

16. Population – Land Use

Summary

This chapter presents an assessment of effects of the proposed scheme on land use resources comprising private property and housing, community assets, development land, businesses, agricultural land holdings and other land. The assessment has been undertaken following DMRB guidance, taking account of the results of scoping and consultation.

A study area was defined which comprised the footprint of the proposed scheme and extended 500m in all directions from it. Baseline conditions for the study area were established through a desk-based study. 671 residential dwellings, 27 community assets, 130 businesses, 13 permitted planning applications, three development land allocations, and 10 primary agricultural land holdings were identified and assessed as part of the study.

Each land use receptor was assigned a sensitivity based on DMRB criteria. Magnitude of impact of the scheme on each receptor was assessed considering land use and access as well as severance and accessibility. A significance of effect matrix was used to calculate the effects (adverse or beneficial) of the scheme on each receptor. For the purposes of this assessment, effects were considered to be 'significant' in the context of the EIA Regulations where the assessment results indicated effects of Moderate or higher significance.

The assessment considers both construction impacts and operational impacts of the proposed scheme, and reports the potential impacts, along with mitigation measures as they relate to land use. The assessment also considers likely future viability in the context of the potential changes in land use.

To mitigate potential effects, embedded mitigation in combination with standard and project specific (essential) mitigation measures have been developed through an iterative design process. The DMRB Stage 3 design includes measures to provide access to housing and businesses, community assets, community land and agricultural holdings, with revised access arrangements and tie-ins to the road network. This includes the proposed accesses which form part of the proposed scheme design. These have been discussed with affected residents/landowners as part of the consultation process, and their inclusion in the design is considered embedded mitigation. The development of the DMRB Stage 3 design has also reduced land-take, where possible, through the consideration and assessment of different design refinements.

Land to be acquired for the construction, operation and essential mitigation for the proposed scheme comprises:

- 0.06ha from three private property and housing receptors;
- 0.38ha from four community land and community asset receptors;

- 3.53ha from six business receptors including demolition of seven buildings/structures (one of which is a residential property associated to the business);
- 157.10ha from seven agricultural land holdings and
- 0.26ha from other land.

With proposed mitigation in place, significant residual effects are reported for:

- three private property and housing receptors, all of which are assessed as **Moderate** with access during operation to private property and housing at Birnam, Little Dunkeld and Dunkeld assessed to be **Moderate (beneficial)**;
- access to private property and housing at Birnam Glen (during construction only) assessed to be **Moderate**;
- two community land and community asset receptors, ranging from **Moderate** to **Large** and **Very Large (beneficial)** with access during operation to community assets located in or near to Ringwood, Birnam, Little Dunkeld, Dunkeld and Inver assessed to be **Moderate (beneficial)**;
- one development land receptor which is assessed as **Large**;
- eight business receptors, assessed as ranging from **Moderate** to **Very Large** and **Very Large (beneficial)**, with access during operation to businesses located in or near to Byres of Murthly, Ringwood, Birnam, Little Dunkeld, Dunkeld and Inver assessed to be **Moderate (beneficial)**; and
- seven agricultural land holding receptors, assessed as ranging from **Moderate** to **Very Large**.

16.1 Introduction

- 16.1.1 This chapter presents the results of the Design Manual for Roads and Bridges (DMRB) Stage 3 Environmental Impact Assessment (EIA) for the A9 Dualling Programme: Pass of Birnam to Tay Crossing (hereafter referred to as the proposed scheme) in relation to impacts on Population – Land Use.
- 16.1.2 The assessment is based on guidance contained in [DMRB LA 112](#) 'Population and Human Health' published in October 2019 (Highways England et al., 2019a) (hereafter referred to as 'DMRB LA 112'). Environmental assessment of population and human health effects reports on the elements of 'land use and accessibility' and 'human health'. Due to the volume and complexity of data covered under 'Population and Human Health' in relation to the proposed scheme, the findings are reported in three linked chapters; this chapter (Chapter 16) covering 'Population – Land Use', Chapter 17 (Population - Accessibility), and Chapter 18 (Human Health).
- 16.1.3 In addition, [DMRB LA 109](#) 'Geology and Soils' published in October 2019 replaces DMRB Volume 11, Section 3, Part 11 and Part 6 (Highways England et al, 2019b). As per DMRB LA 109 impacts on soils, including Land Capability for Agriculture (LCA) are reported in Chapter 13 (Geology and Soils).

- 16.1.4 Guidance provided in [DMRB LA 104](#) 'Environmental Assessment and Monitoring' (Highways England et al, 2019c) was utilised for the purposes of the land use assessment and ensuring compliance with the requirements of The Roads (Scotland) Act 1984 (Environmental Impact Assessment) Regulations 2017.
- 16.1.5 In accordance with DMRB LA 112, the scope of the assessment of land use includes consideration of private property and housing; community land and assets; land allocated for development through the Local Development Plan and/or planning applications; businesses; and agricultural land holdings. This assessment considers both temporary construction impacts and operational impacts of the proposed scheme, and reports the potential impacts, along with mitigation measures as they relate to land use. The assessment also considers likely future viability of the relevant affected land use receptors in the context of the potential changes in land use.
- 16.1.6 Where relevant and to support the assessment, cognisance of previous DMRB guidance in relation to land and community effects was taken where professional judgement identified this was relevant and would better inform the assessment. The scope of the assessment also includes commentary on indirect socio-economic impacts.
- 16.1.7 The chapter is supported by the following appendix and figures, which are cross referenced in the text where relevant:
- Appendix A16.1: Business Properties;
 - Figure 16.1: Community Land and Community Assets;
 - Figure 16.2: Business Properties, Development Land and Planning Applications; and
 - Figure 16.3: Proposed Scheme Land-take.
- 16.1.8 This chapter makes reference to Chapter 6 (The Proposed Scheme), Chapter 8 (Air Quality), Chapter 10 (Landscape), Chapter 11 (Visual), Chapter 13 (Geology and Soils), Chapter 15 (Noise and Vibration) Chapter 17 (Population – Accessibility), and Chapter 18 (Human Health).

Legislative and Policy Background

- 16.1.9 A summary of the national, regional and local planning policies and guidance relevant to population (land use) is provided in this section. These policies are further reviewed throughout this EIAR where relevant in other environmental discipline chapters.
- 16.1.10 The national planning policy for Scotland is set out in the fourth [National Planning Framework \(NPF4\)](#). NPF4 was adopted by the Scottish Government in February 2023.
- 16.1.11 Part 2 of the NPF4 sets out national planning policies that will be of relevance to the design and assessment of the proposed development. Policies which are anticipated to be relevant to the assessment of environmental impacts in relation to Population – Land Use include:
- Policy 3 (Biodiversity);
 - Policy 4 (Natural places);
 - Policy 5 (Soils); and

- Policy 6 (Forestry, woodland and trees).

16.1.12 Table 16.1 sets out the main local and strategic planning policies relevant to this assessment on population and land use. The policies and their requirements are outlined in the relevant land use sections of Section 16.3 (Baseline Conditions).

Table 16.1: Summary of Key Planning Policies for Population - Land Use

Planning Document (Status)	Title	Relevant Policies/Supplementary Guidance
Local Development Plan	Perth & Kinross Local Development Plan 2 (PKC LDP2) (Perth & Kinross Council 2019)	<ul style="list-style-type: none"> ▪ Policy 7: Employment and Mixed-Use Areas ▪ Policy 8: Rural Business and Diversification ▪ Policy 9: Caravan Sites, Chalets and Timeshare Developments ▪ Policy 10: City, Town and Neighbourhood Centres ▪ Policy 14: Open Space Retention and Provision ▪ Policy 15: Public Access ▪ Policy 16: Social, Cultural and Community Facilities ▪ Policy 17: Residential Areas ▪ Policy 40: Forestry, Woodland and Trees ▪ Policy 42: Green Infrastructure ▪ Policy 50: Prime Agricultural Land ▪ Policy 51: Soils ▪ Policy 54: Health and Safety Consultation Zones <p><u>Supplementary Guidance</u></p> <ul style="list-style-type: none"> ▪ Open Space Provision for New Developments ▪ Green and Blue Infrastructure

16.1.13 The Scottish Government published [Scotland's Third Land Use Strategy 2021-2026 – Getting the best from our land](#) in March 2021 (Scottish Government, 2021). The introduction to the document notes that the '*Land Use Strategy sets out our long term vision for sustainable land use in Scotland, our objectives and key policies for delivery.*'

16.1.14 An assessment of the compliance of the proposed scheme against all planning policies and plans relevant to this environmental topic is reported in Appendix A3.1 (Assessment of Policy Compliance) with a summary provided in section 16.7 of this chapter.

16.2 Approach and Methods

- 16.2.1 The approach used to establish the baseline conditions and assess the significance of potential effects on land use is explained in this section. Impacts on soils including Land Capability for Agriculture (LCA) are assessed in Chapter 13 (Geology and Soils). Changes in accessibility for walkers, wheelers, cyclists and horse-riders (WCH) due to changes in paths and access to outdoor areas are assessed in Chapter 17 (Population – Accessibility).

Study Area

- 16.2.2 In accordance with DMRB LA 112, the initial study area for this assessment is based on the construction footprint/boundary (including temporary land-take) plus a 500m area, as illustrated on Figure 16.1. The guidance also states that where appropriate, the study area may be reduced or extended to support the impact assessment. In considering severance, cognisance (where required) was taken of any change in routes to land and assets as well as traffic flows on roads outwith the 500m study area where there are changes as a result of the proposed scheme, such as the implications of the removal of the A9 Southern Tie-in Interim Roundabout on the Tay Crossing to Ballinluig Project and its replacement with the Dalguise Junction.

Baseline Conditions

- 16.2.3 Baseline receptors considered within this assessment include:
- private property and housing – land, buildings and infrastructure for the purpose of residential use in centres of population and as scattered properties;
 - community assets – buildings and infrastructure in centres of population providing a service/resource to a community, e.g. education facilities, healthcare, post offices, village halls and places of worship;
 - community land – land which is an established public recreational resource, such as playing fields, country parks, waterways or areas identified as ‘Open Space’ within the PKC LDP2. Informal areas of community land which permit public access such as woodlands are also included;
 - development land – land identified in national or local plans, policies or strategies for development (including intensification of existing uses) and land with planning permission. For the purposes of this assessment this includes land allocated for a change from the existing land use and also land safeguarded for its existing use through the PKC LDP2 and areas of land with approved planning applications as granted or under consideration by the Local Planning Authority (Perth & Kinross Council);
 - businesses – land, buildings and infrastructure for the purpose of business/commercial use in centres of population, employment sites and scattered properties;

- agricultural land holdings – land and associated infrastructure for the purpose of agricultural production, e.g. arable farming, dairy farming etc. For the purposes of this assessment this also includes forestry (land used for the growing of trees to produce wood and wood products for commercial purposes), sporting interests (land used for activities such as shooting and stalking over agricultural land and woodland, as well as fishing activities in and on lochs, reservoirs, rivers, burns, canals and ponds) and other agricultural, forestry and sporting land (land within agricultural, forestry and sporting interests that is not utilisable for commercial purposes e.g. tracks, open ditches, yards and unusable land); and
- other land – land not meeting one of the land use categories identified above. Examples of such land would include existing roads and road verges.

16.2.4 The categorisation of land use may fall into one or more of the baseline receptor categories listed in paragraph 16.2.3. In order to take full account of the impact on land use, assessment of impacts is reported for current land use (e.g. community land), and future land use where land has been identified for alternative development, including relevant planning applications and development land allocations. It should be noted that where land is safeguarded for a use in the PKC LDP2 which is consistent with its existing use, the assessment of impact is reported only against the existing use in order to avoid double counting of impacts.

16.2.5 It should be noted that where development land has planning permission and construction has commenced, this is assessed within the land use category for which the planning application was approved for e.g. private property and housing, or business property.

16.2.6 Land-take is calculated for each land use where appropriate to inform the assessment. It should be noted that the land-take associated with development land (land allocations or planning applications submitted and/or approved but not yet under construction) is reported separately and is not considered in the overall land-take total of the proposed scheme, reported in Section 16.4. However, land-take has been taken into consideration in the development land assessment in relation to the potential impacts on future land use. Land-take of LDP safeguarded land for existing uses is reported in the corresponding land-use impact assessment.

16.2.7 Baseline conditions for the above receptors were identified through the following:

- review of aerial photographs;
- review of digital Ordnance Survey (OS) maps;
- Jacobs' Geographical Information System (GIS) database;
- Jacobs' TrackRecord providing information on land ownership and occupation;
- online based search for commercial property and community land and community facilities;
- review of OS AddressBase;
- Scottish Index of Multiple Deprivation (SIMD);
- Scotland's Official Statistics;

- Scotland's Census;
- Perth & Kinross Local Development Plan 2 (PKC LDP2) (Perth & Kinross Council (PKC), 2019);
- extant planning applications provided by Perth & Kinross Council (PKC) (01 February 2022 to 31 January 2025);
- title searches undertaken by Transport Scotland; and
- online resources of VisitScotland.

Private Property and Housing

- 16.2.8 The location and number of private property holdings and housing have been identified using the resources listed in paragraph 16.2.7. The requirement for new housing has been identified from [PKC's Local Housing Strategy 2022-2027](#) and the LDP2 (PKC, 2023; PKC, 2019).

Community Land and Assets

- 16.2.9 The location and extent of community land and community facilities have been identified using the resources listed in paragraph 16.2.7. 'Open Space' as set out within PKC LDP2 (PKC, 2019) is included within the assessment.

Development Land

- 16.2.10 For the purposes of this assessment, development land relates to land allocated within PKC LDP2 (PKC, 2019) as well as relevant consented, or yet to be determined, planning applications lodged with the planning authorities.

Local Development Plan Allocations

- 16.2.11 Land allocated within the adopted PKC LDP2 (PKC, 2019) was identified. The assessment considered land allocated for a change from the existing land use and also land safeguarded for its existing use where further similar types of development benefit from policy support. However, where such land allocations relate to an existing use the assessment of impacts is reported as applicable under the relevant land use sections of this report to avoid duplication.

Land Subject to Planning Permission

- 16.2.12 Consultation with PKC as well as searches of the PKC online planning portal were undertaken to identify planning permissions within the proposed scheme study area granted between 01 February 2022 and valid up to 31 January 2025 (i.e. within a three-year implementation timeframe). The three-year assessment period was chosen to reflect the standard duration for commencing development following the granting of planning permission.
- 16.2.13 Planning permissions and pending planning applications in the three-year period were assessed with the following application types excluded on the basis that they relate to minor works or procedural aspects and would not alter the number or location of receptors captured in the existing baseline:
- householder applications for improvements/extensions;

- local commercial and business applications for minor improvement works and alterations;
- change of use;
- applications for advertisement consent;
- enforcement actions; and
- applications that have been withdrawn or refused.

16.2.14 Planning permissions granted prior to the three-year period were either assumed to have lapsed or been completed at which point they are assessed as existing land use. However, where consultation with landowners and the planning authority has confirmed the presence of an extant planning permission granted prior to this period (e.g. due to development being initiated) the approved use was assessed as the existing land use for the purposes of this assessment. The same principle was applied to planning permissions within the three-year period where construction had commenced (e.g. assessment considered within current land use against the permitted land use).

Businesses

16.2.15 The location and number of businesses have been identified using the resources listed in paragraph 16.2.7. Consultation with businesses (property owners and occupiers) where there was expected to be land-take or change in accessibility was undertaken using structured interviews between January 2024 and May 2025 to identify the nature of the commercial interests and the potential impacts of the proposed scheme on their business. Consultation allowed the following baseline information to be ascertained:

- nature of business, including employment levels;
- recent and projected business metrics;
- customer and markets;
- potential impacts; and
- mitigation considerations.

Agricultural Land Holdings

16.2.16 Agricultural land holdings were defined on the basis of their agricultural, forestry and sporting enterprises and associated infrastructure, and in some instances included areas of land under different ownership but the same occupation.

16.2.17 The number and location of agricultural land holdings with the potential to be affected have been identified using the resources listed in paragraph 16.2.7.

