11, O12, O14, O15, O18, O20, O24, O26, O27, O28, O29, O30, O31, O34, O35 and O37) - mainly core paths - are predicted to experience **Large** residual effects during construction of the scheme as a result of the activities listed above.
- 11.6.18 In addition to the above, nine outdoor locations (receptors O4, O6, O7, O9, O22, O23, O32, O33 and O38) are predicted to experience **Moderate** residual effects during construction of the proposed scheme.
- 11.6.19 Further information is provided in Table 1 of Appendix A11.2.

Visual Effects during Operation

- 11.6.20 Visualisations from selected viewpoint locations are shown on Figures 11.6 to 11.14 and the locations of the viewpoints are shown on Figure 11.5. The visualisations are intended to be illustrative of the nature of the changes to views resulting from the proposed scheme; they have not been used as a tool in the assessment of impact significance, nor are they intended to focus only on significant impacts. The viewpoints selected are all publicly accessible outdoor locations. Views from private properties were not included. Visualisations were prepared for the following locations:
- Viewpoint 1 (Figure 11.6): View from Birnam Hill (Core Path DUNK/14) looking south-east along Strath Tay (Predicted Wireframe View).
 - Viewpoint 2 (Figure 11.7): View from Birnam Hill (rocky outcrop adjacent to Core Path DUNK/11) looking north towards Loch of the Lowes (Predicted Wireframe View).
 - Viewpoint 3 (Figure 11.8): View from B867/NCR77 (adjacent to Birnam Hill) looking north-west along B867/NCR77 (Predicted Wireframe View).
 - Viewpoint 4 (Figure 11.9): View from Mast on Newtyle Hill looking west along Strath Tay and south-west towards Birnam Hill (Predicted Photomontage View).
 - Viewpoint 5 (Figure 11.10): View from Station Road, Birnam looking south towards Birnam Industrial Estate (Predicted Photomontage View).
 - Viewpoint 6 (Figure 11.11): View from Junction of Perth Road and Station Road, Birnam looking south along Station Road (Predicted Photomontage View).
 - Viewpoint 7 (Figure 11.12): View from Junction of Perth Road and A923, Little Dunkeld looking south towards War Memorial (Predicted Photomontage View).

- Viewpoint 8 (Figure 11.13): View from Dunkeld Cathedral Grounds looking south-west towards the existing A9 (Predicted Photomontage View).
- Viewpoint 9 (Figure 11.14): View from Pine Cone Viewpoint looking north along Strath Tay and the existing A9 (Predicted Photomontage View).

Building Locations

General

- 11.6.21 The following section provides a summary of the detailed visual effects assessment presented in Appendix A11.1 for building locations and highlights those locations that are likely to experience significant (**Moderate** and above) residual effects post-mitigation.

Inkpot Cottage, Rowan Cottage, Willow Tree Cottage and Oak Tree Cottage (approx. ch1100 to ch1400) (Figure 11.3b-c)

- 11.6.22 **Large** residual effects would be experienced by residents at receptors 4 (Inkpot Cottage) and 6 (Rowan Cottage, Willow Tree Cottage and Oak Tree Cottage) during the winter of the year of opening. These residual effects would result from the proposed widening of the realigned mainline and associated cutting slopes, pre-earthworks drainage ditches, the removal of existing vegetation along the A9 road corridor and the introduction of new roadside signage, mammal fencing and a 100m long, 2m high noise barrier (approx. ch1240 – ch1340). The loss of existing intervening woodland would also result in residents gaining visibility of the widened A9 and associated traffic. Traffic on the B867 would also become slightly more visible in filtered views south from Inkpot Cottage during winter due to the proposed verge widening and associated loss of existing roadside vegetation. However, the significance of these residual effects would reduce to Slight in the summer 15 years after opening following the establishment of mixed woodland replacement planting to screen views of the proposed scheme (**Mitigation Items P02-LV14, P02-LV15, P02-LV17 and P02-LV19**).

Birnam (approx. ch2300 to ch3500) (Figure 11.3d)

- 11.6.23 Residents at Ballincrieff, Oakwood, Tomcroy House, Barbed Wire and Poppies (receptor 11) would experience **Large** residual effects during the winter of the year of opening as a result of the close proximity of the reinforced 1 in 1 embankment slope and associated pre-earthworks drainage ditch along the southbound side of the widened mainline between ch2430 and ch2600, the realignment of Perth Road and associated large-scale cuttings, the proposed new culvert and open channel (for watercourse WF7), the resultant loss of existing woodland and increased visibility of A9 traffic and the introduction of new roadside signage. These residual effects would reduce to **Moderate** in the summer 15 years after opening following the establishment of mixed woodland mitigation planting to screen views of the proposed scheme (**Mitigation Items P02-LV14, P02-LV15, P02-LV17 and P02-LV19**). The installation of a 2m high wattle screen fence along the back of the verge between ch2430 and ch2900 would provide additional visual screening of traffic on the widened A9 (**Mitigation Item P02-LV17**).



Photograph 11.11: Example of wattle screen fence (Mitigation Item P02-LV17)

11.6.24 **Moderate** residual effects would be experienced by people at Dunkeld Fuel Express (receptor 12), residents at Dowiestone, 6 Perth Road, Carse-na-Tay, Shian, Rowanlea, Wychwood and Hollybank (receptor 14, refer to Photograph 11.11), and at Hazelby, Inchewan Cottage and Torlee (receptor 15), 37, 39, 41 and 43 Inchewan (receptor 16), 18, 20, 22 and 24 Inchewan (receptor 19), 2, 4, 6, 8, 10 and 12 Inchewan (receptor 20, refer to Photograph 11.12), 1, 3, 5, 7, 9 and 11 Inchewan (receptor 21), The Tanners and Ettrick (receptor 23), 1 – 10 Torwood Place (receptor 24) and Comraich and Kennard (receptor 25) during the winter of the year of opening. These residual effects would result from the proposed widening of the mainline and associated embankments, pre-earthworks drainage ditch, the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. The significance of these residual effects would reduce to Slight in the summer 15 years after opening at these locations due to the proposed buffer of retained existing intervening vegetation (**Mitigation Item P02-LV13**) and the installation of a 2m high wattle screen fence along the back of the verge between ch2430 and ch2900 to provide additional visual screening of traffic on the widened A9 (**Mitigation Item P02-LV17**).



