

## **8 People and Communities – Community and Private Assets**

This chapter considers the potential impacts of the proposed scheme on community and private assets, including land and property. Current land uses in the study area include residential, commercial and industrial land, community land, land allocated for development and land supporting agriculture, forestry and sporting activity. The main settlements in the study area are Dowally, Guay and Kindallachan.

The development of the proposed scheme design has sought to avoid impacts on community and private assets, where feasible. Additional mitigation measures to reduce residual construction and operational impacts have been developed.

The proposed scheme would require the loss of:

- approximately 3ha of residential, commercial and industrial land;
- less than 1ha of community land;
- less than 1ha of one planning application;
- approximately 33ha of agricultural land;
- approximately 23ha of forestry; and
- approximately 10ha of other land of which 5ha is land in unknown landownership.

Residual impacts of Moderate significance are anticipated as a result of land-take at one group of residential properties (Croft Croy properties), 1 residential property (1 Dowally Cottage) and one commercial property (Cuil-an-Duin Country House). In addition, impacts of Moderate/Substantial significance are anticipated as a result of permanent land-take from and alteration to one residential property (Guay Farmhouse).

There is expected to be land-take from one community facility; Dowally Church Car Park, as a result of the proposed scheme. The residual impact during construction and operation is assessed as Moderate and Slight/Moderate, respectively.

Provision of replacement bus stops on the main alignment between Dowally and Guay (existing bus stops are at Kindallachan) is expected to result in increased journey distances for pedestrians travelling from Kindallachan, assessed as a Substantial (adverse) impact. Pedestrians travelling from Dowally and Guay would have reduced journey distance with Substantial (beneficial) impacts assessed for pedestrians travelling from Dowally to the northbound and southbound bus stops and from Guay to the southbound bus stop. There is a Slight (beneficial) impact arising from a reduction in journey distance for access to the northbound bus stop from Guay. New bus stops for local bus services are provided on the Dowally to Kindallachan Side Road at Dowally and south of Kindallachan.

Changes to the current vehicular access arrangements from properties will affect residential, commercial and industrial property. Significant residual impacts in terms of vehicular access for 14 groupings of residential properties and six commercial/industrial properties have been identified.

Changes to current vehicular access arrangements to properties will affect residential, commercial and industrial property. Significant residual impacts in terms of vehicular access for five groupings of residential properties and three commercial/industrial properties have been identified. The overall impacts on commercial businesses viability have been assessed as Neutral.

Significant residual impacts have been identified on two agricultural, forestry and sporting interests (Dalmarnock Fishing Beat and Dowally, Guay and Haugh of Tulliemet Farms: Robert Laird) as a result of permanent land-take, severance, demolition of cattle shed (Guay), change in property and field access arrangements, loss of boundary features, disruption to field drainage systems and water supplies and in the case of Dalmarnock Fishing Beat disturbance to sporting activity through change in access. The three other agricultural, forestry and sporting interests affected by the proposed scheme are not expected to have significant impacts. Of the agricultural and forestry land-take described above, there is the potential to return 13ha of land to agriculture and retain 9ha of forestry. Return of this land to agriculture or retained as forestry may meet landowner requests, but would not change the reported significance of impacts on agricultural, forestry or sporting interests.

### **8.1 Introduction**

- 8.1.1 This chapter presents the DMRB Stage 3 assessment of the proposed scheme on community and private assets.