16.2.18 Structured interviews were conducted between January 2024 and May 2025 with landowners, occupiers, tenants and land managers where there was expected to be land-take or change in accessibility. Interviews were undertaken by Jacobs and the following baseline information was ascertained:

- extent of property holdings and form of land ownership;

- land use, management and performance levels attained;
- infrastructure and the level of existing access/severance to agricultural holdings;
- labour and machinery resources;
- forestry/woodland resources and management
- sporting activity and management;
- frequency of use of agricultural holdings/assets;
- other business interests; and
- existing subsidies and environmental agreements.

16.2.19 A summary of the information provided during the surveys is presented in Table 16.14 for each potentially affected agricultural land holding.

Consultation

16.2.20 Consultations were undertaken with a number of statutory and non-statutory consultees to inform the assessments. A summary of the consultation, including that relevant to this assessment, is reported in Chapter 7 (Consultation and Scoping) and supporting Appendix A7.1 (Summary of Consultation).

Impact Assessment

16.2.21 As indicated at paragraph 16.2.7, title searches were undertaken to identify ownership and occupation of land. Searches have not been able to identify ownership and occupation in all cases and so land of unknown title cannot be allocated and assessed within the categories of land use: residential, commercial property; community land and community facilities; development land and planning applications; or agricultural land holdings. As such, significance of effect on unknown land cannot be determined and land-take only is reported in Section 16.4 (Potential Impacts).

16.2.22 [The Roads \(Scotland\) Act 1984 \(Environmental Impact Assessment\) Regulations 2017](#) (Scottish Government, 2017) requires EIAs to identify, describe and assess in an appropriate manner “*the direct and indirect likely significant effects*” of the project being considered on a number of factors, including population and land. However, the Regulations do not provide a definition of what constitutes a significant effect, as this is determined according to the environmental parameter under consideration.

16.2.23 The significance of effect is derived by combining the assigned value (sensitivity) of receptors using criteria based on DMRB LA 112 with the magnitude of change arising from the proposed scheme, again based on DMRB LA 112. The significance of effect is determined for each element of this land use topic as identified in paragraph 16.2.3. In the case of indirect socio-economic impacts, the assessment is reported as either; no change, beneficial impact, adverse impact or mixed impact. Significance is not attributed to the reported indirect socio-economic impacts as only potential impacts are assessed.

- 16.2.24 For the purposes of this assessment, effects were considered to be ‘significant’ in the context of the EIA Regulations where the assessment results indicated effects of **Moderate** or higher significance. Significant effects (potential or residual) are shown in bold throughout the chapter. This methodology is consistent with DMRB LA 104.
- 16.2.25 Land use effects are assessed during construction and for the first year of operation (future year scenario). After the first year of operation, effects on land use associated with routine maintenance and monitoring operations are unlikely to be significant.

Private Property and Housing

Sensitivity

- 16.2.26 Table 16.2 provides details of the criteria for assessing the sensitivity of private property and housing, including land allocated for housing.

Table 16.2: Sensitivity criteria for private property and housing

Receptor value (Sensitivity)	Criteria
Very High	Existing private property or land allocated for housing in a local authority area where the number of households are expected to increase by more than 25% by 2041; and/or Existing housing and land allocated for housing (e.g. strategic housing sites) covering >5 hectares (ha) and/or >150 houses.
High	Private property or land allocated for housing in a local planning authority area where the number of households are expected to increase by between 16% and 25% by 2041; and/or Existing housing and land allocated for housing (e.g. strategic housing sites) covering >1-5 ha and/or >30-150 houses.
Medium	Private property or land allocated for housing in a local planning authority area where the number of households are expected to increase by between 6% and 15% by 2041; and/or Existing housing and land allocated for housing (e.g. strategic housing sites) covering <1 ha and/or <30 houses.
Low	Proposed development on unallocated sites providing housing with planning permission/in the planning process.
Negligible	N/A

Magnitude of Impact

- 16.2.27 Magnitude of impact on private property and housing arising from the proposed scheme is focused on impacts relating to:
- direct land-take and changes in access to/from private property and housing; and

- introduction or removal of severance and changes in accessibility for users of private property and housing.

- 16.2.28 Land-take is defined as land acquired through the Compulsory Purchase Order (CPO) process to provide sufficient land to construct, operate and maintain the proposed scheme including essential mitigation. Land-take and the CPO process is defined within Chapter 6 (The Proposed Scheme).
- 16.2.29 For the purpose of this assessment, land-take is considered to be areas directly required for the construction, operation and maintenance of the proposed scheme and includes land required for environmental mitigation such as landscape planting. Servitude rights across some land may also be acquired and where this is the case, this land is also included within the land-take assessment.
- 16.2.30 Severance is defined in DMRB LA 112 as *“the extent to which members of communities are able (or not able) to move around their community and access services/facilities”*.
- 16.2.31 Accessibility is defined in DMRB LA 112 as *“the ability of users to access land, property, infrastructure, businesses and community facilities”*.
- 16.2.32 Access is defined in DMRB LA 112 as *“the means by which to approach or enter land, property and assets”*.
- 16.2.33 The construction of new roads, or even relatively minor changes to existing roads, can result in significant changes in access and accessibility for WCH and vehicle users within a community. A road may act as a barrier deterring WCH from using certain community facilities (introduction of severance), or conversely, a diversion of road traffic away from a busy road or a change in the layout of the road and facilities provided for safe movement may make an existing road easier for WCH to cross, thereby removing severance of private property and housing.
- 16.2.34 The direct impact arising from amendments to access to private property and housing is focused on properties where, because of the proposed scheme, the means by which approach to, or entry of, property for WCH and vehicle users are altered. Additionally, the ability of users to access private property and housing is also considered.
- 16.2.35 Traffic diversions and associated impacts on vehicle travellers during construction of the proposed scheme are not fully known at this stage. However, on the basis of constructability assessments to date it is assumed during construction that vehicle access to private properties and housing, community land and assets, businesses and development land and agricultural land holdings will be provided at all times with the exception of:
- Short-term overnight closure of Birnam Glen Road during construction of the Birnam Glen and Inchewan Burn Bridge.

- 16.2.36 With the exception of Birnam Glen Road, due to the uncertainty over the need for traffic and WCH diversions and the construction access assumptions stated above, construction impacts have not been considered within the access or accessibility assessments for WCH or vehicles. Transport Scotland's appointed Contractor would be responsible for identifying diversion routes for WCH and preparing a Traffic Management Plan in advance of construction of the proposed scheme.
- 16.2.37 Whilst DMRB LA 112 details that the magnitude of change be reported where there has been the introduction (adverse) or removal (beneficial) of severance it does not provide criteria to assess the magnitude of change (complete severance, severe severance, severance, and discernible severance). Professional judgement is used to determine the degree of severance and is based on a combination of change in access and accessibility, including considering the introduction/removal of hindrances to movement (such as use of an at-grade road crossing, an overbridge with provision for WCH or an underpass with provision for WCH).
- 16.2.38 Land-take may give rise to demolition of property, loss of land within the curtilage of the property and severance. The magnitude of impact was determined based on the degree of change from baseline conditions in terms of land-take and access, and severance and accessibility in accordance with the criteria in Table 16.3.

Table 16.3: Impact magnitude criteria for private property and housing

Magnitude	Land Use and Access	Severance and Accessibility
Major	Loss of land use resource through direct land-take and/or loss of access to land and property. Current land use no longer viable.	Introduction of complete severance. No accessibility provision for users (adverse). or Removal of complete severance. Provision of full accessibility for users (beneficial).
Moderate	Partial loss of land use resource through direct land-take and/or substantial loss of access to land and property. Current land use potentially compromised.	Introduction of severe severance. Retention of limited accessibility for users (adverse). or Removal of severe severance. Provision of ample accessibility for users (beneficial).
Minor	Material change to land use resource through direct land-take and/or amendment of access to land and property. Current land use not likely to be compromised.	Introduction of severance. Retention of adequate accessibility for users (adverse). or Removal of severance. Provision of adequate accessibility for users (beneficial).

Magnitude	Land Use and Access	Severance and Accessibility
Negligible	Discernible alteration to land use resource through direct land-take and/or amendment of access to land and property. Current land use not directly affected.	Introduction of discernible severance. Retention of ample accessibility for users (adverse). or Removal of discernible severance. Provision of limited accessibility for users. (beneficial).
No change	No observable loss of land or alteration to access.	No observable severance or change in accessibility provision.

- 16.2.39 In assessing whether the acquisition of land compromises overall viability of a property, land or asset, professional judgement is used to determine whether there would be the potential for a likely change in future use of the property, land or asset. It should be noted that this is not an economic assessment of viability and does not provide more detailed analysis of the scale of impact on overall viability.
- 16.2.40 For the purposes of the assessment of indirect change in access, property, land and assets indirectly affected by the proposed scheme, some receptors have been grouped by the residential area they are located in, these being Byres of Murthly, Ringwood, Birnam, Birnam Glen, Little Dunkeld, Dunkeld, Inver and Properties along B898 (refer to Diagram 16.1). It is recognised that in certain circumstances the proposed scheme may make a beneficial contribution to the future development and viability of property, land and assets, such as through change in access. Where this is assessed, beneficial impacts are reported.
- 16.2.41 In the event of the loss of property, land and assets, the provision of financial compensation for land lost, severance, injurious affection and disturbance would be assessed by the District Valuer and is determined outside of the EIA process. Potential compensation payments were not considered as mitigation, but in undertaking the viability assessment for property, land and assets, reasonable claims for compensation were assumed to have been met in line with Transport Scotland's [Guidance on the Compulsory Purchase Process and Compensation](#) (Transport Scotland, 2014).

Significance of Effect

- 16.2.42 The overall significance of effect was determined taking into account sensitivity and magnitude, as set out in Table 16.2, Table 16.3 and Table 16.4 and in accordance with DMRB LA 104. It should be noted that as this assessment included a wide range of considerations, the final significance category was adjusted in some instances using professional judgement. Generally, where two significance categories are provided, the assessment reports the higher of the two significance categories to provide a worst-case precautionary approach. Where such an adjustment is made and the lower significance category is reported, an explanation is provided within the assessment.

- 16.2.43 Effects are considered adverse, unless otherwise stated. Effects are considered potentially 'significant' where the assessment reports effects of Moderate or higher significance, which are shown in bold in Table 16.4.

Table 16.4: Matrix for determination of effect significance

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
Medium	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

Community Land and Assets

Sensitivity

- 16.2.44 Sensitivity of a community facility (land and/or asset) is determined from a combination of its relative position in the community in terms of its existing accessibility (severance), the availability of alternative facilities to the community, and its use (including frequency of use) by members of the community.
- 16.2.45 DMRB LA 112 sets out the sensitivity criteria for community land assets and this is detailed in Table 16.5.

Table 16.5: Sensitivity criteria for community land and assets

Receptor value (Sensitivity)	Criteria
Very High	<p>Where there is a combination of:</p> <ul style="list-style-type: none"> ▪ existing complete severance between communities and their land/assets, with little/no accessibility provision to land and assets; ▪ alternative community facilities are only available outside the local planning authority area; ▪ the levels of use of the community facilities is very frequent (daily); and ▪ the land and assets are used by the majority ($\geq 50\%$) of the community.

Receptor value (Sensitivity)	Criteria
High	<p>Where there is a combination of:</p> <ul style="list-style-type: none"> existing substantial severance between community and land/assets, with limited accessibility provision; alternative community facilities are only available in the wider local planning authority area; the levels of use of the community facilities is frequent (weekly); and the land and assets are used by the majority ($\geq 50\%$) of the community.
Medium	<p>Where there is a combination of:</p> <ul style="list-style-type: none"> existing severance between communities and their land/assets but with existing accessibility provision; limited alternative community facilities are available at a local level within adjacent communities; the levels of use of the community facilities is reasonably frequent (monthly); and the land and assets are used by the majority ($\geq 50\%$) of the community.
Low	<p>Where there is a combination of:</p> <ul style="list-style-type: none"> limited existing severance between community and assets, with existing full (e.g. Equalities Act (EA) compliant) accessibility provision; alternative community facilities are available at a local level within the wider community; the levels of use of the community facilities is infrequent (monthly or less frequent); and The land and assets are used by the minority ($\leq 50\%$) of the community.
Negligible	<p>Where there is a combination of:</p> <ul style="list-style-type: none"> no or limited existing severance or accessibility issues; alternative community facilities are available within the same community; the levels of use of the community facilities is very infrequent (a few occasions yearly); and the land and assets are used by the minority ($\leq 50\%$) of the community.

Magnitude of Impact

16.2.46 Magnitude of impact on community land and assets arising from the proposed scheme is focussed on direct land-take and changes in access, and on severance and accessibility.

16.2.47 The magnitude of impact is assessed as per the assessment for private property and housing (paragraphs 16.2.27 to 16.2.43 and Table 16.3).

16.2.48 In accordance with paragraph 11 of the First Schedule Part III [Acquisition of Land \(Authorisation Procedure\) \(Scotland\) Act 1947](#), if community land and assets are considered as Open Space as defined in the Acquisition of Land Act, and the Open Space is lost under the Compulsory Purchase Order (CPO) process then the Orders shall be subject to a special parliamentary procedure unless:

- exchange land is given; or
- that the land does not exceed 250 square yards or is required for the widening of an existing road, and Scottish Ministers certify that the giving of exchange land is unnecessary in the interests of the vested person or in the public interest.

Significance of Effect

16.2.49 The overall significance of effect was determined taking into account sensitivity and magnitude as set out in Table 16.4 and as detailed in paragraphs 16.2.44 to 16.2.48.

Development Land

16.2.50 DMRB LA 112 treats development land and businesses as one category of land use to be assessed together. For the purposes of this EIAR they are separated into different land use categories and assessed separately. DMRB LA 112 provides criteria for the assessment of land allocated for housing and land allocated for employment. If a site is allocated within the Local Development Plan for a mixture of uses such as housing and employment, or the planning application provides for a mix of such uses, a review of the land use composition of the site would be undertaken and land use impacts would be assessed using sensitivity and magnitude criteria for the most prevalent land use.

16.2.51 In relation to planning applications the assessment criteria used directly relate to the intended use of the planning application, for example if it is related to a business the sensitivity and magnitude criteria relating to a business would be used for the assessment.

Sensitivity

16.2.52 Table 16.2 which provides details on the criteria for assessing the sensitivity of private property and housing is also applicable to development land allocated for housing. Table 16.6 provides details of the criteria for assessing the sensitivity of other development land allocated for employment use.

Table 16.6: Sensitivity criteria for land allocated for employment

Receptor value (Sensitivity)	Criteria
Very High	Land allocated for employment covering >5 ha
High	Land allocated for employment covering >1–5 ha
Medium	Land allocated for employment covering <1 ha
Low	Proposed development on unallocated sites providing employment with planning permission/in the planning process
Negligible	N/A

Magnitude of Impact

- 16.2.53 The assessment uses both a quantitative and qualitative approach to assessing magnitude of impact on allocated development land sites.
- 16.2.54 A development land allocation that does not have planning permission is assessed and reported based on the land use it is allocated for, in addition to its existing land use to reflect current land use impacts. Where a development land allocation is the subject of a pending planning application, or planning permission has been granted but construction has not commenced, the assessment reports impacts on both existing land use and additionally on the future use as proposed by the planning application.
- 16.2.55 Where a development has been granted planning permission and construction has commenced, the approved use is considered as the existing land use for the purposes of this assessment (e.g. an employment development). The construction status of planning applications has been identified using the Perth & Kinross Council Planning Portal to determine whether applicants had submitted a 'Notification of Initiation of Development' therefore notifying the council that construction has commenced.
- 16.2.56 The magnitude of impact is assessed as per the assessment for private property and housing (paragraphs 16.2.27 to 16.2.43).
- 16.2.57 In determining the magnitude of impact, professional judgement has been used due to uncertainty of the final planned built form and the level of detail available for development.

Significance of Effect

- 16.2.58 The significance of effect was determined taking into account sensitivity and magnitude, as set out in Table 16.4 and as detailed in paragraphs 16.2.50 and 16.2.57.