Photograph 11.12: View looking south towards the existing A9 from Carse-na-Tay and 2 Inchewan, Birnam

- 11.6.25 **Moderate** residual effects would be experienced during winter year of opening at Erigmore Estate Leisure Park (eastern lodges) (receptor 26), due to the proposed SuDS feature and associated access track to the immediate east. The significance of residual effects would reduce to Slight in the summer 15 years following the establishment of species-rich and wetland grassland mix seeding and individual tree planting, aiding integration of the SuDS into the surrounding landscape (**Mitigation Items P02-LV9, P02-LV15, P02-LV19 and P02-LV20**).
- 11.6.26 **Moderate** residual effects would be experienced by residents at Macbeth Cottage (receptor 28, refer to Photograph 11.13), Parkland and Viewpark (receptor 29) and Laiken and Byways (receptor 37) during the winter of the year of opening. These residual effects would result from the proposed widening of the mainline and associated embankments, the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. The significance of residual effects would reduce to Slight in the summer 15 years after opening due to the proposed buffer of retained existing intervening vegetation combined with the establishment of proposed mixed woodland mitigation planting (**Mitigation Items P02-LV13, P02-LV14, P02-LV15, P02-LV17 and P02-LV19**).



Photograph 11.13: View looking south towards the existing A9 from Macbeth Cottage

- 11.6.27 During the winter of the year of opening, residents at 1 - 10 Gladstone Terrace, The Smithy House, Kilbloan, Annfield and St Catherine's Cottage (receptor 36), Craigielea and Dunsville (receptor 40) and 1 - 2 Station Cottages, 8 and 10 Station Road and Rosemount (receptor 47) would experience **Large** residual effects. These residual effects would result from the proposed widening of the mainline, the Dunkeld & Birnam Station Replacement Car Park and new Underpass structure, swale and SuDS geocellular storage area, all associated earthworks and retaining structures, the introduction of new roadside signage, plus the removal of existing vegetation along the A9 road corridor and two buildings within Birnam Industrial Estate, and the resultant increase in visibility of A9 traffic. Nearby residents at Rockfield, Balnoe, Schiehallion and Conival (receptor 38), Bheinne Mhor, School House, Armoury House and The Bungalow (receptor 39) and Ivy Cottage, St Abbs and Cherry Trees (receptor 41) would experience **Moderate** residual effects due to the same elements of the proposed scheme being visible during the winter of the year of opening. The introduction of a 2m high roadside stone parapet wall adjacent to the Dunkeld & Birnam Station Replacement Car Park would help to screen traffic on the A9. Lighting will be designed to complement the street lighting within Birnam Conservation Area, while minimising intrusiveness in the form of spillage, glare and reflection (**Mitigation Item P02-LV25**). The significance of residual effects experienced from all of these properties would reduce to Slight in the summer 15 years after opening following the establishment of native grasses and wildflowers in the area around the proposed SuDS geocellular storage area (**Mitigation Items P02-LV9 and P02-LV20**), individual trees and species-rich grassland within and adjacent to the Dunkeld & Birnam Station Replacement Car Park, a 1.8m high hedgerow (adjacent to 1 – 2 Station Cottages) and mixed woodland

mitigation planting to screen views of traffic on the widened A9 (**Mitigation Items P02-LV14, P02-LV15, P02-LV17, P02-LV19 and P02-LV25**).

- 11.6.28 Residents at Birnam Bank, The Lodge, Oakbank and Craigmore (receptor 42) would experience **Moderate** residual effects during the winter of the year of opening due to the proposed widening of the mainline and associated embankments, the new Pedestrian Underpass structure and new lift shaft buildings at Dunkeld & Birnam Station, the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. These residual effects would reduce to Slight in the summer 15 years after opening due to the retention of existing intervening vegetation (**Mitigation Item P02-LV13**), combined with the establishment of species-rich grassland, individual trees and mixed woodland mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV17, P02-LV19 and P02-LV20**).
- 11.6.29 During the winter of the year of opening, visitors to Dunkeld & Birnam Station (receptor 43, refer to Photograph 11.14) would experience **Moderate** residual effects. These residual effects would result from the proposed widening of the mainline, resulting in the loss of the existing station car park, the introduction of the Dunkeld & Birnam Station Replacement Car Park and new Pedestrian Underpass structure, all associated earthworks and retaining structures, the introduction of new roadside signage, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. A wattle screen fence along the back of the A9 northbound side verge between ch3205 and ch3410 (**Mitigation Item P02-LV17**) would help to screen views of traffic from the station. Lighting will be designed to complement the street lighting within Birnam Conservation Area, while minimising intrusiveness in the form of spillage, glare and reflection (**Mitigation Item P02-LV25**). The significance of residual effects would remain **Moderate** in the summer 15 years after opening following the establishment of individual trees within and adjacent to the Dunkeld & Birnam Station Replacement Car Park, native shrub planting adjacent to Platform 2 and species-rich grassland plus mixed woodland mitigation planting along the widened A9 road corridor (**Mitigation Items P02-LV14, P02-LV15, P02-LV17, P02-LV19 and P02-LV25**).



Photograph 11.14: View looking south-east from the existing Dunkeld & Birnam Station Car Park

11.6.30 Residents at 8 – 11 Birnam Terrace (receptor 44), 12 - 18 Birnam Terrace (receptor 45), 1 – 3 Westwood, 1 - 3 Balgownie and 1 – 6 Parkview (receptor 49), and 1, 3, 4, 9 and 11 Murthly Terrace (receptor 51) would experience **Moderate** residual effects during the winter of the year of opening. These effects would result from the proposed widening of the mainline, the Dunkeld & Birnam Station Replacement Car Park and new Pedestrian Underpass structure, SuDS features, all associated earthworks and retaining structures, plus the removal of existing vegetation along the A9 road corridor and two buildings within Birnam Industrial Estate, and the resultant increase in visibility of A9 traffic. Visitors at The Merryburn Hotel (receptor 46) would experience **Large** residual effects during the winter of the year of opening due to the same elements of the proposed scheme being visible at close proximity. The introduction of a 2m high roadside stone parapet wall adjacent to the station car park would provide some visual screening of A9 traffic. Lighting will be designed to complement the street lighting within Birnam Conservation Area, while minimising intrusiveness in the form of spillage, glare and reflection (**Mitigation Item P02-LV25**). The significance of residual effects experienced from all of these building locations would reduce to Slight in the summer 15 years after opening following the establishment of native grasses and wildflowers in the area of the proposed SuDS geocellular storage area (**Mitigation Items P02-LV9 and P02-LV20**), individual trees within and adjacent to the Dunkeld & Birnam Station Replacement Car Park, plus mixed woodland mitigation planting to screen views of traffic on the widened A9 (**Mitigation Items P02-LV14, P02-LV15, P02-LV17, P02-LV19, P02-LV20 and P02-LV25**).