- 8.1.2 The assessment is based on guidance presented in DMRB Volume 11. DMRB Interim Advice Notes (IAN) 125/09 and 125/15 (Highways Agency et al., 2009, Highways England 2015) recommend that the Volume 11 three topic areas of 'Land Use', 'Pedestrians, Cyclists, Equestrians and Community Effects' and 'Vehicle Travellers' (Volume 11: Parts 6, 8 and 9 respectively) are considered under a single topic area: 'People and Communities', for which an updated DMRB topic guidance has not yet been published. Due to volume and complexity of data covered under 'People and Communities' in relation to the A9 dualling corridor, the findings are reported in two linked chapters; this chapter (Chapter 8) covering 'Community and Private Assets', and Chapter 9 covering 'All Travellers'.
- 8.1.3 Community and private assets assessment includes consideration of private properties (residential, commercial and industrial); local communities and community facilities; community land; development land; and agricultural, forestry and sporting interests. This assessment considers temporary construction and permanent operational impacts of the proposed scheme and includes a discussion of the impacts, along with mitigation as they relate to community and private assets.
- 8.1.4 The chapter is supported by the following appendices, which are cross referenced in the text where relevant:
- Appendix A8.1: Land Capability Assessment Descriptors;
  - Appendix A8.2: Farm Business Survey;
  - Appendix A8.3: Forestry Survey; and
  - Appendix A8.4: Agriculture, Forestry and Sporting Land: Pre- and Post-Mitigation Impacts.
- 8.1.5 An assessment of the compliance of the proposed scheme against all local and regional planning policies and plans relevant to community and private assets is reported in Appendix A19.2 (Assessment of Development Plan Policy Compliance) with a summary of these policies, plus a review of relevant national policies provided in Chapter 19 (Policies and Plans), Section 19.4 (Assessment of Compliance).

## **8.2 Approach and Methods**

- 8.2.1 The approach used to establish the baseline conditions and assess the significance of potential impacts on community and private assets is explained in this section. Changes to access for non-motorised users (NMUs) are assessed within Chapter 9 (People and Communities - All Travellers).

### **Study Area**

- 8.2.2 The assessment covers a study area extending to a corridor of 500m from the centreline of the proposed scheme, as shown on Figure 8.1.

### **Baseline Conditions**

- 8.2.3 Baseline receptors considered within this assessment include:
- local communities;
  - residential, commercial (including tourist attractions) and industrial property;
  - community facilities - commercial or public authority managed facilities for use by the whole community e.g. doctors surgeries, schools, hospitals, post offices and churches;
  - 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 Local Development Plan (LDP). Informal areas of community land which permit public access such as woodlands are also included;
  - development land - land allocated through the Perth & Kinross Council Local Development Plan (PKC LDP) (Perth & Kinross Council (PKC), 2014) and relevant and approved planning applications lodged with PKC between 01 June 2015 and valid up to 31 May 2018;

- agricultural land - land used for the practice of cultivating the land or rearing stock to produce food products;
- forestry land - land used for the growing of trees to produce wood and wood products for commercial purposes;
- land for sporting interests - land used for activities such as shooting and stalking over agricultural land and woodland, as well as water and fishing activities in and on lochs, reservoirs, rivers, burns, canals and ponds; and
- other land - land not meeting one of the land use categories identified above. Examples of such land would include: road, road verges, agricultural roads, yards and buildings, and ditches.

8.2.4 It should be noted that community and private assets can fall into one or more of the baseline receptor categories listed above. For the purposes of this assessment, community and private assets have been allocated to one category and this has been based on their primary or future land use, dependent in some cases on where the potential impact is greatest. For example, where forestry land permits access to the public (e.g. community land), forestry is considered to be the primary land use; consequently, this land is considered within the agriculture and forestry category.

8.2.5 There are no relevant waterway restoration projects located within the study area based on latest available information from the Inland Waterways Amenity Advisory Council (2006), and therefore these are not considered any further in this assessment.