Businesses

Sensitivity

- 16.2.59 Table 16.7 provides details of the criteria for assessing the sensitivity of businesses.

Table 16.7: Sensitivity criteria for businesses

Receptor value (Sensitivity)	Criteria
Very High	Businesses located on existing employment sites covering >5 ha
High	Businesses located on existing employment sites covering >1-5 ha
Medium	Businesses located on existing employment sites covering <1 ha
Low	Proposed development on unallocated sites providing employment with planning permission/in the planning process.
Negligible	N/A

Magnitude of Impact

- 16.2.60 Magnitude of impact on businesses arising from the proposed scheme is focussed on direct land-take and change in access, and on severance and accessibility.
- 16.2.61 The magnitude of impact is assessed as per the assessment for private property and housing (paragraphs 16.2.27 to 16.2.43).

Significance of Effect

- 16.2.62 The overall significance of effect was determined taking into account sensitivity and magnitude, as set out in Table 16.4 and as detailed in paragraphs 16.2.59 and 16.2.61.

Indirect socio-economic impacts

- 16.2.63 In addition to direct impacts on businesses, indirect socioeconomic impacts on businesses and the wider local economy may arise, particularly for people and businesses that utilise the A9. Socio-economic impacts may include effects on travel to Perth & Kinross and onward journeys to the Highlands area. This in turn may affect tourism in Perth & Kinross and the Highlands, an important element of the local economy in the area with reliant businesses including hospitality, food and accommodation providers; visitor attractions; and those providing recreational opportunities. Similarly, commercial businesses rely on access for the receipt and distribution of goods and services and so continuity of access, access to existing and new transport links, and journey time reliability are important to such businesses.
- 16.2.64 Indirect socio-economic impacts are complex, relating to a variety of often interlinked factors and so professional judgement has been used to qualitatively assess these. The assessment is reported as either no change, beneficial impact, adverse impact or mixed. Significance is not attributed to the reported impacts as only potential impacts are assessed.

Agricultural Land Holdings

Sensitivity

16.2.65 Table 16.8 provides an indication of the characteristics used to inform the assignment of sensitivity for land interests.

Table 16.8: Sensitivity criteria for agricultural land holdings

Sensitivity	Characteristics
Very High	<ul style="list-style-type: none"> ▪ areas of land in which the enterprise is wholly reliant on the spatial relationship of land to key infrastructure; and ▪ access between land and key infrastructure is required on a frequent basis (daily) ▪ Intensive livestock production such as dairy cattle.
High	<ul style="list-style-type: none"> ▪ areas of land in which the enterprise is dependent on the spatial relationship of land to key infrastructure; and ▪ access between land and key infrastructure is required on a frequent basis (up to weekly) ▪ semi-intensive upland and lowland sheep and cattle grazing systems.
Medium	<ul style="list-style-type: none"> ▪ areas of land in which the enterprise is partially dependent on the spatial relationship of land to key infrastructure; and ▪ access between land and key infrastructure is required on a reasonably frequent basis (weekly to monthly) ▪ Extensive hill sheep livestock and arable production systems.
Low	<ul style="list-style-type: none"> ▪ areas of land which the enterprise is not dependent on the spatial relationship of land to key infrastructure; and ▪ access between land and key infrastructure is required on an infrequent basis (monthly or less frequent) ▪ Commercial forestry.
Negligible	<ul style="list-style-type: none"> ▪ areas of land which are infrequently used on a non-commercial basis.

Magnitude of Impact

16.2.66 Land-take from agricultural land holdings may give rise to demolition of property and key infrastructure, loss of land within the curtilage of the property, change in access, and change in severance and accessibility. The magnitude of impact was determined based on the degree of change from baseline conditions in terms of land-take and access, and severance and accessibility in accordance with the criteria in Table 16.9.

Table 16.9: Impact magnitude criteria for agricultural land holdings

Magnitude	Land Use and Access	Severance and Accessibility
Major	Loss of land use resource (e.g. demolition of property or key infrastructure, loss of >10% of the agricultural land holding) through direct land-take and/or loss of access to land and property. Current land use no longer viable.	Introduction of complete severance. No accessibility provision for users (adverse). <i>or</i> Removal of complete severance. Provision of full accessibility for users (beneficial).
Moderate	Partial loss of land use resource (e.g. loss of between 5% and 10% of the agricultural land holding) through direct land-take and/or substantial loss of access to land and property. Current land use potentially compromised.	Introduction of severe severance. Provision of limited accessibility for users (adverse). <i>or</i> Removal of severe severance. Provision of limited accessibility for users (beneficial).
Minor	Material change to land use resource (e.g. loss of <5% of the agricultural land holding) through direct land-take and/or amendment of access to land and property. Current land use not likely to be compromised.	Introduction of severance. Provision of adequate accessibility for users (adverse). <i>or</i> Removal of severance. Provision of adequate accessibility for users (beneficial).
Negligible	Discernible alteration to land use resource through direct land-take and/or amendment of access to land and property. Current land use not directly affected.	Introduction of discernible severance. Provision of ample accessibility for users (adverse). <i>or</i> Removal of severance. Provision of ample accessibility for users. (beneficial).
No change	No observable loss of land or alteration to access.	No observable severance or change in accessibility provision.

16.2.67 The impacts of the proposed scheme on agricultural land holdings associated with land-take and access, and severance and accessibility may affect the scope and scale of activities and enterprises on agricultural land holdings:

- permanent loss of land or change in agricultural land capability due to the proposed scheme and associated works;
- severance of fields;
- fragmentation of fields and disruption to cultivation patterns with risk of change in land use;

- access restrictions with changes in routes and journey distance to and from key infrastructure;
- disruption to existing drainage and disruption of provision of water to fields;
- loss of, or gaps in, commercial and amenity forestry, shelterbelts and covers;
- disturbance to sporting activities; and
- changes in permanent and/or seasonal employment patterns due to changes in the scale and nature of enterprises on the agricultural land holding.

16.2.68 Severance impacts refer to situations where:

- the proposed scheme would transect land or forestry parcels, potentially affecting access and also creating field compartment sizes and shapes which may cause operational disturbance to normal husbandry operations or render the severed area redundant for agricultural, forestry or sporting use; and/or
- the main farm steading, important farm buildings, or other key infrastructure (e.g. stock handling facilities) would be separated from land parcels.

16.2.69 Land-take was calculated based on the area affected by the anticipated land required for the proposed scheme, together with any areas of severed land parcels that would be rendered redundant for current land use. Any surplus land acquired may be offered back to former owners or their successors in accordance with the Crichton Down Rules (Scottish Government, 2011).

Significance of Effect

16.2.70 The overall significance of effect was determined taking into account sensitivity and magnitude, as set out in Table 16.4 and the methodology described in paragraphs 16.2.65 and 16.2.69.

Compensation

16.2.71 In the event of the loss of any agricultural, forestry or sporting land, the potential provision of financial compensation for land lost, severance, injurious affection and disturbance would be assessed by the District Valuer. However, the determination of financial compensation is outside the remit of the EIA process and is therefore unknown at this stage of the project. Potential compensation payments were not considered as mitigation. However, as part of the likely future viability assessment for agricultural, forestry and sporting businesses, reasonable claims for compensation as assessed by the District Valuer are assumed to have been met.

Cumulative Effects

16.2.72 Potential for 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

- 16.2.73 Land-take estimates are based on the areas shown on the Draft CPO and other land appropriated and which includes the land required for proposed scheme design elements, the extent of earthworks and the mitigation measures identified in this EIAR, and any other land required for the construction, maintenance and operation of the proposed scheme. The locations of temporary construction compounds would depend on the appointed Contractor, taking into account constraints identified by this EIAR. Whilst the appointed Contractor may locate these within land made available to them within the boundaries of the site, it is possible that they would seek planning consent for temporary use of land beyond this boundary. This would be subject to separate approvals that would be assessed at the appropriate time.
- 16.2.74 In assessing the impact of the proposed scheme on the development capacity and the amenity of a development site, no allowance has been made for any additional impacts that may arise as a result of the provision of measures required to mitigate the proximity impacts of the proposed scheme to the development when it is built.

16.3 Baseline Conditions

- 16.3.1 This section sets out the baseline conditions for Population – Land Use, providing general context of the local communities and then providing baseline conditions for each land use type.

Local Communities and the Wider Area

Centres of Population

- 16.3.2 The main communities within the study area are Birnam, Little Dunkeld, Dunkeld and Inver. Further settlements are located at Byres of Murthly, Birnam Glen, and Properties Along the B898. The location of these communities and settlements is shown on Diagram 16.1.
- 16.3.3 In the [2022 census](#), the population of the local area in the settlement of Dunkeld and Birnam was 1,194, accounting for approximately 0.79% of the wider population of Perth and Kinross (150,953) (Scotland's Census, 2022). According to the 2022 census, much of the population within the settlement of Dunkeld and Birnam consisted of the age cohort of 45 years or older (60%).

Tourism and Recreation

- 16.3.4 The dominant occupation in Dunkeld and Birnam is 'Accommodation and food service activities' at 18.8%, followed by 'Wholesale and retail trade; repair of motor vehicles and motorcycles' at 14.9% (Scotland's Census, 2022).
- 16.3.5 Within the wider region, tourism is of growing importance. The existing A9 provides access between Perth and Inverness and is a conduit for travellers looking to visit different regions of Scotland.
- 16.3.6 The [Scotland Visitor Survey 2023 Local Area Factsheet for Perthshire](#) indicates that 68% were

domestic visitors (17% from Scotland and 50% from the rest of the UK) and 32% international visitors (13% from Europe and 19% long haul with the majority of long haul visitors being from America) (VisitScotland, 2024). 77% of the surveyed visitors were identified as repeat visitors. In terms of life stage, 79% of surveyed visitors were classed as older independents and of retirement age.

16.3.7 The majority (55%) of the surveyed visitors stayed in non-serviced accommodation (e.g. self catering, camping) and 47% stayed in serviced accommodation (e.g. hotel or guest house). The top 5 attractions or activities undertaken/visited in Perthshire by the surveyed visitors were:

- Shopping;
- A castle or fort
- A historic house, palace, stately home;
- Viewed architecture and buildings; and
- Hill walk, mountaineering, hike or ramble – guided or self-guided.

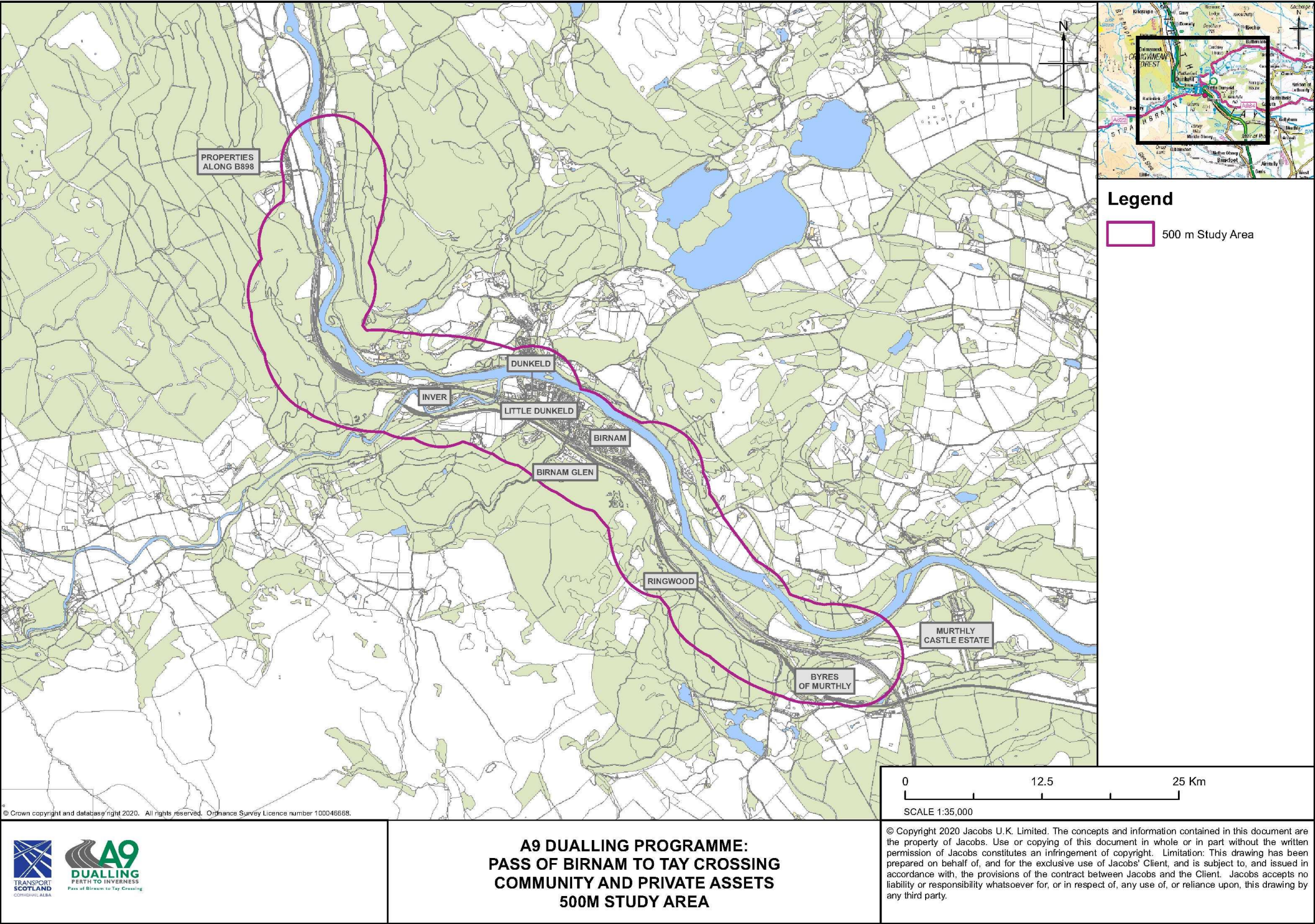


Diagram 16.1: Local Communities and study area, Ordnance Survey

- 16.3.8 Tourist attractions within the study area have been identified through [VisitScotland](#) resources (VisitScotland (Perthshire), 2025). Within Dunkeld and Birnam there are several tourist attractions that offer sporting activities such as Progression Bikes, County Clays, The Canyoning Company and Paddle Surf Scotland. The Hermitage, located west of Inver, is owned by the National Trust for Scotland and offers scenic woodland walks, nature spotting and guided tours. Dunkeld and Birnam also hold The Annual Niel Gow Festival which includes a variety of concerts, recitals and workshops. These events are accommodated in several locations in the town including The Royal Dunkeld Hotel, Little Dunkeld Church and the Birnam Arts and Conference Centre.
- 16.3.9 The PKC LDP2 (PKC, 2019) seeks to enhance existing tourism facilities, which includes Inver Mill Farm Caravan Park and Erigmore Leisure Park due to its contribution to visitor accommodation in the area. The retention of this facility is important for the local community and is included within the PKC LDP2 as a tourism policy (Policy 9A – Caravan Sites, Chalets and Timeshare Developments: Existing Caravan Sites). Further information is provided within ‘Development Land’ section of this baseline.
- 16.3.10 Within the study area there are 36 properties classified as ‘accommodation’ such as hotels, guesthouses, bed and breakfasts and self-catering accommodation. These include facilities such as the Dunkeld House Hotel and the Inver Mill Farm Caravan Park providing a diverse range of accommodation options to visitors and tourists.