Little Dunkeld (approx. ch3500 to ch4300) (Figure 11.3e)

11.6.31 During the winter of the year of opening, residents at Gowrie Cottage, Braan Cottage and Cailleagan (receptor 78) would experience **Large** residual effects. These residual effects would result from a loss of existing screening vegetation, the introduction of the Dunkeld Junction Roundabout and the proposed realignment of the A923 which would bring the road and its traffic in closer proximity to the properties. LED luminaires equipped with back shields would mitigate light spill as much as possible from Dunkeld Junction Roundabout (**Mitigation Item P02-LV22**). The residual effects would reduce to **Moderate** in the summer 15 years after opening following the establishment of species-rich grassland and mixed woodland mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19 and P02-LV20**).

11.6.32 Residents at Lagmhor Stables (receptor 76) and visitors at Lagmhor (Dunkeld & Birnam Community Co-Working Space) (receptor 77), Craigvinean Surgery (receptor 79) and Dunkeld & Birnam Recreation Club (receptor 80) would experience **Moderate** residual effects during the winter of the year of opening. These residual effects would result from the proposed widening of the mainline, the new at-grade, five-spur elongated Dunkeld Junction and associated lighting, SuDS feature, all associated earthworks plus retaining structure (along the realigned A923), the introduction of new roadside signage, the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. LED luminaires equipped with back shields would mitigate light spill as much as possible from Dunkeld Junction Roundabout (**Mitigation Item P02-LV22**). These residual effects would reduce to Slight in the summer 15 years after opening following the establishment of species-rich grassland and mixed woodland mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19 and P02-LV20**).

Inver (approx. ch4300 to ch5300) (Figure 11.3e-f)

- 11.6.33 **Moderate** residual effects would be experienced by residents at Invermill Holiday Park (receptor 94), the farmhouse at Invermill Farm Caravan Park (receptor 96), 3A and 3B Inver Cottages and Tigh Fada (receptor 100) and by workers at the Forestry and Land Scotland: Dunkeld Office (receptor 95) during the winter of the year of opening. These residual effects would result from the proposed widening of the mainline, the new River Braan Bridge structure, the River Braan Flood Relief Culverts and three flood relief culverts adjacent to Inver Mill Lade, SuDS detention basin and access track, all associated earthworks, the introduction of new roadside signage, mammal fencing, the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of species-rich grassland, mixed and riparian woodland and scattered individual trees as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19, P02-LV20 and P02-LV27**).
- 11.6.34 During the winter of the year of opening, residents at Sunnybank Cottage, Rose Cottage, Inverbraan Cottage, Craigview and Niel Gow Cottage (receptor 101) would experience **Moderate** residual effects. These residual effects would result from the proposed widening of the mainline, all associated earthworks, the removal of existing vegetation along the A9 road corridor and resultant increase in visibility of A9 traffic, plus the introduction of new roadside signage and mammal fencing. The residual effects would reduce to Neutral in the summer 15 years after opening due to the realignment of the mainline increasing the distance of the road from these properties and the establishment of species-rich grassland, individual trees and mixed woodland mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV17, P02-LV19 and P02-LV20**).

Dunkeld House Hotel to Inchmagrannachan (approx. ch5300 to ch8300) (Figure 11.3f-i)

- 11.6.35 **Moderate** residual effects would be experienced by visitors at Dunkeld House Hotel (including Northern, Western and Eastern Lodges) (receptor 102, refer to Photograph 11.15) during the winter of the year of opening due to the proposed widening of the mainline, SuDS detention basin and access track, all associated earthworks, the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic, plus the introduction of new roadside signage. The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of scrub, mixed and riparian woodland mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17 and P02-LV19**).
- 11.6.36 **Moderate** residual effects would be experienced by residents at Inch Cottage (receptor 103) and at Inchmagrannachan Farmhouse, The Steading and The Coppers (receptor 104) during the winter of the year of opening due to the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic, with direct views to the earthworks associated with the widened mainline, SuDS, culverts and the River Tay Bridge launching platform. The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of scattered scrub and individual trees and broadleaved woodland mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, and P02-LV19**).



Photograph 11.15: View looking south across the River Tay from Core Path DUNK/145, adjacent to Dunkeld House Hotel

Outdoor Locations

General

- 11.6.37 The following section provides a summary of the detailed visual residual effects assessment presented in Appendix A11.2 for outdoor locations, and highlights receptors that are likely to experience significant (**Moderate** and above) residual effects post-mitigation. In general, the greatest residual effects would be experienced by users of routes located immediately adjacent to the proposed scheme.