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

- review of aerial photography provided by Transport Scotland (BLOM Survey, 2014);
- review of digital Ordnance Survey (OS) maps;
- consultation with the ESG, Environmental Forum, landowners and tenants (Chapter 7: Consultation and Scoping);
- interrogation of the Jacobs Geographical Information Systems (GIS) database;
- review of census data (Statistics, 2016);
- VisitScotland website;
- review of PKC LDP (PKC, 2014);
- review of Perth & Kinross Council Core Paths Plan (PKC, 2012);
- published Macaulay Land Use Research Institute (MLURI) and Land Capability for Agriculture (LCA) data (The James Hutton Institute, 2013);
- information provided by Brodies LLP and Transport Scotland and obtained by Jacobs stakeholder team during January 2017 to July 2018 in relation to land ownership and land occupation;
- review of relevant extant planning applications supplied by PKC between 01 June 2015 and valid up to 31 May 2018 and supplemented with the Council's online planning portal; and
- online searches for commercial and industrial property and community facilities.

#### Residential, Commercial and Industrial Property

8.2.7 Consultation with residential, commercial and industrial property owners and occupiers was undertaken between January 2017 and January 2018 where necessary to identify the impacts of the proposed scheme on their property and business interests.

#### Community Land and Community Facilities

8.2.8 Community land and community facilities have been identified using the resources identified in paragraph 8.2.6. 'Open Space' as set out within PKC LDP (PKC, 2014) is included within the assessment.

Development Land and Planning Applications

- 8.2.9 For the purposes of this assessment, development land relates to areas allocated for development as identified in PKC LDP (PKC, 2014) as well as relevant consented, or yet to be determined, planning applications lodged with the planning authorities.
- 8.2.10 Consultation with PKC was undertaken to identify consented, or yet to be determined, planning applications between 01 June 2015 and valid up to 31 May 2018 (i.e. within a three-year implementation timeframe). The three-year assessment period was chosen to reflect the standard duration of planning permissions, as per the amendment of Section 58 of the Town and Country Planning (Scotland) Act 1997 on 03 August 2009.
- 8.2.11 Consented, or yet to be determined, planning applications in the above three-year period were assessed with the following application types excluded if the application related to minor works or procedural aspects and therefore would not alter the 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.
- 8.2.12 Approved applications outwith the implementation timeframe period are 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 application outwith this period which is an extant consent (e.g. due to development being initiated but not completed), this was included in the assessment.

Agricultural, Forestry and Sporting Interests

- 8.2.13 Agricultural business units were defined on the basis of their operation and in some instances may include areas of land under different ownership.
- 8.2.14 The quality of the agricultural land uses the MLURI (now James Hutton Institute (JHI)) published data. The LCA classification can be found in Appendix A8.1 (Land Capability Assessment Descriptors). Land is classified into seven main classes, some of which have subdivisions. Class 1 is the best quality land and Class 7 is the poorest quality land. Classes 1, 2 and 3.1 are known as prime quality land and Classes 3.2 to 7 are known as non-prime quality land.
- 8.2.15 Structured interviews were held between February 2017 and December 2017 with the landowners and tenants of the potentially affected farms and holdings, and with forestry and sporting landowners and managers within the study area. Interviews were undertaken by Jacobs. This allowed the following baseline information to be ascertained:
- extent of property holdings and form of land ownership;
  - land use, management and performance levels attained;
  - labour and machinery resources;
  - sporting activity and management;
  - other business interests; and
  - existing grants.
- 8.2.16 The questionnaire template used during the landowner interviews can be found in Appendix A8.2 (Farm Business Survey). Completed questionnaires may be commercially sensitive and are therefore

not provided in this ES. A summary of the information provided during the surveys is presented in Table 8.15 for each potentially affected agricultural, forestry and sporting land interest.

- 8.2.17 Forestry site surveys of the potentially affected woodland coupes within the study area were undertaken between February 2017 and April 2017. Baseline information was collected for each of the surveyed coupes and included species, height, stem diameter and age class and this is presented in Appendix A8.3 (Forestry Survey).

#### Consultation

- 8.2.18 A summary of the consultation, including that relevant to the Community and Private Assets assessment, is reported in Chapter 7 (Consultation and Scoping) and supporting Appendix A7.2 (Summary of Consultation Responses).