Transport Infrastructure

- 16.3.11 Dunkeld and Birnam are well connected to Perth by bus and train. [Traveline Scotland](#) shows that Stagecoach operate bus services to Perth which run Monday to Sunday (approximately every hour to two hours) (Traveline Scotland, 2024). Dunkeld and Birnam are also well connected to Pitlochry, Edinburgh and Inverness by bus. There are a number of bus stops located within the study area, including two on the existing A9 at Inver and 8 located within Little Dunkeld and Birnam.
- 16.3.12 Scotrail services run hourly up until 10pm Monday to Saturday with irregular services on Sundays, with the latest service to Perth at 7pm. Dunkeld and Birnam are well connected to Pitlochry, Edinburgh and Inverness by train. Network Rail improvements at Dunkeld & Birnam Station include raising sections of Platform 1 and Platform 2 to provide step free train to platform access. These works commenced in January 2025 and were completed in May 2025. Additionally, Network Rail are committed to undertake associated works to provide step free access between Platform 1 and Platform 2 via ramps and footways linking to Birnam Glen Road. Given this is a reasonably foreseeable development and the timeline for the improvement works are imminent, these Network Rail improvements are included in the baseline for this EIAR and this assessment. The location of these works are shown on Diagram 16.2.

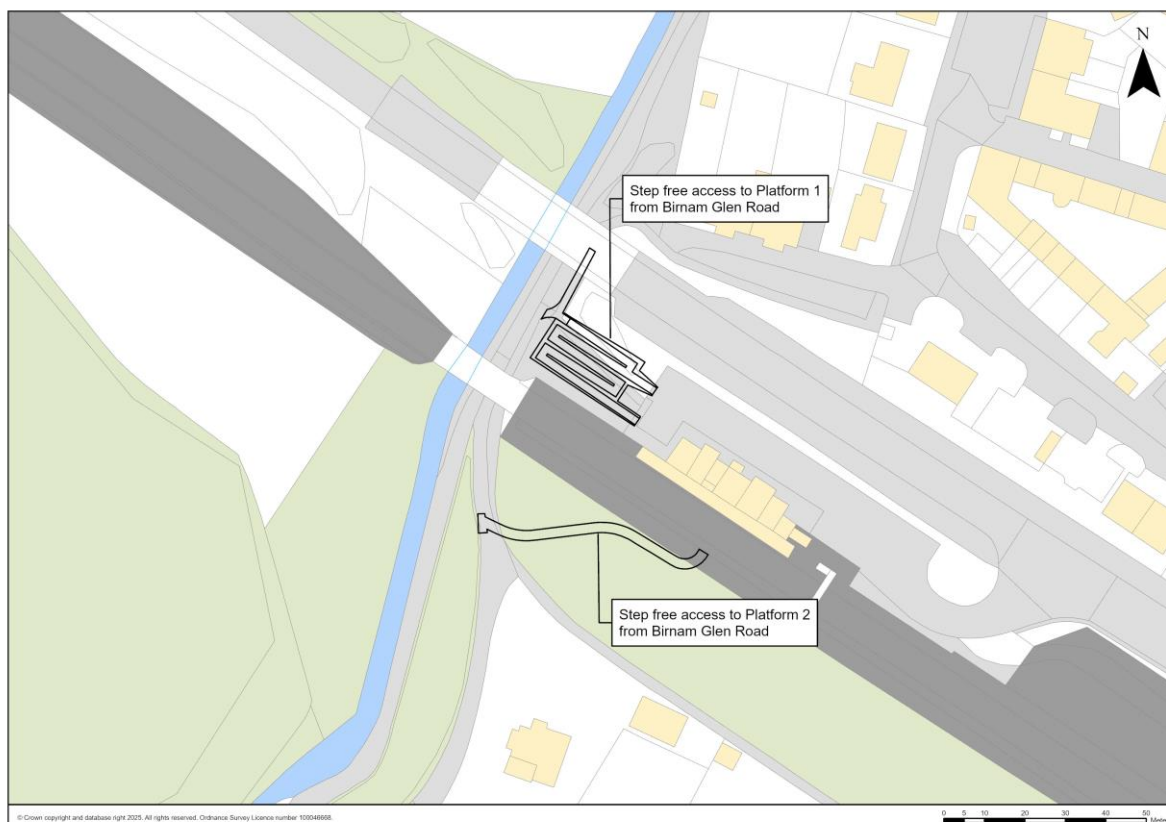


Diagram 16.2: Network Rail Step Free Access Between Platform 1 and Platform 2

Private Property and Housing

- 16.3.13 Most residential properties within the study area are located within the communities of Birnam, Little Dunkeld, Dunkeld and Inver. The remainder of the residential properties are made up of scattered rural dwellings, including a number of farmhouses and their associated cottages, in the areas of Ringwood, Byres of Murthly, the Murthly Castle Estate, Birnam Glen and along the B898. It is estimated from the AddressBase dataset that there are 671 residential dwellings within the study area.
- 16.3.14 [Household projections for Scotland](#) (2018-based) estimate that by 2043 the number of households within the Perth & Kinross local authority area will increase by 8% (National Records of Scotland, 2020). [Perth & Kinross Council](#) have also projected that within the Highland Housing Market Area (HMA), which includes the communities in the study area, approximately 420 additional units will be required between 2021 and 2040 (PKC, 2023). The PKC LDP2 Policy 17 (Residential Areas) looks to protect residential amenity and ensure that development within allocated 'Residential Areas' is compatible with amenity and character of the area.
- 16.3.15 Based on the criteria detailed in Table 16.2 (Sensitivity Criteria for Private Property and Housing) sensitivity ratings for residential areas and individual properties within these areas have been allocated as follows:
- Byres of Murthly: medium sensitivity;

- Ringwood: medium sensitivity;
- Birnam: very high sensitivity;
- Birnam Glen: medium sensitivity;
- Little Dunkeld; very high sensitivity;
- Dunkeld: very high sensitivity;
- Inver: high sensitivity; and
- Properties along the B898: medium sensitivity.

16.3.16 The residential areas are shown on Diagram 16.1.

Community Land and Assets

16.3.17 PKC LDP2 Policy 16 (Social, Cultural and Community Facilities) considers developments that have the potential to result in the loss or change of land or buildings presently (or more recently) used for community purposes and seeks to ensure that this land is safeguarded. Development will only be permitted where:

- It would not seriously affect the availability of community facilities in the locality; and
- No suitable alternative community uses can be found for the land or buildings in question; or
- The proposal would result in the provision of alternative facilities of equivalent community benefit.

Community Land

16.3.18 The PKC LDP2 identifies Sports Pitches, Parks and Open Space which has value to the community for either recreational or amenity purposes (PKC, 2019). Policy 14 (Open Space Retention and Provision) and accompanying supplementary guidance '[Open Space Provision for New Developments](#)' provides the policy framework for development in respect of Open Space and is outlined in Table 16.10. Policy 42 (Green Infrastructure) of the PKC LDP2 and accompanying '[Green and Blue Infrastructure Supplementary Guidance](#)' also seeks to ensure that all new development contributes to the creation, protection and management of green infrastructure. Areas designated as Open Space are shown on Figure 16.2 and include, but are not limited to:

- Community Land in Birnam
 - Beatrix Potter Garden;
 - Jubilee Park;
 - Birnam Play Area;
- Community Land in Little Dunkeld
 - Riverside Land (National Trust for Scotland);
 - Dunkeld and Birnam Recreation Club (Community Facility) in Little Dunkeld;

- Land by Little Dunkeld Manse (the site of Birnam Highland Games);
- Little Dunkeld Recreation Park; and
- Community Land in Dunkeld
 - Riverside Play Area.

- 16.3.19 Areas of Open Space within the study area are allocated a high sensitivity given the balance of existing accessibility provision, frequency of use (very frequent) and the level of use by the community (the majority) and the availability of alternative local facilities at a local level. These criteria have also been used to allocate sensitivity for other community land.
- 16.3.20 Other land identified as being potentially used by the community for recreation or amenity purposes but not designated as Open Space in the PKC LDP2 includes, but is not limited to:
- Quarry Car Park (Birnam Hill) near Ringwood: high sensitivity
 - Torwood Park in Birnam: high sensitivity;
 - St Ninian's Wynd Gardens in Dunkeld: high sensitivity;
 - The Hermitage near Inver: very high sensitivity; and
 - Newton Craig Car Park (Inver Wood) near properties along the B898: high sensitivity.
- 16.3.21 The majority of community land is located within Birnam, Little Dunkeld and Dunkeld. The Hermitage is a National Trust for Scotland owned visitor attraction located north of Inver. The location of these areas of community land are shown on Figure 16.1.
- 16.3.22 The Birnam War Memorial is located within Little Dunkeld Recreation Park and the Monument to the 6th Duke of Atholl is located at The Cross.
- 16.3.23 There are a number of footpaths (e.g. core paths) within the study area that provide access for the public and may be used by the local community for recreational purposes. The potential impact of the proposed scheme on these paths is considered within Chapter 17 (Population – Accessibility).

Table 16.10: Open Space policy framework in the PKC LDP2

Ref	Type/Name	Overview
Community Facilities, Sport and Recreation		
Policy 14: Open Space Retention and Provision		
Policy 14A	Existing Areas	<p>Areas of open space, parks, outdoor sport facilities, including sport pitches, and allotments/community growing areas, are areas of land which have value to the community for either recreational or amenity purposes; these areas are located both within and outside settlement boundaries. Development proposals resulting in the loss of these areas will not be permitted, except in circumstances where one or more of the following apply:</p> <p>(a) Where the site is principally used as a recreation resource, the proposed development is ancillary to the principal use of the site as a recreational resource.</p> <p>(b) The proposed development involves a minor part of the site which would not affect its continued use as a recreational or amenity resource.</p> <p>(c) In the case of proposals involving the loss of a recreational facility, the facility which would be lost would be replaced by provision of one of comparable or greater benefit and in a location which is convenient for its users, or by the upgrading of an existing provision to provide a better quality facility, either within the same site, or at another location which is convenient for its users.</p> <p>(d) Where a proposal would involve the loss of a sports pitch, a playing field strategy prepared in consultation with sportscotland has demonstrated that there is a clear excess of sports pitches to meet current and anticipated future demand in the area, and that the site could be developed without detriment to the overall quality of provision.</p>
Policy 14B	Open Space within New Developments	<p>The Council will seek the provision of appropriate areas of informal and formal open space that is accessible to all users as an integral part of any new development where existing provision is not adequate. Allotments should be incorporated where there is a proven demand in the local area. The Council will also encourage opportunities for the provision of community growing spaces as part of new developments where appropriate.</p> <p>Where it is physically impossible or inappropriate to meet the open space provision on-site, consideration may be given to the provision of a suitable alternative.</p>

Ref	Type/Name	Overview
		In areas where there is an adequate supply of accessible open space of an appropriate quality in a locality, a financial contribution towards improvement or management of existing open space may be considered an acceptable alternative.

Community Assets

16.3.24 Community assets include village halls, healthcare facilities, postal services, education facilities and religious facilities. The majority of community assets are located within Birnam, Little Dunkeld and Dunkeld. Table 16.11 outlines the community assets identified in the study area, and the assigned sensitivities in accordance with the sensitivity criteria as described in Table 16.5:

Table 16.11: Community assets within the 500m study area

Community Asset	Sensitivity
Birnam Arts and Conference Centre (Birnam Institute)	Very high
Little Dunkeld Village Hall	Very high
Dunkeld & Birnam Railway Station (Station Building)	High
Little Dunkeld Churchyard (cemetery)	High
The Duchess Ann Halls	Very high
The Chanonry Hall	Very high
Birchwood House Roman Catholic Church	Very high
St Mary's Episcopal Church	Very high
Little Dunkeld Church	Very high
Dunkeld Cathedral	Very high
Willowbank Recycling Point	High
Royal School of Dunkeld	Very high
Birnam Arts and Conference Centre	Very high
Birnam Library	Very high
Community Archive (12 The Cross)	Very high
Little Dunkeld Sports & Leisure Hub (Dunkeld & Birnam Recreation Club)	Very high
Tennis Courts (Craigvinean)	Very high
Tennis Courts (Dunkeld House)	Very high
Dunkeld Masonic Hall	Very high
Craigvinean Surgery	Very high
Bank of Scotland	Very high
Bridge Street Post Office	Very high
Bus Shelter and Bus Stops (2 at Inver, 8 in Little Dunkeld and Birnam)	Very high
Public Telephones (eight)	High
Tayside Fire & Rescue (Fire Station)	Very high
The Drill Hall	Very high
Rivendell House	Very high

16.3.25 The location of community assets in the 500m study area are shown on Figure 16.1.

Businesses

16.3.26 PKC LDP2 Policy 8 (Rural Business Diversification) seeks to retain employment provisions in designated areas. The policy stipulates the criteria for new businesses in the area and protecting existing proposals. Policy 8 also promotes tourist-related developments which would help extend the tourist season. PKC LDP2 Policy 9A (Caravan Sites, Chalets and Timeshare Developments: Existing Caravan Sites) looks to encourage the retention and improvement of existing caravan and camping sites for holiday-related uses. Within the study area, the site of Erigmore Leisure Park has been designated for tourism under Policy 9A.

16.3.27 The businesses identified within the study area using Ordnance Survey's AddressBase, are summarised in Table 16.12 and listed in Appendix A16.1 (Business Properties). There are a total of 130 business sites within the study area, these have been filtered by class of commercial property on the AddressBase database and aggregated into similar classifications of businesses. The locations of the business sites are illustrated on Figure 16.2. Scottish Gas Networks also have buried infrastructure within the study area and as this is not associated with a property it is not shown on Figure 16.2.

Table 16.12: Business profile within the study area

Business classification	No. of sites	% of total sites
Accommodation	36	28
Commercial/Industrial	39	30
Education	1	1
Office/Workshop	13	10
Petrol Filling Station	2	2
Restaurant/Cafeteria	8	6
Retail/Showroom	29	22
Waste Transfer/Disposal	1	<1
Station/Interchange	1	<1

16.3.28 In accordance with the criteria for assessing the sensitivity of businesses in Table 16.7, businesses within the Birnam, Little Dunkeld and Inver areas are located on existing employment sites covering less than 1 ha and are allocated a sensitivity of medium. Businesses located in Dunkeld are located on existing employment sites (designated as retail in PKC LDP 2) covering 1-3ha and are allocated a sensitivity of high.

Development Land and Planning Applications

16.3.29 There are 13 permitted planning applications and three development land allocations within the study area. Extant planning applications and development land are assessed as future uses (with the exception of land with planning permission where construction has begun which are assessed as an existing land use based on the type of development being constructed).

16.3.30 As explained within paragraph 16.2.12, consultation has taken place with PKC to identify planning permissions granted between 01 February 2022 and valid up to 31 January 2025. Applications submitted during this period, but are under consideration, have also been included within the assessment. Where works are either known to have been completed or expected to have been completed (e.g. internal alterations to a property) these have been sifted out. Each planning application is assigned a reference for the purpose of this assessment (e.g. PA01: Planning Application) and are outlined in Table 16.13. Post sifting, two planning applications have been identified and are shown on Figure 16.2.

Table 16.13: Extant planning applications

Reference	PKC Application Reference	Description	Planning Permission
PA01	22/00784/FLL	Erection of two light industrial/storage units	Approved
PA02	24/00619/FLL	Erection of replacement fishing hut	Approved

16.3.31 In relation to development land, PKC LDP2 allocates land to be safeguarded for existing uses with corresponding LDP policies detailing requirements for further development (e.g. Policy 7 – Employment and Mixed-Use Areas). There are three land allocations identified in PKC LDP2 located within the study area and shown on Figure 16.2:

- *LA01: PKC LDP2 Economic Development Policy 7 – Employment and Mixed-Use Areas. Employment Safeguarding (General) at Birnam Industrial Estate and at Depot (Fosters Contracting Ltd).*
- *LA02: PKC LDP2 Economic Development Policy 9 – Caravan Sites, Chalets and Timeshare Developments. Tourism at Erigmore Leisure Park.*
- *LA03: PKC LDP2 Retail and Commercial Development Policy 10 – City, Town and Neighbourhood Centres. Town and Neighbourhood Centre at Dunkeld.*

16.3.32 Although land has also been safeguarded by Policy 54 (Health and Consultation Zones) as a Pipeline Consultation Zone, it is not of relevance to the assessment of the proposed scheme as it concerns health and safety considerations of planning applications.

Agricultural Land Holdings

Land Use and Land Capability

16.3.33 The predominant land use in the study area is forestry interspersed with a limited number of agricultural fields. The agricultural land supports a limited range of upland (moderate to low production intensity) agricultural systems with livestock production (cattle and sheep), the main farming type. In the case of forestry, most of this is managed for commercial purposes although some forestry and woodland support other uses, including recreation.