Highland Main Line railway (ch-576 to ch8423) (Figure 11.4b-c)

- 11.6.38 Travellers on the Highland Main Line railway (receptors O1A and O1B) would experience **Moderate** residual effects during the winter of the year of opening. These residual effects would result from the proposed mainline widening, the proposed new junctions at Birnam, Dunkeld and Dalguise, SuDs features, the replacement Dunkeld & Birnam Station Car Park, new bridge structures across the River Tay and Inchewan Burn, all associated earthworks and retaining structures, the introduction of new roadside signage, mammal fencing, the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic.
- 11.6.39 From the section of the Highland Main Line railway between Murthly and Dunkeld & Birnam Station (receptor O1A), the greatest visual residual effects are expected to result from the proposed mainline widening, the new grade separated Birnam Junction and adjacent SuDS feature, all associated earthworks and retaining structures, the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. The residual effects would not remain significant, reducing to Slight in the summer 15 years after opening following the establishment of individual trees, native shrubs, broadleaved, mixed and riparian woodland and species-rich grassland as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19, P02-LV20 and P02-LV25**).
- 11.6.40 From the section of the Highland Main Line railway between Dunkeld & Birnam Station and Inchmagrannachan (receptor O1B), the greatest visual residual effects are expected to result from the proposed mainline widening, the new at-grade, five-spur elongated Dunkeld Junction Roundabout, the new grade separated Dalguise Junction, new bridge structures across the River Tay and Inchewan Burn, all associated earthworks and retaining structures, SuDS features, mammal fencing, the removal of existing vegetation along the A9 road corridor

and the resultant increase in visibility of A9 traffic. The residual effects would not remain significant, reducing to Slight in the summer 15 years after opening following the establishment of individual trees, broadleaved, mixed and riparian woodland and species-rich grassland as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19 and P02-LV20**).

NCR77 (ch-576 to ch8423) (Figure 11.4b-c)

- 11.6.41 **Large** residual effects would be experienced by cyclists on NCR77 (receptor O2) during the winter of the year of opening. The route is to be re-aligned along the northbound verge of the widened mainline between Birnam Junction and ch3050, along the Station Building Access Track between ch3050 and Dunkeld & Birnam Station, along the new River Tay Bridge and Dalguise Junction to join the B898. Visual residual effects would result from the proposed mainline widening, the new Murthly Junction, the new grade-separated junctions at Birnam and Dalguise and at-grade, five-spur elongated Dunkeld Junction Roundabout, the new River Tay Bridge, SuDS features, the proposed hardstanding area along the B867 (approx. ch360), all associated earthworks and retaining structures, pre-earthworks drainage ditches, the introduction of new roadside signage, mammal and reptile fencing, the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. The residual effects would reduce to **Moderate** in the summer 15 years after opening following the establishment of scattered scrub and individual trees, native shrubs, broadleaved, mixed and riparian woodland and species-rich grassland as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19, P02-LV20 and P02-LV25**).

RCR83 (ch4000 to ch8423) (Figure 11.4c)

- 11.6.42 Cyclists on RCR83 (receptor O33) would experience **Moderate** residual effects during the winter of the year of opening. Loss of woodland due to the construction of the temporary Tay Bridge launching platform would open up views over a short section of the route to the proposed mainline widening, the new grade-separated junction at Dalguise, the new River Tay Bridge, SuDS feature, all associated earthworks and retaining structures, the introduction of new roadside signage and mammal fencing, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of broadleaved and mixed woodland, scattered scrub and individual trees as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17 and P02-LV19**).

B867 (ch-576 to ch2200) (Figure 11.4b)

- 11.6.43 Vehicle travellers on the B867 (receptor O5) would experience **Moderate** residual effects during the winter of the year of opening due to the proposed mainline widening, the new Murthly Junction, the new grade-separated junction at Birnam and nearby SuDS feature, all associated earthworks, rock cuttings and retaining structures, the proposed hardstanding area along the B867 (approx. ch360), the introduction of new roadside signage, mammal and reptile fencing plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of broadleaved, mixed and

riparian woodland, scattered individual trees and species-rich grassland as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19 and P02-LV20**).

Perth Road (ch2300 to ch4000) (Figure 11.4b-c)

- 11.6.44 Vehicle travellers on Perth Road (receptor O13) would experience **Moderate** residual effects during the winter of the year of opening due to the proposed mainline widening, the new grade-separated junction at Birnam, the new at-grade, five-spur elongated Dunkeld Junction Roundabout, the Dunkeld & Birnam Station Replacement Car Park, all associated earthworks and retaining structures, the introduction of new roadside signage, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of mixed and riparian woodland and species-rich grassland as mitigation planting, plus individual trees within and adjacent to the replacement Dunkeld & Birnam Station Car Park (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19, P02-LV20 and P02-LV25**). The installation of a 2m high wattle screen fence along the back of the verge between ch2430 and ch2900 would provide additional visual screening of traffic on the widened A9 (**Mitigation Item P02-LV17**). The introduction of a 2m high roadside stone parapet wall would provide additional visual screening of A9 traffic adjacent to the station car park. Lighting will be designed to complement the street lighting within Birnam Conservation Area, while minimising intrusiveness in the form of spillage, glare and reflection (**Mitigation Item P02-LV25**).

A923 (ch3900 to ch4100) (Figure 11.4b-c)

- 11.6.45 Vehicle travellers on the A923 (receptor O19) would experience **Moderate** residual effects during the winter of the year of opening due to the proposed mainline widening, the new at-grade, five-spur elongated Dunkeld Junction Roundabout and associated lighting, all associated earthworks and retaining structures, the introduction of new roadside signage, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. LED luminaires equipped with back shields would mitigate light spill as much as possible from Dunkeld Junction roundabout (**Mitigation Item P02-LV22**). The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of individual trees, mixed woodland and species-rich grassland as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19 and P02-LV20**).

A822 (ch3900 to ch4200) (Figure 11.4c)

- 11.6.46 Vehicle travellers on the A822 (receptor O25, refer to Photograph 11.16) would experience **Moderate** residual effects during the winter of the year of opening. Views to the scheme would be experienced over a short section of the route and would result from the proposed mainline widening, the new at-grade, five-spur elongated Dunkeld Junction Roundabout and associated lighting, the new River Braan Bridge, SuDS feature, all associated earthworks and retaining structures, pre-earthworks drainage ditches, the introduction of new roadside signage, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. LED luminaires equipped with back shields would mitigate light spill as much as possible from Dunkeld Junction roundabout (**Mitigation Item P02-LV22**).

The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of species-rich grassland, broadleaved, mixed and riparian woodland and individual trees as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19 and P02-LV20**).