- 16.3.34 PKC LDP2 Policy 50 – Prime Agricultural Land seeks to protect prime agricultural land (Land Capability for Agriculture (LCA) classes 1, 2 and 3,1), however, it makes exception for development that is necessary to meet specific established need, such as a major infrastructure proposal and where there is no other suitable site available on prime land. Policy 51 – Soils also seeks to protect soils and good quality agricultural land from damage such as erosion or compaction.
- 16.3.35 The soils and quality of agricultural land within the study area, including the LCA classification, is described in detail within Chapter 13 (Geology, Soils, Groundwater and Land Contamination) and shown on Figure 13.1. Prime agricultural land (Class 3.1) is found adjacent to the River Tay to the east of Birnam and at the River Tay Crossing.

Agricultural Land Holdings

Agriculture

- 16.3.36 The range of agricultural activities in the study area is typical of farming types and practices in this part of Scotland; arable based systems on land of higher agricultural capability and grassland-based livestock systems.

Forestry

- 16.3.37 Forestry and woodland are located throughout the proposed scheme study area; however, forestry and woodland are more limited around Dunkeld and Birnam. The type of forestry and woodland varies between each coupe and includes coniferous forests, deciduous woodlands, shrubland and riparian strips. Forestry and woodland within the study area is used for both commercial and amenity purposes.
- 16.3.38 The vast majority of wooded cover in the study area is designated on the Ancient Woodland Inventory (Scotland) as ancient woodland of semi-natural origin (categories 1a and 2a) or of plantation origin (category 2b). A large proportion of the wooded cover is designated by the Native Woodland Survey of Scotland data however the majority of this is of plantation origin (PAWS) indicating that non-native conifer species are particularly prevalent.
- 16.3.39 PKC LDP2 Policy 40 (Forestry, Woodland and Trees) seeks to protect woodland and trees, ensuring that new development does not lead to a loss of these features.
- 16.3.40 Further information on forestry and woodland condition is provided within Chapter 12 (Biodiversity).

Sporting Land

- 16.3.41 Sporting activities within the study area consist predominantly of fishing on the River Tay with some of the landowners and Estates having other sporting interests e.g. shooting and stalking, on their land outwith the study area.

Sensitivity Assessment

16.3.42 The baseline data collected during the farm business and forestry surveys were used to give an individual sensitivity assessment for each land interest potentially affected by the proposed scheme (refer to Figure 16.3 for the location of each land interest). The sensitivity assessments for each land interest can be found in Table 16.14.

Table 16.14: Agricultural land holdings

Land Interest	Description of enterprises	Sensitivity
Murthly Estate	<p>Large mixed farming and sporting estate incorporating wider business enterprises extending to approximately 4,450ha. Main business activities include farming, forestry, sporting, property lets, sawmilling and commercial activities in and around Murthly Castle. Estate land supports recreational activities including walks and cycle routes.</p> <p>Agricultural interests within the study area include sheep grazing and arable farmland south of Dunkeld and around Byres of Murthly. Forestry interests consist of Byres Wood, Dalpowie Plantation and Birnam Wood. Sporting interests comprise predominantly salmon fishing using fly method on the Top Water beat on the River Tay. A fishing hut with a boat is located on the left bank opposite Branders Hill.</p> <p>Land is subject to environmental agreements.</p>	High
Forestry and Land Scotland	<p>Tay Forest District comprising Craigvinean Forest and managed under Craigvinean Forest Plan. Forestry managed within the study area is predominantly managed as continuous cover forestry to support recreation with some commercial activities (felling and restocking) planned at Ladywell. The forest has a long history of management with it being established in 1759. The forest supports recreation through forest walks at The Hermitage and in the lower reaches at Ladywell. Formal facilities include a car park and forest walk at the Hermitage, paths from Dunkeld and Birnam Walks system at Ladywell and a right of way (RoW). Open access for horse riding as well as waymarked mountain bike routes and several events and competitions.</p>	Low

Land Interest	Description of enterprises	Sensitivity
Ladywell Farm (Drummond Fencing)	Mixed livestock farm within the study area supporting sheep and equestrian enterprises and extending to approximately 9.30ha. Grazing is let supporting the sheep enterprises. Equestrian enterprise includes stabling for 10 horses. Land also supports the function of Drummond Fencing.	High
Ladywell Farm (Ladywell Fencing)	Mixed livestock farm within the study area supporting sheep enterprises and extending to approximately 9.30ha. Grazing is let supporting the sheep enterprises. Land also supports the function of Ladywell Fencing.	High
Invermill Farm	Grazing land within the study area with total agricultural land area extending to approximately 11.69ha. Total land interest holding extends to 14.74ha. Land used to support equestrian activities. Comprises grazing land, ménage and covered structure let out. Grazing land east of the Hermitage and the River Braan. Also used for car parking for local events. Note that the business interests of Invermill Farm extend to the ownership and running of Invermill Caravan Park.	High
Inchmagrannachan Farm	Mixed livestock and arable farm supporting beef and sheep enterprises and arable cropping (mainly cereals and rotation of land let for potatoes) and extending to approximately 43ha. Three self-catering farm Holiday cottages located at Inchmagrannachan. Land within the study area used for arable cropping on rotation.	High
Atholl Estates	Large farming and sporting estate extending to 18,000ha. Land ownership within study area comprises the southern extents of Rotmell Wood. Wider estate activities include: <ul style="list-style-type: none"> ▪ Agriculture: cattle, sheep and cropping systems. ▪ Forestry: managed for commercial wood production and to support sporting activities. 	High

Land Interest	Description of enterprises	Sensitivity
	<ul style="list-style-type: none"> Environmental Agreements: land subject to environmental management through agricultural, forestry and environmental subsidy schemes. <p>Other: renewables (hydro scheme), equestrianism and tourism.</p>	
Dalmarnock Fishings and Woodlands Cottage	<p>Salmon fishing rights holders within the study area on both banks of the River Tay from Dalguise to Rotmell.</p> <p>Self-catering accommodation at Woodlands Cottage including for use as a fishing lodge. Comprises the upper and lower beat with one Fishing Bothy located on the lower beat within the A9 Dualling Programme: Tay Crossing to Ballinluig project approximately 150m north of the proposed scheme. Six of the 15 named pools within this beat are located within the proposed scheme study area.</p>	Very High
Dunkeld House Salmon Fishings	<p>Salmon fishing rights holders within the study area on the River Tay from Dunkeld Bridge to Dalguise. The beat is approximately two miles long on both banks and contains 17 named pools within the study area. Dunkeld House Hotel located within the middle of the beat provides accommodation.</p>	Very High
Newtyle Fishings	<p>Salmon fishing rights holders within the study area on the River Tay at Birnam. The beat is approximately two miles long on both banks and contains 16 named pools within the study area. A fishing hut and boat are located on the right bank approximately 250m south of the sewage works.</p>	Very High

16.4 Potential Impacts

Introduction

- 16.4.1 Potential impacts on land use have been identified for the study area and are discussed below. Construction and operation impacts have been assessed together, as impacts on land use are expected to be similar during both construction and operation phases. All potential impacts are adverse unless otherwise stated.

- 16.4.2 Potential impacts are assessed in the absence of mitigation, with residual impacts taking account of mitigation identified in Section 16.6 (Residual Impacts). As noted previously, impacts assessed as **Moderate** or above are considered potentially significant in the context of the EIA Regulations. This is with the exception of impacts on business viability and indirect socio-economic impacts which use different assessment criteria as outlined in Section 16.2 (Approach and Methods).

The Proposed Scheme Overall Land-take

- 16.4.3 The overall land-take for the construction, operation and essential mitigation for the proposed scheme excluding land already owned by Scottish Ministers and land of unknown title is calculated as 161.07ha. Land already owned by Scottish Ministers forming existing road infrastructure is 49.09ha and land from unknown title is 0.26ha. Land-take is summarised in Table 16.15.

Table 16.15: Proposed scheme overall land-take

Land Interest	Total Land-take (ha)
Private Property and Housing	0.06
Community Land and Assets	0.38
Businesses	3.53
Agricultural Land Holdings	157.10
Sub-total	161.07
Other Land (unknown title)	0.26
Scottish Ministers Land	49.09
Total Land-take	210.42

- 16.4.4 Land-take of development land has been considered separately in order to prevent the double counting of land-take. Land-take from extant planning applications within the study area extends to 0.40ha. Land-take from development land allocations identified in PKC LDP2 within the study area of the proposed scheme extends to 1.42ha. Land take from open space designated in in PKC LDP2 extends to 0.65ha. Land-take from planning applications is summarised in Table 16.18.

Private Property and Housing

- 16.4.5 As shown on Diagram 16.1 private property and housing in the study area is concentrated in the communities of Byres of Murthly, Ringwood, Birnam Glen, Birnam, Little Dunkeld, Dunkeld, Inver and properties along the B898. These communities and settlements are indirectly affected by access to/from the proposed scheme as detailed below:

- Byres of Murthly and Ringwood during operation:
 - To the proposed scheme via the B867 to the grade separated Birnam Junction allowing access northbound and via the B867 and Perth Road to the Dunkeld Junction at-grade roundabout to access the proposed scheme southbound and northbound.

- From the proposed scheme southbound via the Dunkeld Junction at-grade roundabout, Perth Road and the B867 and from the proposed scheme northbound via the grade separated Birnam Junction and the B867.
 - Sensitivity is assessed as medium.
 - Indirect access arrangements to/from the proposed scheme are assessed to be materially changed (minor beneficial) as journey length is similar, safer access is provided, and journey times are more reliable.
 - Indirect change in access to/from the proposed scheme for Byres of Murthly and Ringwood are assessed to have the potential for impacts of Slight (beneficial) significance.
- Birnam Glen during construction:
 - There would be temporary short-term overnight closures of Birnam Glen Road during the construction of the Birnam Glen and Inchewan Burn Bridge resulting in indirect partial loss of access (moderate) to properties in Birnam Glen (medium sensitivity) during this period. Closures are expected to happen on single nights rather than consecutively.
 - Indirect temporary short-term partial loss of access to/from the proposed scheme for Birnam Glen is assessed to have the potential for impacts of **Moderate** significance.
- Birnam Glen during operation:
 - To the proposed scheme via Birnam Glen Road and Perth Road to the Dunkeld Junction at-grade roundabout allowing access northbound and southbound or via Birnam Glen Road and Perth Road to the grade separated Birnam Junction allowing access southbound and northbound.
 - From the proposed scheme northbound and southbound at the Dunkeld Junction at-grade roundabout via Perth Road and Birnam Glen Road or from the proposed scheme northbound via the grade separated Dunkeld Junction via the B867, Perth Road and Birnam Glen Road.
 - Sensitivity is assessed as medium.
 - Indirect access arrangements to/from the proposed scheme are assessed to be materially changed (minor beneficial) as journey length is similar, safer access is provided, and journey times are more reliable.
 - Indirect change in access to/from the proposed scheme for Birnam Glen are assessed to have the potential for impacts of Slight (beneficial) significance.
- Birnam and Little Dunkeld during operation:
 - To the proposed scheme via Perth Road to the Dunkeld Junction at-grade roundabout allowing access northbound and southbound or via Perth Road to the grade separated Birnam Junction allowing access southbound and northbound.
 - From the proposed scheme northbound and southbound at the Dunkeld Junction at-grade roundabout via Perth Road or from the proposed scheme northbound via the grade separated Dunkeld Junction via the B867 and Perth Road.

- Sensitivity is assessed as very high.
 - Indirect access arrangements to/from the proposed scheme are assessed to be materially changed (minor beneficial) as journey length is similar, safer access is provided, and journey times are more reliable.
 - Indirect change in access to/from the proposed scheme for Birnam and Little Dunkeld are assessed to have the potential for impacts of **Moderate** (beneficial) significance.
- Dunkeld during operation:
 - To the proposed scheme via A923 to the Dunkeld Junction at-grade roundabout allowing access northbound and southbound or via Perth Road to the grade separated Birnam Junction allowing access southbound and northbound.
 - From the proposed scheme northbound and southbound at the Dunkeld Junction at-grade roundabout via the A923 or from the proposed scheme northbound at the grade separated Dunkeld Junction via the B867, Perth Road and the A923.
 - Sensitivity is assessed as very high.
 - Indirect access arrangements to/from the proposed scheme are assessed to be materially changed (minor beneficial) as journey length is similar, safer access is provided, and journey times are more reliable.
 - Indirect change in access to/from the proposed scheme for Dunkeld are assessed to have the potential for impacts of **Moderate** (beneficial) significance.
- Inver during operation:
 - To the proposed scheme via unclassified road to Inver to the Dunkeld Junction at-grade roundabout allowing access northbound and southbound.
 - From the proposed scheme northbound and southbound at the Dunkeld Junction at-grade roundabout via the unclassified road to Inver.
 - Sensitivity is assessed as medium.
 - Indirect access arrangements to/from the proposed scheme are assessed to be materially changed (minor beneficial) as journey length is similar, safer access is provided, and journey times are more reliable.
 - Indirect change in access to/from the proposed scheme for Inver are assessed to have the potential for impacts of Slight (beneficial) significance.
- Properties along the B898 during operation:
 - To the proposed scheme via the B898 to the grade separated Dalguise Junction allowing access northbound and southbound.
 - From the proposed scheme northbound and southbound at the grade separated Dalguise Junction via the B898.
 - Sensitivity is assessed as medium.
 - Indirect access arrangements to/from the proposed scheme are assessed to be materially changed (minor beneficial) as journey length is similar, safer access is provided, and journey times are more reliable.

- Indirect change in access to/from the proposed scheme for Inver are assessed to have the potential for impacts of Slight (beneficial) significance.

- 16.4.6 The proposed scheme requires the acquisition of approximately 0.06ha of land from three private properties. The potential impacts in relation to private property and housing are reported in Table 16.16. Demolition of one former residential property (Auchlou at ch5700) is required within Scottish Ministers land to facilitate the construction of the southbound carriageway. Whilst this is not assessed as private property and housing, the demolition of a former residential property is noted.
- 16.4.7 Of the three private properties identified in Table 16.16, all have potential for significant impacts arising from a combination of land-take, change in access and change in severance/accessibility provision.

Table 16.16: Potential impacts for private property and housing (construction and operation)

Property name	Description of potential impacts	Sensitivity	Magnitude	Significance
Ballincreiff House, Birnam	Material loss via servitude of 0.03ha (262m ² or thereby) of woodland and garden for realignment of WF007 and tie-in to existing property access on B867/Perth Road. Discernible alteration to access. Current land use not likely to be compromised. No observable severance or change in accessibility provision.	Very high	Minor	Moderate
Rowanlea, Birnam	Material loss of 0.02ha (224m ² or thereby) of woodland and garden for main alignment and pre-earthworks drain. No observable alteration to access, severance or change in accessibility provision.	Very high	Minor	Moderate
Tirohia (10 Station Road)	Material loss of <0.01ha (122m ² or thereby) of property boundary and driveway for tie-in to Station Road. No observable alteration to access, severance or change in accessibility provision.	Very high	Minor	Moderate

Community Land and Assets

- 16.4.8 Indirect access arrangements to/from 13 areas of community land and the proposed scheme located in or near to Ringwood, Birnam, Little Dunkeld, Dunkeld, and along the B898 (refer to paragraphs 16.3.18 to 16.2.23 and Figure 16.1) would be the same as reported for private property and housing in paragraph 16.4.5 and associated bullet points.
- 16.4.9 With high sensitivity and indirect access arrangements to/from the proposed scheme assessed to be materially changed (minor beneficial) as journey length is similar, safer access is provided, and journey times are more reliable, the indirect change in access to/from the proposed scheme for community land located in or near to Ringwood, Birnam, Little Dunkeld, Dunkeld and along the B898 are assessed to have the potential for impacts of Slight (beneficial) significance.
- 16.4.10 Direct access for The Hermitage located near Inver during operation is provided to/from the proposed scheme by The Hermitage Left-in Left-out Junction. This facilitates access to/from the proposed scheme northbound only.
- 16.4.11 Access to The Hermitage from the proposed scheme southbound would be provided by the combination of the Dunkeld Junction at-grade roundabout and The Hermitage Left-in Left-out Junction. Access from The Hermitage to the proposed scheme southbound would be provided by the combination of The Hermitage left-in Left-out Junction the Dunkeld Junction at-grade roundabout and the grade separated Dalguise Junction.
- 16.4.12 The Hermitage has very high sensitivity and direct access arrangements to/from the proposed scheme assessed to be materially changed (minor magnitude) as journey length is only discernibly changed to/from the proposed scheme northbound, and materially changed (longer) to/from the proposed scheme southbound as either Dunkeld Junction at-grade roundabout or the grade separated Dalguise Junction would be required to be used in combination. This is offset by safer access being provided. The direct change in access to/from the proposed scheme for The Hermitage is assessed to have the potential for impacts of overall **Moderate** significance.
- 16.4.13 Indirect access arrangements to/from community assets and the proposed scheme located in or near to Ringwood, Birnam, Little Dunkeld, Dunkeld and Inver (refer to Table 16.11 and Figure 16.1) would be the same as reported for private property and housing in paragraph 16.4.5 and associated bullet points.
- 16.4.14 With very high or high sensitivity and indirect access arrangements to/from the proposed scheme assessed to be materially changed (minor beneficial) as journey length is similar, safer access is provided, and journey times are more reliable, the indirect change in access to/from the proposed scheme for community assets located in or near to Ringwood, Birnam, Little Dunkeld, Dunkeld and Inver are assessed to have the potential for impacts of **Moderate** (beneficial) significance.

- 16.4.15 The proposed scheme requires the acquisition of approximately 0.38ha of land from five areas of community land and assets. The potential land-take impacts on community land and assets relating to are detailed in Table 16.17.

Table 16.17: Potential land-take impacts for community land and assets

Land Interest	Description of Land-take	Sensitivity	Magnitude	Significance
Little Dunkeld Park and War Memorial	Material loss of 0.08ha of land from junction between the A923 and Perth Road. No observable change in severance or accessibility.	High	Minor	Slight
Dunkeld & Birnam Recreation Club	Discernible loss of <0.01ha (60m ² or thereby) of land to facilitate realignment of a watercourse (WF009). No observable change in severance or accessibility.	Very High	Negligible	Slight
Land by Little Dunkeld Manse	Discernible loss of <0.01ha (71m ² or thereby) of land for re-alignment of a watercourse (WF009). No observable change in severance or accessibility.	High	Negligible	Slight
Riverside Land	Material loss of 0.26ha of land from main alignment at River Braan bridge and provision for WCH. No observable change in severance or accessibility.	High	Minor	Slight
The Hermitage	Discernible loss of 0.03ha of land to facilitate improvement of the Hermitage Junction. Material change in severance or accessibility.	Very High	Minor	Moderate

- 16.4.16 Of the five community land and assets identified in Table 16.17, one has the potential for significant impacts arising from a combination of land-take, change in access and change in severance/accessibility provision, this being The Hermitage (**Moderate** for land-take and access).
- 16.4.17 Land-take from Open Space is required within Little Dunkeld Park and War Memorial, Dunkeld & Birnam Recreation Club and Riverside Land and extends to 0.19ha. A further 0.46ha of Open Space is subject to land-take from land forming the A9 Perth – Inverness Trunk Road and Land (including parts of road) at Inver and the solum and footways of the A923 and Perth Road.
- 16.4.18 Total land-take from Open Space extends to 0.65ha. The land-take is required for a variety of features including earthworks, verges, pavement and drainage associated with the proposed scheme.

- 16.4.19 Of the 0.19ha of Open Space being acquired, 0.18ha will remain available for use by the public after construction works, in the same or similar way as it was before. This land is therefore going to remain equally advantageous to public use.
- 16.4.20 Furthermore approximately 4.50ha has been identified as land available for public use post construction within the Compensatory Flood Storage Area near Inver. This area will be planted with riparian woodland, mixed woodland and have open areas of species rich grassland. Riparian woodland vegetation on the banks of the River Tay and the River Braan will be retained. Public access will be provided by a network of paths linking to the existing path network, providing riverside walks accessible from Birnam, Dunkeld and Inver via paths and footways proposed to be constructed or improved as part of the scheme proposals. The land will be managed and maintained by Transport Scotland as part of the essential mitigation for the proposed scheme. This land is currently accessible by the public, but the provision of new planting and better, more connected paths will improve its accessibility and amenity for public use.
- 16.4.21 Dunkeld & Birnam Railway Station (Station Building) whilst not affected by land-take, would be affected by change in access and by change in severance and accessibility.
- 16.4.22 Whilst identified as a community asset, Dunkeld & Birnam Railway Station (Station Building) is owned and maintained by Network Rail. It is not currently used as a community asset and has not been in use for some time. This is in part due to the poor condition of the building. Vehicle travellers obtain direct access from the existing A9 to car parking for approximately 30 vehicles. There is no clearly designated disabled parking. There is existing substantial severance between the building and the communities of Birnam and Dunkeld due to the presence of the existing A9 and there is limited accessibility provision as access for walkers, wheelers, cyclists and horse-riders (WCH) from Birnam is via a stepped path from Station Road and via Birnam Glen road.
- 16.4.23 Considering all factors, the sensitivity of Dunkeld & Birnam Railway Station (Station Building) is assessed to be High as detailed in Table 16.11.
- 16.4.24 The proposed scheme enables the station to be retained such that it can continue to operate in its current position. However, there would be change of access with access provided via Station Road to a replacement station car park and connection to the station building and both platforms for WCH provided by a pedestrian underpass with lift/stairs. The vehicle and WCH access arrangements are shown on Diagram 16.3.

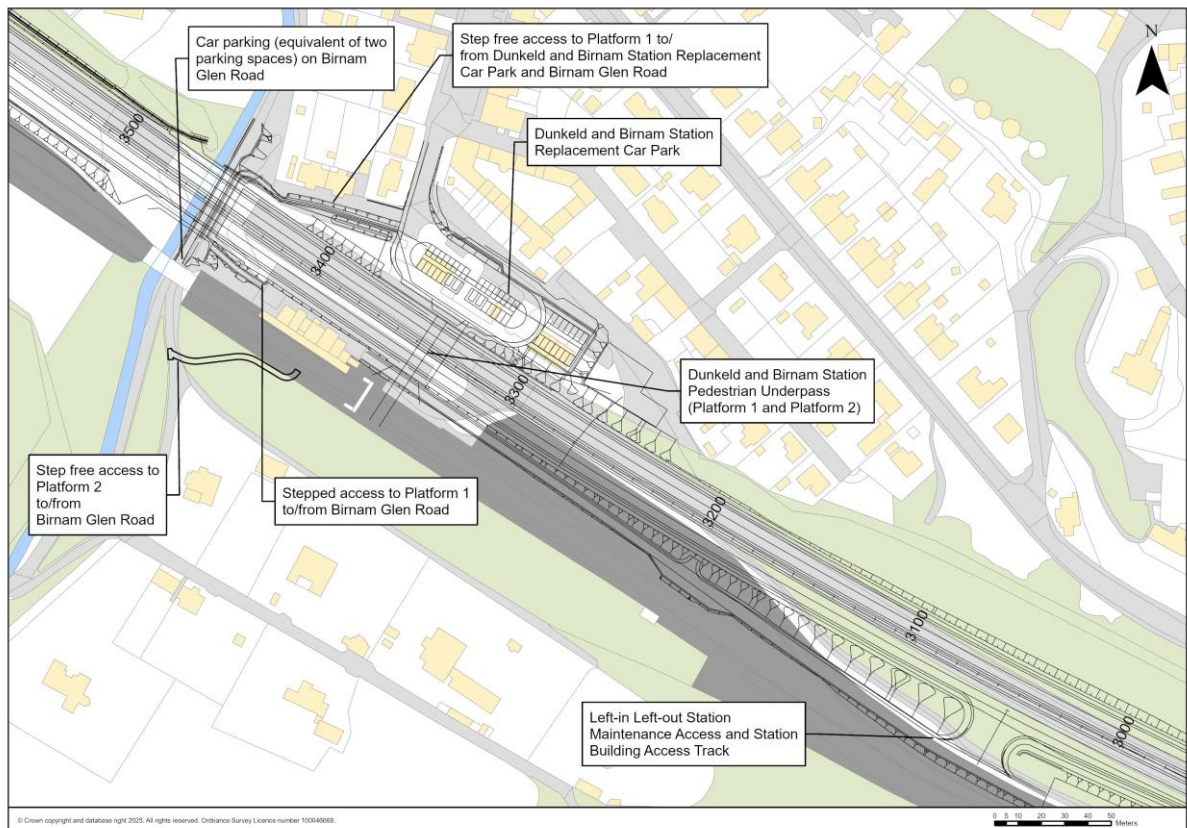


Diagram 16.3: Vehicle and WCH access arrangements at Dunkeld & Birnam Station

- 16.4.25 Direct vehicular access to the station building would be limited to maintenance and emergency vehicles and provided via the Left-in Left-out Station Maintenance Access and the Station Building Access Track. The Station Building Access Track provides for turning and limited parking. Vehicular access and parking would be provided at the replacement Dunkeld & Birnam car park and would include provision of full accessibility for all users. An area equivalent to two car parking spaces is also provided near the Dunkeld & Birnam Railway Station (Station Building) on Birnam Glen Road. Access from the car parking spaces to the Dunkeld & Birnam Railway Station (Station Building) is provided by stepped access.
- 16.4.26 Overall, the access for vehicles and vehicle travellers to Dunkeld & Birnam Railway Station (Station Building) via Station Road and the replacement Dunkeld & Birnam Station car park being situated on the other side of the main alignment to the Dunkeld & Birnam Railway Station (Station Building) is assessed to introduce severance of Minor magnitude. However, it is recognised that the replacement car park arrangements will provide better facilities for vehicle travellers using Dunkeld & Birnam Station, including provision of full accessibility for all users. The potential impacts relating to change in access arrangements and severance are assessed to be of **Moderate** significance.
- 16.4.27 As noted in paragraph 16.4.25, should maintenance of Dunkeld & Birnam Railway Station (Station Building) be required, maintenance vehicles would be able to use the Left-in Left-out Station Maintenance Access and the Station Building Access Track that the proposed scheme provides.

- 16.4.28 Access for WCH to/from Dunkeld & Birnam Railway Station (Station Building) to/from the replacement Dunkeld and Birnam Station car park would be available via the pedestrian access and lift/stairs to Platform 1. This would allow provision of full accessibility for all users. Note that this would also be the case to Platform 2.
- 16.4.29 Due to the provision of full accessibility for all users to Dunkeld & Birnam Railway Station (Station Building) the magnitude of impact is assessed to be Major (beneficial) and the potential impacts to be of **Very Large (beneficial)** significance.
- 16.4.30 Access for WCH to/from Dunkeld & Birnam Railway Station (Station Building) to/from Birnam Glen road would be by stepped access and by step free access from Birnam Glen Road past Station Cottages to Dunkeld & Birnam Station Replacement Car Park and Station Road. This would allow provision of limited accessibility for all users.
- 16.4.31 Due to the provision of limited accessibility for users to Dunkeld & Birnam Railway Station (Station Building) using Birnam Glen Road the magnitude of impact is assessed to be Moderate and the potential impacts to be of **Large** significance.

Development Land

- 16.4.32 The proposed scheme requires the acquisition of land from two sites with development land allocations and two sites with planning permission.
- 16.4.33 Refer to Figure 16.2 (Business Properties, Development Land and Planning Applications) for the location of development land and planning applications in relation to the proposed scheme.

Development Land Allocations

- 16.4.34 The proposed scheme requires land-take from development land designated for Employment Safeguarding (General) (LA01 at Birnam Industrial Park and LA02 at Fosters Contracting (North) Ltd).
- 16.4.35 The extents of development land allocations LA01 and LA02 totalling 1.42ha would be wholly acquired for the proposed scheme. These already contain businesses and so the Employment Safeguarding (General) is consistent with its existing business use. In accordance with paragraph 16.2.4 the assessment of impact is reported against existing business use in Table 16.19.

Planning Applications

- 16.4.36 The proposed scheme requires land-take of 0.40ha from two sites with planning permission as shown in Table 16.18.

Table 16.18: Planning applications affected by the proposed scheme

Ref.	Development Status/Planning Permissions	Land-take		Sensitivity	Magnitude	Significance
		ha	%			
PA01 (22/00748/FLL)	Erection of 2 light industrial/ storage units within Birnam Industrial Park – T&M Developments (Approved)	0.09	100	Medium	Major	Large
PA02 (24/00619/FLL)	Erection of a replacement Fishing Hut (Top Water Newtyle Fishings) on land owned by Murthly Estate	0.31	n/a	Medium	Minor	Slight
Total		0.40				

- 16.4.37 PA01 is Birnam Industrial Park – T & M Developments and is wholly located within the Birnam Industrial Estate, the site of which is wholly required for the replacement car park for Dunkeld & Birnam Station. The entire area subject to the planning permission would be required for the proposed scheme and the viability of the development compromised.
- 16.4.38 PA02 is the replacement of an existing Fishing Hut associated with the Newtyle Fishings and on land owned by Murthly Estate. The land is required for diversion of watercourse WF005A and for access to the diverted watercourse from Perth Road via an existing track that also serves as access to the Sewage Works. Only part of the planning application area is required and the land required would not be from the footprint of the proposed replacement fishing hut. Of the 0.31ha to be acquired, 0.18ha is servitude. It is assessed that the viability of the proposed development would not be compromised.

Businesses

- 16.4.39 Indirect access arrangements to/from businesses and the proposed scheme located in or near to Byres of Murthly, Ringwood, Birnam, Little Dunkeld, Dunkeld and Inver (refer to Table 16.12, Appendix A16.1 and Figure 16.2) would be the same as reported for private property and housing in paragraph 16.4.5 and associated bullet points.

- 16.4.40 With high sensitivity and indirect access arrangements to/from the proposed scheme assessed to be materially changed (minor beneficial) as journey length is similar, safer access is provided, and journey times are more reliable, the indirect change in access to/from the proposed scheme for businesses located in or near to Byres of Murthly, Ringwood, Birnam, Little Dunkeld, Dunkeld and Inver are assessed to have the potential for impacts of **Moderate** (beneficial) significance.
- 16.4.41 The proposed scheme requires the acquisition of approximately 3.53ha of land affecting nine businesses. Demolition of seven buildings/structures, (one of which is a residential property associated to the business), is required affecting four businesses. The significance of effects in relation to land-take, severance and accessibility is reported in Table 16.19.