Photograph 11.16: View looking north-east along the A822 (approaching the existing A9)

King's Pass Road (ch4400 to ch8423) (Figure 11.4c)

- 11.6.47 Vehicle travellers on the King's Pass Road (receptor O32) would experience **Moderate** residual effects during the winter of the year of opening. Loss of woodland due to the construction of the temporary Tay Bridge launching platform would open up views over a short section of the route to the proposed mainline widening, the new grade-separated junction at Dalguise, the new River Tay Bridge, SuDS feature, all associated earthworks and retaining structures, the introduction of new roadside signage and mammal fencing, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of broadleaved and mixed woodland, scattered scrub and individual trees as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17 and P02-LV19**).

B898 (ch7300 to ch8423) (Figure 11.4c)

- 11.6.48 Vehicle travellers on the B898 (receptor O36) would experience **Moderate** residual effects during the winter of the year of opening. Views to the scheme would be experienced over a short section of the route and would result from the proposed mainline widening, the new grade-separated junction at Dalguise, the new River Tay Bridge, SuDS features, all associated earthworks and retaining structures, pre-earthworks drainage ditches, the introduction of new roadside signage, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of species-rich grassland,

broadleaved and mixed woodland, scattered scrub and individual trees as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV18, P02-LV19 and P02-LV20**).

PKC Core Paths and Right of Ways (ch-576 to ch8421) (Figure 11.4b-c)

- 11.6.49 Walkers at the South-west of Newtyle Hill (receptor O9) would experience **Moderate** residual effects during the winter of the year of opening due to the proposed mainline widening, the new grade-separated junction at Birnam, SuDS features, all associated earthworks, rock cuttings and retaining structures, the introduction of new roadside signage, mammal and reptile fencing, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. The residual effects would reduce to Slight in the summer 15 years after opening from this location following the establishment of broadleaved, mixed and riparian woodland, scattered scrub and individual trees and species-rich grassland as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19 and P02-LV20**).
- 11.6.50 Walkers on Core Path DUNK/142 (receptor O8) would experience **Large** residual effects during the winter of the year of opening. The path is to be re-aligned along the northbound verge of the widened mainline between Birnam Junction and ch3050, and along the Station Building Access Track between ch3050 and Dunkeld & Birnam Station. Visual residual effects would result from the proposed mainline widening, the new grade-separated junction at Birnam, the Dunkeld & Birnam Station Replacement Car Park and new Pedestrian Underpass, the new Birnam Glen and Inchewan Burn Bridge, all associated earthworks, rock cuttings and retaining structures, pre-earthworks drainage ditch, the introduction of new roadside signage, mammal and reptile fencing, plus the removal of existing vegetation along the A9 road corridor. The residual effects would reduce to **Moderate** in the summer 15 years after opening following the establishment of scattered individual trees, native shrubs, broadleaved, mixed and riparian woodland and species-rich grassland as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19, P02-LV20 and P02-LV25**).
- 11.6.51 **Moderate** residual effects would be experienced by walkers on Core Path DUNK/11 and Right of Way TP106 (receptor O10) during the winter of the year of opening. These residual effects would result from the proposed mainline widening, the Dunkeld & Birnam Station Replacement Car Park and new Pedestrian Underpass structure, the new Birnam Glen and Inchewan Burn Bridge, all associated earthworks and retaining structures, the introduction of new roadside signage, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of species-rich grassland plus individual trees within and adjacent to the replacement Dunkeld & Birnam Station Car Park (**Mitigation Items P02-LV14, P02-LV15, P02-LV17, P02-LV19, P02-LV20 and P02-LV25**).
- 11.6.52 Walkers on Core Path DUNK/57 and Right of Way TP102 (receptor O11) would experience **Moderate** residual effects during the winter of the year of opening. The path is to be rerouted with the proposed route terminating at the existing tunnel under the railway (ch2420), tying into the B867 footpath at Birnam Junction. Visual residual effects would result from the proposed mainline widening, the new grade-separated junction at Birnam, all associated earthworks, rock cuttings and retaining structures, the introduction of new roadside signage,

plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic and would occur locally across short sections of the route. The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of mixed woodland and species-rich grassland as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19 and P02-LV20**).

- 11.6.53 Walkers on Core Path DUNK/10 and Right of Way TP102 (receptor O12, refer to Photograph 11.17) would experience **Moderate** residual effects during the winter of the year of opening due to the proposed mainline widening, the new grade-separated junction at Birnam, the new at-grade, five-spur elongated Dunkeld Junction Roundabout, the new River Braan Bridge, SuDS feature, open drainage channel, all associated earthworks and retaining structures, plus the removal of existing vegetation along the A9 road corridor. Walkers on Core Path DUNK/103 (receptor O14) would experience **Moderate** residual effects during the winter of the year of opening. Views to the scheme would occur locally across a short section of the route and would result from the proposed mainline widening, the new grade-separated junction at Birnam, the replacement Dunkeld & Birnam Station Car Park, all associated earthworks, rock cuttings and retaining structures, the introduction of new roadside signage, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. The installation of a 2m high wattle screen fence between ch2430 and ch2900 (**Mitigation Item P02-LV17**) and the 2m high roadside stone parapet wall adjacent to the station car park would help to screen the A9 traffic. Lighting will be designed to complement the street lighting within Birnam Conservation Area, while minimising intrusiveness in the form of spillage, glare and reflection (**Mitigation Item P02-LV25**). The residual effects would reduce to Slight in the summer 15 years after opening from both locations following the establishment of mixed woodland and species-rich grassland as mitigation planting, plus individual trees within and adjacent to the replacement Dunkeld & Birnam Station Car Park (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19, P02-LV20 and P02-LV25**).