Table 16.19: Potential impacts for businesses

Property name	Description of potential impacts	Sensitivity	Magnitude	Significance
Foster Contracting (North) Ltd (including Dunkeld Builders)	Total loss extending to 0.53ha of land for Dunkeld Junction and SuDS feature. Demolition of two sheds and one associated residential property (within the curtilage of the business property and owned by the business) and loss of yard storage. Current land use no longer viable.	Medium	Major	Large
Birnam Industrial Park - Lonely Mountain Skis	Total loss extending to 0.51ha of land for Dunkeld & Birnam Station replacement car park. Demolition of two industrial units and loss of yard storage. Current land use no longer viable.	Medium	Major	Large
Birnam Industrial Park – Vacant Unit		Medium	Major	Large
Birnam Industrial Park – Colin Bell Yard		Medium	Major	Large
Aran Bakery	Total loss and demolition of unit for Dunkeld & Birnam Station replacement car park. Land owned by Scottish Ministers. Current land use no longer viable.	Medium	Major	Large
T & M Developments	Total loss of 0.04ha of land comprising a yard area for Dunkeld & Birnam Station replacement car park. Current land use no longer viable.	Medium	Major	Large
SSE PLC Electricity Sub Station, Station Road	Total loss extending to <0.01ha (26m ² or thereby) of land for Dunkeld & Birnam replacement car park. Demolition of one electricity sub-station. Current land use no longer viable.	Medium	Major	Large
Scottish Gas Networks	Partial loss extending to 0.10ha of land of which 0.06ha is servitude for the construction of an access track to Pond B2 and associated drainage infrastructure. Current land use not directly affected.	Medium	Minor	Slight
	Land-take	Very High	Moderate	Very Large

Property name	Description of potential impacts	Sensitivity	Magnitude	Significance
Dunkeld and Birnam Railway Station (Interchange) - Network Rail Infrastructure Ltd	<p>Partial loss extending to 2.35ha of land including railway sidings for the northbound carriageway of the main alignment at Dunkeld and Birnam Station; the provision of the pedestrian underpass connecting the replacement Dunkeld & Birnam Station with Platforms 1 and 2; the lifts/stairs for Platforms 1 and 2; the Left-in Left-out Station Maintenance Access; the Network Rail Maintenance Access Track; the Station Building Access Track and diversion/realignment of paths DUNK/142, DUNK/57, TP102 and NCR77. No demolitions required. The provision of the Left-in Left-out Station Maintenance Access; the Network Rail Maintenance Access Track; the Station Building Access Track provides improved access from the A9. The loss of the sidings result in loss of existing road/rail access point and the requirement for sidings to be replaced elsewhere to facilitate safe operation of the Highland Main Line railway. Replacement road/rail access point provided as embedded mitigation. Current land use not likely to be compromised.</p> <p>Also includes land required for Inver Rail Bridge, Inverwood Access Track (North) Rail Bridge and Inch Rail Bridge and associated accesses.</p>			
	<p>Severance and Accessibility</p> <p>Refer to paragraphs 16.4.21 to 16.4.31 for a description of the accessibility arrangements for vehicles and for WCH provided by the proposed scheme.</p>	Very High	<p>Minor (vehicle travellers)</p> <p>Major (beneficial)</p>	<p>Moderate</p> <p>Very Large (beneficial)</p>

Property name	Description of potential impacts	Sensitivity	Magnitude	Significance
			(WCH from replacement car park) Moderate (WCH from Birnam Glen)	Large

Indirect Socio-economic Impacts

- 16.4.42 During construction, there is likely to be additional spend in the local area by workers and others associated with the proposed scheme construction, along with increased employment. Some businesses, for example those providing seasonal holiday accommodation and food, would have the opportunity to adapt their business and customer profile to take advantage of increased demand from construction workers for catering and accommodation in the area. A beneficial impact for such businesses in Birnam, Dunkeld and the surrounding area would therefore be expected during construction.
- 16.4.43 It is expected that some other businesses would not be able to adapt and that there would be disturbance during construction (noise and vibration, air quality emissions, landscape and visual). Tourism related businesses that rely on the character and setting of the area may be particularly sensitive to such effects. Consequently, an adverse impact on such businesses and people in Birnam, Dunkeld and Inver and the surrounding area would be expected.
- 16.4.44 The proposed scheme provides safer access to Dunkeld, Birnam and Inver, encouraging travellers to visit amenities and businesses within the communities, resulting in the potential to increase footfall and visitor numbers and a potential boost to the local economy during operation. For example, Birnam Arts and Conference Centre would potentially see an increase in footfall and visitor numbers due to the connectivity of Dunkeld & Birnam Station with Station Road. Its improved connection to public transport links may further enhance its suitability as an events and conference centre.
- 16.4.45 Therefore, the overall indirect socio-economic impact during construction is likely to be mixed, with the potential impact on businesses dependant on their type, sensitivity to construction impacts and their ability to adapt their business during the construction period.
- 16.4.46 Indirect socio-economic impacts during operation for Birnam, Dunkeld, Inver and the surrounding area are expected to be beneficial overall, due to the benefits associated with the A9 Dualling programme.

Agricultural Land Holdings

- 16.4.47 There are significant potential impacts in terms of land-take and access assessed for nine land interests. These impacts are described in Table 16.20. The potential impacts generally relate to loss of land, severance of fields, loss of access, loss of boundaries (including fences, hedges and walls), disruption of existing field drainage systems and disruption to sporting interests.
- 16.4.48 The total land-take from seven agricultural land holdings equates to approximately 157.10 ha.

Table 16.20: Description of potential impacts on agricultural land holdings

Land Interest	Description of potential impacts
Murthly Estate	<p>Loss of approximately 92.06ha of agricultural and forestry land of which 1.76ha is servitude.</p> <p>Land lost equates to 2% of total land interest area.</p> <p>No demolitions.</p> <p>Material change to access to land and property.</p> <p>Loss of boundary features, disruption to drainage system and risk of windthrow.</p> <p>Viability of current land use not likely to be compromised.</p> <p>Magnitude of impact assessed as Minor.</p> <p>Significance assessed as Moderate.</p>
Forestry and Land Scotland	<p>Loss of approximately 38.75ha agricultural and forestry land.</p> <p>Land lost equates to less than 1% of total land interest area.</p> <p>No demolitions.</p> <p>Material change to access to land and property.</p> <p>Disruption to drainage system and risk of windthrow.</p> <p>Viability of current land use not likely to be compromised.</p> <p>Magnitude of impact assessed as Minor.</p>
Ladywell Farm (Drummond Fencing)	<p>Loss of approximately 4.06ha of agricultural land.</p> <p>Land lost equates to 44% of total land interest area.</p> <p>No demolitions.</p> <p>Discernible change to access to land.</p> <p>Loss of boundary features and disruption to drainage system.</p> <p>Viability of current land use potentially compromised.</p> <p>Magnitude of impact assessed as Major.</p> <p>Significance assessed as Very Large.</p>
Ladywell Farm (Ladywell Fencing)	<p>Loss of approximately 3.95ha of agricultural land.</p> <p>Land lost equates to 43% of total land interest area.</p> <p>No demolitions.</p> <p>Discernible change to access to land.</p> <p>Loss of boundary features and disruption to drainage system.</p> <p>Viability of current land use potentially compromised.</p> <p>Magnitude of impact assessed as Major.</p> <p>Significance assessed as Very Large.</p>
Invermill Farm	<p>Loss of approximately 6.19ha of agricultural land.</p> <p>Land lost equates to 53% of total agricultural land area (42% of total land holding).</p> <p>No demolitions.</p>

Land Interest	Description of potential impacts
	<p>Material change to access to land.</p> <p>Loss of boundary features and disruption to drainage system.</p> <p>Viability of current land use potentially compromised.</p> <p>Magnitude of impact assessed as Major.</p> <p>Significance assessed as Very Large.</p>
Inchmagrannachan Farm	<p>Loss of approximately 5.73ha of agricultural land.</p> <p>Land lost equates to 13% of total farmed area.</p> <p>No demolitions.</p> <p>Loss of access to part of land holding, material change in access to property and part of land holding.</p> <p>Loss of boundary features and disruption to drainage.</p> <p>Viability of current land use potentially compromised.</p> <p>Magnitude of impact assessed as Major.</p> <p>Significance assessed as Very Large.</p>
Atholl Estates	<p>Loss of approximately 6.36ha of forestry and other land of which <0.01ha (229m² or thereby) is servitude.</p> <p>Land lost equates to less than 1% of the land interest area.</p> <p>No demolitions.</p> <p>Discernible change in access to land.</p> <p>Disruption to drainage and risk of windthrow.</p> <p>Viability of current land use not likely to be compromised.</p> <p>Magnitude of impact assessed as Minor.</p> <p>Significance assessed as Moderate.</p>
Dalmarnock Fishings and Woodlands Cottage	<p>No acquisition of fishing rights (acquisition of 0.22ha of the bed and banks of the River Tay owned by Atholl Estates).</p> <p>No demolitions.</p> <p>Disruption of access to riverbanks and named salmon pools.</p> <p>Substantial change in access to land and property and increased journey length for vehicle movements from/to north beat and south beat due to change in access from using the A9 Southern Tie-in Interim Roundabout to using the Dalguise Junction. Increased journey length from north beat to the south beat of approximately 2km (10km to 12km).</p> <p>Vehicle access to fishings and named pools at the River Tay Bridge would be provided by the Dalguise Junction and the Inverwood Access Track (North). Passing place and turning provision for vehicles.</p> <p>Access for anglers to the right bank would be provided by new access tracks linking to core path DUNK/23. Access for anglers to the left bank would be provided by the WCH crossing provision on the River Tay Bridge and new paths linking to core paths DUNK/23 and</p>

Land Interest	Description of potential impacts
	<p>DUNK/145. Access from the left bank fishings upstream of the River Tay Bridge are provided by DUNK/145 and the WCH provision on the River Tay Bridge also allows access to right bank fishings downstream of the River Tay Bridge.</p> <p>Viability of current land use not likely to be compromised.</p> <p>Magnitude of impact assessed as Moderate.</p> <p>Significance assessed as Very Large.</p>
Newtyle Fishings	<p>No acquisition of fishing rights (acquisition of land from Murthly Estate).</p> <p>No demolitions.</p> <p>Discernible alteration of access to fishing hut, riverbanks and named salmon pools.</p> <p>Current land use not directly affected.</p> <p>Magnitude of impact assessed as Negligible.</p> <p>Significance assessed as Slight.</p>

- 16.4.49 The proposed scheme would result in moderate magnitude of impact on access (vehicle journey distance) for Dalmarnock Fishings to access key infrastructure. Access to and from the upper beat banks to the lower beat banks and fishing bothy would change from the baseline facilitated by the A9 Southern Tie-in Interim Roundabout on the Tay Crossing to Ballinluig Project to being facilitated by the Dalguise Junction with the proposed scheme. Journey distance from/to the upper and lower beats during operation of the proposed scheme would increase from approximately 10km to approximately 12km.
- 16.4.50 In addition, construction of the proposed River Tay Bridge has the potential to result in temporary disturbance and prevention from fishing in the immediate vicinity of the works, and temporary severance of the Dalmarnock Fishings lower beat upstream and downstream of the proposed River Tay Bridge.

16.5 Mitigation

- 16.5.1 This chapter makes reference to overarching standard measures applicable across the southern section projects ('SMC' mitigation item references), and also to project-specific measures ('P02' mitigation item references). Those that specifically relate to land use are assigned a 'LU' reference. Together these are considered essential mitigation measures.
- 16.5.2 Embedded mitigation detailed in this section has been considered in the assessment of potential impacts detailed in Section 16.4. Standard mitigation and specific mitigation for the proposed scheme in relation to land use are also detailed in this section and take into account best practice, legislation, guidance and professional experience. These have been considered to have been applied when assessing and reporting the residual effects detailed in Section 16.6.

- 16.5.3 Where the proposed scheme results in the loss of land, it is assumed landowners would be compensated financially for their loss subject to a valid claim and assessment of compensation by the District Valuer, taking into account all statutory and common law provisions. Detail of the extent of financial compensation is outside the remit of the EIA process and is unknown at this stage of the project. As such any potential compensation payments have not been considered as mitigation.

Embedded Mitigation

- 16.5.4 The DMRB Stage 3 design includes measures to provide access to residential land and property as well as agricultural land holdings, with revised access arrangements and tie-ins to the road network. This includes the proposed private means of access and access tracks which form part of the proposed scheme design. These have been discussed with affected residents/landowners as part of the consultation process, and their inclusion in the design is considered embedded mitigation.
- 16.5.5 The revised access provision forming part of the proposed scheme is detailed in Chapter 4 (The Proposed Scheme). Access is provided to land at Inchmagrannachan Farm, Invermill Farm, Murthly Estate and Forestry and Land Scotland. In addition, vehicle access is also provided to Murthly Castle Estate and The Hermitage. WCH access paths are provided for the Southbound and Northbound Bus Stops at Inver and the Hermitage and WCH provision is provided on the River Tay Bridge.
- 16.5.6 The DMRB Stage 3 design has also reduced land-take, where possible, through the consideration and assessment of different design refinements (Chapter 5: Iterative Design Development).
- 16.5.7 Mitigation relating to the diversions of WCH routes throughout the proposed scheme is described in Chapter 17 (Population – Accessibility) and shown on Figure 17.2. The proposed scheme design includes measures to provide connections for WCH between local settlements.
- 16.5.8 Mitigation to reduce impacts on amenity during both construction and operation is described in more detail in Chapter 8 (Air Quality), Chapter 10 (Landscape), Chapter 11 (Visual) and Chapter 15 (Noise and Vibration). Further mitigation is proposed as follows to reduce the identified potential impacts on Population – Land Use, where practicable.

Standard Mitigation

- 16.5.9 Standard measures to mitigate potential impacts on land use during construction are set out in Table 16.21. In line with the Strategic Environmental Design Principles S5 and S6, Mitigation Item SMC-LU8 aims to ensure that soil mitigation measures are fully implemented, and soil resources are protected.

Table 16.21: Standard mitigation for land use

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Responsible Party for implementation	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required	Monitoring measure for the suggested mitigation
SMC-LU1	Throughout	Pre-construction Construction	Main Contractor	Access to/from private property and housing, community land and assets, development land and businesses, and agricultural land holdings will be maintained throughout the construction period by means of signed diversions, where necessary. The estimated duration and location of these diversions will be communicated to affected parties, a minimum 2 weeks in advance, before they are put in place.	Maintaining access to land	None	Via supervision requirements outlined in Contract Documents.
SMC-LU2	Throughout	Pre-construction Construction Post-construction	Main Contractor	Existing access arrangements to land and property outwith the boundaries of the site (BotS) will not be prevented by the construction works during or post construction, unless alternative access is provided.	Maintaining access to land	None	Via supervision requirements outlined in Contract Documents.
SMC-LU3	Throughout	Pre-construction Construction	Main Contractor	Consultation with affected landowners and occupiers will be undertaken on the location and timing of planned construction works to reduce disturbance, as far as practicable, taking into account the overall construction programme.	Reducing disturbance to landowners	None	Via supervision requirements outlined in Contract Documents.
SMC-LU4	Throughout	Pre-construction Construction	Main Contractor	Notice of intention to commence construction work will be provided to owners and occupiers of land and property adjacent to the proposed scheme before works commence.	Reducing disturbance to landowners	None	Via supervision requirements outlined in Contract Documents.
SMC-LU5	Throughout	Pre-construction Construction	Main Contractor	Where practicable, temporary construction compounds that are required outwith the BotS will not be sited on prime agricultural land or on areas of woodland and forestry.	Reducing disturbance to landowners	None	Via supervision requirements outlined in Contract Documents.
SMC-LU6	Throughout	Pre-construction Construction	Main Contractor	Where appropriate, temporary fences will be provided during construction for the health and safety of the public and animals. Fencing of working areas will be to a standard adequate for excluding any livestock kept on adjoining land. Access by non-authorised personnel will not be permitted, unless prior permission is granted by the Contractor(s).	Reducing disturbance to landowners	None	Via supervision requirements outlined in Contract Documents.
SMC-LU7	Throughout	Pre-construction Construction	Main Contractor	Where boundary features (e.g. fences, walls and hedges) require temporary or permanent alteration to allow construction, these will be reinstated with appropriate materials to provide a secure boundary.	Reinstatement of boundary features	None	Via supervision requirements outlined in Contract Documents.
SMC-LU8	Throughout	Pre-construction Construction	Main Contractor	Soil resources will be managed in accordance with the ' Construction Code of Practice for the Sustainable Use of Soils on Construction Sites ' (Defra, 2009) This will include the careful excavation, storage and replacement of topsoil and subsoil.	Protection and management of soils.	None	Via supervision requirements outlined in Contract Documents.

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Responsible Party for implementation	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required	Monitoring measure for the suggested mitigation
SMC-LU9	Throughout	Pre-construction Construction	Main Contractor	Reasonable precautions will be taken during construction to avoid spreading of soil-borne pests and diseases; animal and crop diseases; tree pests and diseases; and invasive species. A biosecurity protocol will be developed by the Contractor in consultation with the Animal and Plant Health Agency, the Scottish Government's Environment and Forestry Directorate and the Scottish Government's Agriculture, Food and Rural Communities Directorate, taking cognisance of relevant UK and Scottish Government biosecurity guidance including SEPA Guidance: Disposal of trees and plants infected with specific plant diseases .	Protection and management of soils	None	Via supervision requirements outlined in Contract Documents. Monitoring by ECoW
SMC-LU10	Throughout	Pre-construction Construction Post-construction	Main Contractor	Pre-construction drainage surveys will be undertaken to reduce the likelihood of damage or disturbance to field and forestry drainage systems during construction. Where required, the integrity of the drainage system will be secured by the Contractor as part of pre-construction drainage works. Repairing and reinstatement of drains affected by construction will be agreed with the landowner/occupier to ensure that land capability is maintained and the risk of flooding is not exacerbated.	Protection and reinstatement of land drainage systems	None	Via supervision requirements outlined in Contract Documents. Monitoring by ECoW
SMC-LU11	Throughout	Pre-construction Construction	Main Contractor	Water supplies for livestock will be identified pre-construction and where supplies are lost or access is compromised by any construction works, temporary and/or permanent alternative supplies will be provided as agreed with the landowner/occupier.	Protection and reinstatement of water supplies	None	Via supervision requirements outlined in Contract Documents. Monitoring by ECoW
SMC-LU12	Throughout	Construction Post-construction	Main Contractor	Where areas of land within the CPO are identified as being surplus following construction of the proposed scheme, former owners may, as a general principle, be offered the opportunity to repurchase the land previously in their ownership in accordance with normal procedures (Crichel Down Rules).	Protection and reinstatement of land	None	Via supervision requirements outlined in Contract Documents.
SMC-LU13	Throughout	Pre-construction Construction	Main Contractor	Where there are sporting or fishing rights adjacent to the working area, reasonable endeavours will be taken to minimise interference with enjoyment of them while recognising the primary objective to maintain a safe working environment for both Contractors and users of the land and water.	Reducing disturbance to landowners	None	Via supervision requirements outlined in Contract Documents. Monitoring by ECoW
SMC-LU14	Throughout	Construction Post-construction	Main Contractor	On completion of works, any land required for construction works will be reinstated as far as practicable and in line with mitigation plans. A record of condition survey is to be undertaken of any land to be returned to agriculture, to ensure all land is restored as near to its original condition as is reasonably practicable.	Protection and reinstatement of land	None	Via supervision requirements outlined in Contract Documents. Monitoring by ECoW

Specific Mitigation

- 16.5.10 In addition to the standard A9 mitigation described above, project-specific measures (**Mitigation Items P02-LU15 to P02-LU19**) as set out in Table 16.22 are required to reduce specifically identified potential impacts on Population - Land Use receptors.

Table 16.22: Project-specific mitigation for land use

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Responsible Party for implementation	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required	Monitoring measure for the suggested mitigation
P02-LU15	Throughout	Pre-construction Construction Post-construction	Main Contractor	Consideration will be given by Transport Scotland to the replacement of existing road signage on the proposed scheme for community land and assets. In addition, consideration will be given to the addition of road signage where new access is provided to community land or asset, as a result of the proposed scheme	Maintaining access to land and property	None	Via supervision requirements outlined in Contract Documents.
P02-LU16	Throughout	Pre-construction Construction Post-construction	Main Contractor	Consideration will be given by Transport Scotland to the replacement of existing roadside signage on the proposed scheme including that for certain tourist attractions, tourist destinations and properties where the proposed scheme results in a change in vehicle access routes or where access to properties has changed in vehicle access routes or where property access and/or business activities is particularly dependent on vehicular access movements. This also includes where the proposed scheme has provided new or replacement access to business property.	Maintaining access to land and property	None	Via supervision requirements outlined in Contract Documents.
P02-LU17	Throughout	Pre-construction Construction	Main Contractor	Where areas of land within the CPO are identified as being surplus and having the potential to be returned to agriculture following construction of the proposed scheme, for example areas included in the CPO where land will be allowed to flood to greater depths to mitigate flood impacts, former owners may, as a general principle, be offered the opportunity to repurchase the land previously in their ownership in accordance with normal procedures (Crichel Down Rules) and following imposition of appropriate burdens.	Reducing disturbance to landowners	None	Via supervision requirements outlined in Contract Documents.
P02-LU18	Throughout	Pre-construction Construction	Main Contractor	Where field access points require temporary or permanent alteration as a result of construction, alternative field access will be provided in consultation with the landowner/occupier. Where recessed field access from local roads is identified as being required, this shall be provided.	Reducing disturbance to landowners	None	Via supervision requirements outlined in Contract Documents.
P02-LU19	Birnam Glen	Construction	Main Contractor	The Main Contractor will develop proposals to ensure access to properties at Birnam Glen is provided during construction of Birnam Glen and Inchewan Burn Bridge. Where temporary overnight closures are required to facilitate removal of existing structures and installation of new structures appropriate notification will be given to affected residents. Where practicable, temporary closures will happen on single nights rather than consecutively. During temporary overnight closures the Main Contractor will liaise with emergency services and agree appropriate access arrangements to Birnam Glen for emergency services.	Reducing disturbance to landowners. Maintaining access to land and property.	None	Via supervision requirements outlined in Contract Documents.

16.6 Residual Effects

- 16.6.1 Residual effects are those that remain once the proposed mitigation measures have been implemented. An assessment of the residual effects for Population – Land Use receptors assessed in this chapter are presented in Tables 16.23. Only significant residual effects are reported.

Table 16.23: Residual effects on population – land use receptors (construction and operation)

Receptor Name	Sensitivity	Impact Magnitude	Significance of potential impact	Mitigation Item	Residual magnitude	Residual Significance of Effect
Private Property and Housing						
Access to private property and housing at Birnam Glen (construction only)	Medium	Moderate	Moderate	SMC-LU1; SMC-LU2; SMC-LU3; SMC-LU4; and P02-LU19	Moderate	Moderate
Access to private property and housing at Birnam, Little Dunkeld and Dunkeld (operation only)	Very high	Minor (beneficial)	Moderate (beneficial)	n/a	Minor (beneficial)	Moderate (beneficial)
Ballincreiff House, Birnam	Very high	Minor	Moderate	SMC-LU1; SMC-LU2; SMC-LU3; SMC-LU4; SMC-LU6; SMC-LU7; SMC-LU8; SMC-LU12; and SMC-LU14.	Minor	Moderate
Rowanlea, Birnam	Very high	Minor	Moderate	SMC-LU1; SMC-LU2; SMC-LU3; SMC-LU4; SMC-LU6; SMC-LU7; SMC-LU8; SMC-LU12; and SMC-LU14.	Minor	Moderate
Tirohia (10 Station Road), Birnam	Very high	Minor	Moderate	SMC-LU1; SMC-LU2; SMC-LU3; SMC-LU4; SMC-LU6; SMC-LU7; SMC-LU8; SMC-LU12; and SMC-LU14.	Minor	Moderate
Community Land and Assets						
Access to community assets located in or near to Ringwood, Birnam, Little Dunkeld, Dunkeld and Inver (operation only)	Very high and high	Minor (beneficial)	Moderate (beneficial)	n/a	Minor (beneficial)	Moderate (beneficial)

Receptor Name	Sensitivity	Impact Magnitude	Significance of potential impact	Mitigation Item	Residual magnitude	Residual Significance of Effect
The Hermitage	Very High	Minor	Moderate	SMC-LU1; SMC-LU2; SMC-LU3; SMC-LU4; SMC-LU6; SMC-LU7; SMC-LU8; SMC-LU12; SMC-LU14 and P02-LU15.	Minor	Moderate
Dunkeld & Birnam Railway Station (Station Building) <i>Access Vehicles</i>	High	Minor	Moderate	SMC-LU1; SMC-LU2; SMC-LU3; SMC-LU4; SMC-LU6; SMC-LU7; SMC-LU8; SMC-LU12; SMC-LU14 and P02-LU15.	Minor	Moderate
Dunkeld & Birnam Railway Station (Station Building) <i>Accessibility WCH (to/from replacement car park)</i>		Major (beneficial)	Very Large (beneficial)		Major (beneficial)	Very Large (beneficial)
Dunkeld & Birnam Railway Station (Station Building) <i>Accessibility WCH (to/from Birnam Glen)</i>		Moderate	Large		Moderate	Large
Development Land						
Planning Application PA01 (Birnam Industrial Park – T&M Developments)	Very High	Minor	Large	None	Major	Large
Businesses						
Access to businesses located in or near to Byres of Murthly, Ringwood, Birnam, Little Dunkeld, Dunkeld and Inver (operation only)	High	Minor (beneficial)	Moderate (beneficial)	n/a	Minor (beneficial)	Moderate (beneficial)

Receptor Name	Sensitivity	Impact Magnitude	Significance of potential impact	Mitigation Item	Residual magnitude	Residual Significance of Effect
Foster Contracting (North) Ltd (including Dunkeld Builders)	Medium	Major	Large	None	Major	Large
Birnam Industrial Park - Lonely Mountain Skis	Medium	Major	Large	None	Major	Large
Birnam Industrial Park – Vacant Unit	Medium	Major	Large	None	Major	Large
Birnam Industrial Park – Colin Bell Yard	Medium	Major	Large	None	Major	Large
Aran Bakery	Medium	Major	Large	None	Major	Large
T & M Developments	Medium	Major	Large	None	Major	Large
SSE PLC Electricity Sub Station, Station Road	Medium	Major	Large	None	Major	Large
Dunkeld and Birnam Railway Station (Interchange) - Network Rail Infrastructure Ltd	Very High	Moderate	Very Large	SMC-LU1; SMC-LU2; SMC-LU3; SMC-LU4; SMC-LU6; SMC-LU7; SMC-LU8; SMC-LU12; SMC-LU14; and P02-LU16.	Moderate	Very Large
	Very High	Minor (vehicle travellers)	Moderate	SMC-LU1; SMC-LU2; SMC-LU3; SMC-LU4; SMC-LU6; SMC-LU7; SMC-LU8; SMC-LU12; SMC-LU14; and P02-LU16.	Minor (vehicle travellers)	Moderate
		Major (beneficial) (WCH from replacement car park)	Very Large (beneficial)		Major (beneficial) (WCH from replacement car park)	Very Large (beneficial)

Receptor Name	Sensitivity	Impact Magnitude	Significance of potential impact	Mitigation Item	Residual magnitude	Residual Significance of Effect
		Moderate (WCH from Birnam Glen)	Large		Moderate (WCH from Birnam Glen)	Large
Agricultural Land Holdings						
Murthly Estate	High	Major	Moderate	SMC-LU1; SMC-LU2; SMC-LU3; SMC-LU4; SMC-LU5; SMC-LU6; SMC-LU7; SMC-LU8; SMC-LU9; SMC-LU10; SMC-LU11; SMC-LU12; SMC-LU13; SMC-LU14; P02-LU16; and P02-LU18.	Major	Moderate
Ladywell Farm (Drummond Fencing)	High	Major	Very Large	SMC-LU1; SMC-LU2; SMC-LU3; SMC-LU4; SMC-LU5; SMC-LU6; SMC-LU7; SMC-LU8; SMC-LU9; SMC-LU10; SMC-LU11; SMC-LU12; SMC-LU13; SMC-LU14; and P02-LU18.	Major	Very Large
Ladywell Farm (Ladywell Fencing)	High	Major	Very Large	SMC-LU1; SMC-LU2; SMC-LU3; SMC-LU4; SMC-LU5; SMC-LU6; SMC-LU7; SMC-LU8; SMC-LU9; SMC-LU10; SMC-LU11; SMC-LU12; SMC-LU13; SMC-LU14; and P02-LU18.	Major	Very Large

Receptor Name	Sensitivity	Impact Magnitude	Significance of potential impact	Mitigation Item	Residual magnitude	Residual Significance of Effect
Invermill Farm	High	Major	Very Large	SMC-LU1; SMC-LU2; SMC-LU3; SMC-LU4; SMC-LU5; SMC-LU6; SMC-LU7; SMC-LU8; SMC-LU9; SMC-LU10; SMC-LU11; SMC-LU12; SMC-LU13; SMC-LU14; and P02-LU18.	Major	Very Large
Inchmagrannachan Farm	High	Major	Very Large	SMC-LU1; SMC-LU2; SMC-LU3; SMC-LU4; SMC-LU5; SMC-LU6; SMC-LU7; SMC-LU8; SMC-LU9; SMC-LU10; SMC-LU11; SMC-LU12; SMC-LU13; SMC-LU14; and P02-LU18.	Major	Very Large
Atholl Estates	High	Minor	Moderate	SMC-LU1; SMC-LU2; SMC-LU3; SMC-LU4; SMC-LU5; SMC-LU6; SMC-LU7; SMC-LU8; SMC-LU9; SMC-LU10; SMC-LU11; SMC-LU12; SMC-LU13; SMC-LU14; and P02-LU18.	Minor	Moderate
Dalmarnock Fishings and Woodlands Cottage	Very High	Moderate	Very Large	SMC-LU1; SMC-LU2; SMC-LU3; SMC-LU4; SMC-LU6; SMC-LU7; SMC-LU9; SMC-LU13; P02-LU16 and P02-LU18.	Moderate	Very Large

16.7 Compliance Against Plans and Policy

- 16.7.1 DMRB LA 104, Environmental Assessment and Monitoring, states that environmental assessment, reporting and monitoring shall meet the requirements of the national planning policy for each relevant Overseeing Organisation.
- 16.7.2 Appendix A3.1 (Assessment of Policy Compliance) provides a 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 A.3.1 focuses principally on the long-term effects of the proposed scheme rather than the short term, temporary effects from construction.
- 16.7.3 National policy objectives of relevance to this assessment are provided in the National Planning Framework 4 (Scottish Government, 2023) and Scotland's Third Land Use Strategy 2021-2026 – Getting the best from our land (Scottish Government, 2021). The Perth and Kinross Local Development Plan 2 (Perth and Kinross Council, 2019) is relevant to this chapter, including the Perth & Kinross Council Open Space for New Developments Supplementary Guidance (Perth and Kinross Council, 2021) and Green and Blue Infrastructure Supplementary Guidance (Perth and Kinross Council, 2020).

Summary of Policy Compliance

- 16.7.4 Significant residual effects have been identified on private property and housing receptors, community land and community asset receptors, development land receptors, business receptors, and agricultural land holdings receptors. Significant residual effects (beneficial) have also been identified. Indirect socio-economic impacts during operation for Birnam, Dunkeld, Inver and the surrounding area are expected to be beneficial overall, due to the benefits associated with the A9 Dualling programme.
- 16.7.5 Whilst there are considered to be some discrete area of non-compliance with policy, overall, the design and assessment of the proposed scheme has had regard to, and is compliant with, policy objectives to reduce effects on land use resources. A full assessment can be found in Table A3.1-9 of Appendix A3.1 (Assessment of Policy Compliance).

16.8 Statement of Significance

- 16.8.1 With proposed mitigation, significant residual effects on three private property and housing receptors are assessed to be **Moderate**. Access during construction only to private property and housing at Birnam Glen is assessed to be **Moderate**. Access during operation to private property and housing at Birnam, Little Dunkeld and Dunkeld is assessed to be **Moderate (beneficial)**.
- 16.8.2 With proposed mitigation, significant residual effects on two community land and community asset receptors are assessed, ranging from **Moderate** to **Large** and **Very Large (beneficial)**. Access during operation to community assets located in or near to Ringwood, Birnam, Little Dunkeld, Dunkeld and Inver is assessed to be **Moderate (beneficial)**.

- 16.8.3 With proposed mitigation, significant residual effects on one planning application are assessed as **Large**.
- 16.8.4 With proposed mitigation, significant residual effects on eight business receptors are assessed, ranging from **Moderate** to **Very Large** and **Very Large (beneficial)**. Demolition of seven buildings/structures, (one of which is a residential property associated to the business), is required affecting four businesses. Access during operation to businesses located in or near to Byres of Murthly, Ringwood, Birnam, Little Dunkeld, Dunkeld and Inver is assessed to be **Moderate (beneficial)**.
- 16.8.5 With proposed mitigation, significant residual effects on seven agricultural land holding receptors are assessed, ranging from **Moderate** to **Very Large**.

16.9 References

National Legislation and EU Directives

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