Photograph 11.17: View looking south from Core Path DUNK/10 and Right of Way TP102

- 11.6.54 Walkers on Core Path DUNK/144 (receptor (O18)) would experience **Moderate** residual effects during the winter of the year of opening due to the proposed mainline widening, the new at-grade, five-spur elongated Dunkeld Junction Roundabout and associated lighting, all associated earthworks and retaining structures, the introduction of new roadside signage, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. LED luminaires equipped with back shields would mitigate light spill as much as possible from Dunkeld Junction Roundabout (**Mitigation Item P02-LV22**). The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of mixed and riparian woodland and species-rich grassland as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19 and P02-LV20**).
- 11.6.55 Walkers on Core Path DUNK/145 (receptor (O24)) would experience **Moderate** residual effects during the winter of the year of opening due to the proposed mainline widening, the new River Tay Bridge, the proposed compensatory flood storage area, the River Braan Flood Relief Culverts and three flood relief culverts adjacent to Inver Mill Lade, SuDS features, all associated earthworks and retaining structures, the introduction of new roadside signage and mammal fencing, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of species-rich grassland, mixed and riparian woodland, scrub and individual trees as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19, P02-LV20 and P02-LV27**).
- 11.6.56 Walkers on Core Path DUNK/59 and Right of Way 32/10 (receptor O26) would experience **Large** residual effects during the winter of the year of opening due to the proposed mainline widening, the new at-grade, five-spur elongated Dunkeld Junction Roundabout and associated lighting, the new River Braan Bridge, SuDS feature, all associated earthworks and retaining structures, the introduction of new roadside signage, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. LED luminaires equipped with back shields would mitigate light spill as much as possible from Dunkeld Junction roundabout (**Mitigation Item P02-LV22**). The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of species-rich grassland, mixed woodland and individual trees as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19 and P02-LV20**).
- 11.6.57 Walkers on Core Path DUNK/23 (receptor O27), including the new route west of the River Braan Bridge (leading to the proposed southbound bus lay-by), would experience **Large** residual effects during the winter of the year of opening due to the proposed mainline widening, the new at-grade, five-spur elongated Dunkeld Junction roundabout and associated lighting, the new bridge structures across the Rivers Braan and Tay, the proposed compensatory flood storage area, the River Braan Flood Relief Culverts and three flood relief culverts adjacent to Inver Mill Lade, SuDS features, all associated earthworks and retaining structures, the introduction of new roadside signage and mammal fencing, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. LED luminaires equipped with back shields would mitigate light spill as much as possible from Dunkeld Junction Roundabout (**Mitigation Item P02-LV22**). The residual effects would reduce to **Moderate** in the summer 15 years after opening following the establishment

of species-rich grassland, mixed and riparian woodland, scrub, hedgerow and individual trees as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19, P02-LV20 and P02-LV27**).

- 11.6.58 Walkers on Core Paths DUNK/137 (receptor O28) and DUNK/63 (receptor O29) would experience **Large** and **Moderate** residual effects respectively during the winter of the year of opening. These visual residual effects would result from the proposed mainline widening, the new at-grade, five-spur elongated Dunkeld Junction Roundabout and associated lighting, the new River Braan Bridge, the proposed compensatory flood storage area, the River Braan Flood Relief Culverts and three flood relief culverts adjacent to Inver Mill Lade, SuDS feature, all associated earthworks and retaining structures, the introduction of new roadside signage and mammal fencing, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. LED luminaires equipped with back shields would mitigate light spill as much as possible from Dunkeld Junction roundabout (**Mitigation Item P02-LV22**). The residual effects would reduce to **Moderate** for walkers on Core Path DUNK/137 (receptor O28) and Slight for walkers on Core Path DUNK/63 (receptor O29), in the summer 15 years after opening following the establishment of species-rich grassland, mixed woodland, scattered scrub and individual trees as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19, P02-LV20 and P02-LV27**).
- 11.6.59 Walkers on Core Path DUNK/64 (receptor O30) would experience **Moderate** residual effects during the winter of the year of opening due to the proposed mainline widening, the River Braan Flood Relief Culverts and three flood relief culverts adjacent to Inver Mill Lade, SuDS feature, all associated earthworks and retaining structures, the introduction of new roadside signage and mammal fencing, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic Views to the scheme would occur locally across short sections of the route. The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of species-rich grassland, mixed woodland, scattered scrub and individual trees as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19, P02-LV20 and P02-LV27**).
- 11.6.60 Visitors to Pine Cone Viewpoint (receptor O35) would experience **Moderate** residual effects during the winter of the year of opening. Visual residual effects would result from the proposed mainline widening, the new grade-separated junction at Dalguise, the new River Tay Bridge and associated launching platform, SuDS features, all associated earthworks and retaining structures, the introduction of new roadside signage and mammal fencing, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of species-rich grassland, broadleaved and mixed woodland, scrub and individual trees as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV18, P02-LV19 and P02-LV20**).
- 11.6.61 Walkers on Core Path DUNK/100 (receptor O37, refer to Photograph 11.18) would experience **Large** residual effects during the winter of the year of opening due to the proposed realignment of the route along the new River Tay Bridge, the proposed mainline widening, the new grade-separated junction at Dalguise, the launching platform associated with the new River Tay Bridge, all associated earthworks and retaining structures, the introduction of new roadside signage and mammal fencing, plus the removal of existing vegetation along the A9

road corridor. The residual effects would reduce to **Moderate** in the summer 15 years after opening following the establishment of species-rich grassland and broadleaved and mixed woodland as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV18, P02-LV19 and P02-LV20**).



Photograph 11.18: View looking north along Core Path DUNK/100

Torwood Park (ch3100) (Figure 11.4b-c)

- 11.6.62 **Moderate** residual effects would be experienced by recreational users of Torwood Park (receptor O15, refer to Photograph 11.19) during the winter of the year of opening due to the proposed mainline widening and associated earthworks, plus the removal of existing vegetation along the A9 road corridor and the resultant increase in visibility of A9 traffic. The residual effects would reduce to Slight in the summer 15 years after opening, with some screening provided by the proposed buffer of retained existing intervening vegetation (**Mitigation Item P02-LV13**).



Photograph 11.19: View looking south-east towards the existing A9 from Torwood Park

Birnam Highland Games Park (ch4200) (Figure 11.4c)

- 11.6.63 Recreational users of Birnam Highland Games Park (outdoor receptor O20) would experience **Moderate** residual effects during the winter of the year of opening due to the proposed mainline widening, the new at-grade, five-spur elongated Dunkeld Junction Roundabout and associated lighting, all associated earthworks and retaining structures, the introduction of new roadside signage, plus the removal of existing vegetation along the A9 road corridor and the

resultant increase in visibility of A9 traffic. LED luminaires equipped with back shields would mitigate light spill as much as possible from Dunkeld Junction roundabout (**Mitigation Item P02-LV22**). The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of mixed woodland and species-rich grassland as mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV17, P02-LV19 and P02-LV20**).

Dunkeld Cathedral Grounds (ch4200) (Figure 11.4c)

- 11.6.64 Visitors to Dunkeld Cathedral Grounds (receptor O23) would experience **Moderate** residual effects during the winter of the year of opening due to the proposed widening and elevation of the mainline (up to 3.5m above existing grade) and associated earthworks, the proposed compensatory flood storage area, retaining structure and River Braan Flood Relief Culverts, the introduction of new roadside signage, plus the removal of existing vegetation along the A9 road corridor (west of the new River Braan Bridge) and the resultant increase in visibility of A9 traffic. The residual effects would reduce to Slight in the summer 15 years after opening following the establishment of mixed woodland and riparian woodland planting within the proposed compensatory flood storage area west of the River Braan Bridge, thereby screening the proposed scheme (**Mitigation Items P02-LV10, P02-LV14, P02-LV17 and P02-LV27**).

Effects on Views from the Road

- 11.6.65 An assessment of residual effects on drivers' views from the road during the winter of the year of opening and the summer after 15 years (including reference to the special qualities of the River Tay (Dunkeld) National Scenic Area (NSA)) is provided in Section 1.6 (Residual Effects) of Appendix A11.3 (View from the Road Impact Assessment).
- 11.6.66 Following the implementation of the mitigation measures described in Section 1.5 (Mitigation), of Appendix A11.3 (View from the Road Impact Assessment), the proposed scheme would result in residual effects of **Moderate** significance during the winter of the year of opening at Strath Tay: Lower Glen LLCA (ch850 to ch8280). By the summer 15 years after opening, following the establishment of mitigation planting (**Mitigation Items P02-LV14, P02-LV15, P02-LV16, P02-LV19, P02-LV20, P02-LV21 and P02-LV26**), these residual effects would reduce to Slight.

11.7 Compliance Against Plans and Policy

- 11.7.1 [DMRB LA 104, Environmental Assessment and Monitoring](#) (National Highways et al., 2020b), states that environmental assessment, reporting and monitoring shall meet the requirements of the national planning policy for each relevant overseeing organisation.
- 11.7.2 Appendix A3.1 (Assessment of Policy Compliance) identifies a topic specific review of national and local policy documents which are of relevance to the assessment undertaken and reported in this chapter in accordance with DMRB guidance. The compliance assessment undertaken in Appendix 3.1 focuses principally on the long-term effects of the proposed scheme rather than the short term, temporary effects from construction.

- 11.7.3 National policy objectives of relevance to this assessment are provided in the [National Planning Framework 4](#) (Scottish Government, 2023) and the [Perth & Kinross Council Local Development Plan 2](#) (PKC, 2019) Policies 1 (Placemaking), 29 (Gardens and Designed Landscape), 39 (Landscape), 40 (Forestry, Woodland and Trees), and 42 (Green Infrastructure) are of relevance.

Summary of Policy Compliance

- 11.7.4 Overall, the design and assessment of the proposed scheme has had regard to and is compliant with policy objectives to minimise visual effects. A full assessment can be found in Table A3.1-4 of Appendix 3.1 (Assessment of Policy Compliance).

11.8 Statement of Significance

- 11.8.1 This section provides a summary of the DMRB Stage 3 visual assessment of residual effects for the proposed scheme, taking into account the proposed mitigation measures incorporated in the design (e.g. alignment, design elements, grading out of earthworks), as described above in Section 11.7, in addition to the mitigation measures described in Section 10.5 of Chapter 10 (Landscape).

Visual Effects

- 11.8.2 The assessment has identified a number of likely visual residual effects associated with the proposed scheme, as shown in Table 1 in Appendices A11.1 and A11.2 respectively. Visual residual effects have been assessed at a total of 110 building locations and 40 outdoor locations. Potentially significant (**Moderate** and above) residual effects on visual receptors, in the context of this assessment, associated with the proposed scheme during construction and operation are set out below.

Summary of significant residual effects during construction

- 11.8.3 People's views at 73 building locations (66% of locations assessed) and 35 outdoor locations (88% of locations assessed) would be significantly affected during the construction phase of the proposed scheme; however, these effects would be temporary (ranging in duration from under one month to approximately 43 months) and may not be significant for the full duration of construction works.
- 11.8.4 **Large** residual effects would be experienced at 42 building locations (38% of locations assessed) and 26 outdoor locations (65% of locations assessed) during the construction phase of the proposed scheme.
- 11.8.5 **Moderate** residual effects would be experienced at 31 building locations (28% of locations assessed) and nine outdoor locations (23% of locations assessed) during the construction phase of the proposed scheme.

Summary of significant residual effects during operation

- 11.8.6 People's views at 43 building locations (39% of locations assessed) and 28 outdoor locations (70% of locations assessed) would be significantly affected during the winter of the year of opening of the proposed scheme.
- 11.8.7 **Large** residual effects would be experienced at eight building locations (7% of locations assessed) and six outdoor locations (15% of locations assessed) during the winter of the year of opening of the proposed scheme.
- 11.8.8 **Moderate** residual effects would be experienced at 35 building locations (32% of locations assessed) and 22 outdoor locations (55% of locations assessed) during the winter of the year of opening of the proposed scheme.
- 11.8.9 By the summer, 15 years after the proposed scheme opening, mitigation – mostly in the form of new woodland, hedgerow, scrub and individual tree planting, as well as grass establishment – would reduce the residual effects on all building and outdoor locations. Tables 11.7 and 11.8 list the receptors - three building locations (3% of locations assessed) and five outdoor locations (13% of locations assessed) - where people would continue to experience significant visual residual effects in the summer 15 years after opening.

Table 11.7: Summary of significant residual effects on people at building locations in summer 15 years after opening (Moderate and above)

Receptor No	Receptor Name	Type	Residual Effect in Summer 15 Years after Opening
11	Ballincrieff, Oakwood, Tomcroy House, Barbed Wire and Poppies	Dwelling	Moderate
43	Dunkeld & Birnam Station	Railway Station	Moderate
78	Gowrie Cottage, Braan Cottage and Caileagan	Dwelling	Moderate

Table 11.8: Summary of significant residual effects on people at outdoor locations in summer 15 years after opening (Moderate and above)

Receptor No	Receptor Name	Type	Residual Effect in Summer 15 Years after Opening
O2	NCR77	Cyclists	Moderate
O8	Core Path DUNK/142	Walkers	Moderate
O27	Core Path DUNK/23	Walkers	Moderate
O28	Core Path DUNK/137	Walkers	Moderate
O37	Core Path DUNK/100	Walkers	Moderate

Effects on Views from the Road

- 11.8.10 Following the implementation of the mitigation measures described in Section 1.5 (Mitigation), of Appendix A11.3 (View from the Road Impact Assessment), the proposed scheme would result in residual effects of **Moderate** significance during the winter of the year of opening at Strath Tay: Lower Glen LLCA (ch850 to ch8280). By the summer 15 years after opening, following the establishment of mitigation planting, these residual effects would reduce to non-significant.

11.9 References

Blom Survey (2013). Transport Scotland A9/A96 Geodetic Survey, Aerial Photography, Topography and Orthography.

Historic Environment Scotland (2016). The Hermitage GDL00363; Dunkeld House GDL00157; Murthly Castle GDL00292; Battle of Dunkeld BTL32. [Online] Available at: <https://www.historicenvironment.scot/advice-and-support/listing-scheduling-and-designations/gardens-and-designed-landscapes/> (Accessed February 2025)

Landscape Institute and the Institute for Environmental Management and Assessment (2013). Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3). Routledge. Available at: <https://www.landscapeinstitute.org/technical/glvia3-panel/> (Accessed February 2025)

National Highways, Transport Scotland, Welsh Government, Department for Infrastructure (January 2020a). Standards for Highways Design Manual for Roads and Bridges (DMRB): Sustainability & Environment. LA 107: 'Landscape and Visual Effects' (Revision 2). Available at: <https://standardsforhighways.co.uk/tses/attachments/bc8a371f-2443-4761-af5d-f37d632c5734?inline=true> (Accessed February 2025)

National Highways, Transport Scotland, Welsh Government, Department for Infrastructure (2020b). Standards for Highways Design Manual for Roads and Bridges (DMRB): Sustainability & Environment. LA 104 'Environmental assessment and monitoring' (Revision 1). Available at: <https://www.standardsforhighways.co.uk/tses/attachments/0f6e0b6a-d08e-4673-8691-cab564d4a60a?inline=true> (Accessed February 2025)

National Highways, Transport Scotland, Welsh Government, Department for Infrastructure (2020c). Standards for Highways Design Manual for Roads and Bridges (DMRB): Sustainability & Environment. LD 119 'Roadside Environment Mitigation and Enhancement' (Revision 0). Available at: <https://standardsforhighways.co.uk/tses/attachments/6cacd1e7-dcff-4ff8-aa64-bd5556a5eedc?inline=true> (Accessed February 2025)

National Highways, Transport Scotland, Welsh Government, Department for Infrastructure (2024). Standards for Highways Design Manual for Roads and Bridges (DMRB): Sustainability & Environment. LD 117 'Landscape Design' (Version 0.1.0). Available at: <https://standardsforhighways.co.uk/search/html/23894e23-0626-4b57-bab4-38c123582433?standard=DMRB> (Accessed February 2025)

NatureScot (1999). Tayside Landscape Character Assessment. NatureScot Review No 122. Available at: <https://www.nature.scot/doc/archive/naturescot-review-122-tayside-landscape-character-assessment> (Accessed February 2025)

NatureScot (2019). Landscape Character Assessment in Scotland web page and Landscape Character Types Map and Descriptions. Available at: <https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions> (Accessed February 2025)

Perth & Kinross Council (November 2000). Highland Area Local Plan. Available at: https://www.pkc.gov.uk/media/3671/Highland-Area-Local-Plan-Landward-Map/pdf/Highland_Full_Landward_Map (Accessed February 2025)

Perth & Kinross Council (2012). Perth and Kinross Council Core Paths Plan. Available at: <https://www.pkc.gov.uk/article/15438/Core-Paths-Plan> (Accessed February 2025)

Perth & Kinross Council (2019). Perth and Kinross Council Local Development Plan 2. Available at: https://www.pkc.gov.uk/media/45242/Adopted-Local-Development-Plan-2019/pdf/LDP_2_2019_Adopted_Interactive.pdf?m=1576667143577 (Accessed February 2025)

Perth & Kinross Council (2020). Landscape Supplementary Guidance. Available at: https://www.pkc.gov.uk/media/45777/Adopted-SG-2020/pdf/LandscapeSG_mar2020.pdf?m=1583927238097 (Accessed February 2025)

SuDS Scottish Working Party (2009). SuDS for Roads. Available at: https://www.scotsnet.org.uk/_data/assets/pdf_file/0010/46000/SudsforRoads.pdf (Accessed February 2025)

The Highways Agency et. al. (1993). DMRB Volume 11, Section 3, Part 9: Vehicle Travellers.

The Scottish Government (2013). Planning Advice Note (PAN) 1/2013: Environmental Impact Assessment Revision 1 (Scottish Government, 2017). Available at: <https://www.gov.scot/publications/planning-advice-note-1-2013-environmental-impact-assessment/> (Accessed February 2025)

Transport Scotland (2013). A9 Dualling Programme. Strategic Environmental Assessment (SEA) Report. TSSEA/PASS01. Available at: <https://www.transport.gov.scot/media/30841/j280543.pdf> (Accessed February 2025)

Transport Scotland (2014a). Fitting Landscapes: Securing more sustainable landscapes. Available at: <https://www.transport.gov.scot/media/33663/j279083.pdf> (Accessed February 2025)

Transport Scotland (2014b). A9 Dualling Programme Strategic Environmental Assessment (SEA). Report Addendum. Appendix F – Strategic Landscape Review Report.

Woods Ballard, B.; Wilson, S.; Udale Clarke, H.; Illman, S.; Scott, T.; Ashley, R.; Kellagher, R. (2015). The SuDS Manual (C753F). CIRIA. Available at:
<https://www.ciria.org/ItemDetail?iProductCode=C753F&Category=FREEPUBS> (Accessed February 2025)