#### **Impact Assessment**

- 8.2.19 As indicated at paragraph 8.2.6, 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 assessed within the categories of land use: residential, commercial and industrial property; community land and community facilities; development land and planning applications; or agricultural forestry and sporting interests. As such, significance of impacts on unknown land cannot be determined and land-take only is reported in the potential impacts section (Section 8.4).
- 8.2.20 The EIA (Scotland) Regulations (1999) require consideration of the 'likely significant effects' but do not provide a definition of what constitutes a significant effect, as this is determined according to the environmental parameter under consideration. For certain categories (planning applications, development land and commercial business viability) impacts are simply described as being significant or not significant, but for the majority of assessments a level of significance is assigned. For the purposes of this assessment, impacts were considered to be 'significant' in the context of the EIA Regulations where the assessment results indicated impacts of **Moderate** or higher significance. Significant impacts (potential or residual) are shown in bold throughout the chapter.

#### Residential, Commercial and Industrial Property

- 8.2.21 The assessment of impacts of the proposed scheme on residential, commercial and industrial property is focused on direct land-take, changes in access and impacts in future business viability. In addition to these impacts, indirect socio-economic impacts (no significant impact, significant beneficial, or significant adverse) may arise, particularly for people and businesses that utilise the existing A9. Indirect socio-economic impacts relate to a variety of factors and professional judgement is used to assess these.

#### *Land-take*

- 8.2.22 Land-take is defined for as land acquired through the Compulsory Purchase Order (CPO) process to provide sufficient land to construct and operate the proposed scheme including essential mitigation as outlined in Chapter 5, paragraph 5.5.9 (The Proposed Scheme).
- 8.2.23 For the purposes of this assessment, permanent land-take is considered to be areas directly required for the operation of the proposed scheme and includes land required for environmental mitigation such as landscape planting. Servitude rights (e.g. rights to cross land) may also be acquired and where this is the case, this land is also included within the land-take assessment.
- 8.2.24 The assessment on residential, commercial and industrial properties has been undertaken by determining the sensitivity and magnitude according to the criteria in Table 8.1 and Table 8.2. The impact significance was then determined using professional judgement and in line with Table 8.3.
- 8.2.25 Table 8.1 provides details of the criteria for assessing the sensitivity of residential, commercial and industrial property. This table also includes details for community facilities and community land.



**Table 8.1: Sensitivity criteria for residential, commercial and industrial property**

Sensitivity	Description
High	<ul style="list-style-type: none"> <li>Residential or commercial buildings.</li> <li>Property or land used by the community (e.g. schools and community halls).</li> <li>Community land that attracts users nationally (e.g. national parks).</li> <li>Cemeteries.</li> </ul>
Medium	<ul style="list-style-type: none"> <li>Residential or commercial land (e.g. gardens).</li> <li>Land used by the community on a regional scale (e.g. country parks, forests and other land managed in such a way as to attract visitors from a regional catchment).</li> </ul>
Low	<ul style="list-style-type: none"> <li>Derelict or unoccupied buildings.</li> <li>Locally used community land (e.g. local parks and playing fields).</li> </ul>

8.2.26 As indicated in Table 8.2, the magnitude of impacts was determined based on the degree of change from baseline conditions in terms of land-take and/or access severance.

**Table 8.2: Impact magnitude criteria for residential, commercial, industrial property and community land/facilities**

Magnitude	Description
High	Demolition of property, >50% loss of land and/or complete severance due to land-take.
Medium	Between 15% and 50% loss of land and/or major severance due to land-take.
Low	<15% land loss and/or partial severance due to land-take.
Negligible	Very slight change from the baseline condition; change hardly discernible, approximating to a 'no change' in conditions.

8.2.27 The overall impact significance was determined taking into account sensitivity and magnitude, as set out in Table 8.3. 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. Where such an adjustment was made, an explanation is provided within the assessment. Impacts are considered adverse, unless otherwise stated.

**Table 8.3: Matrix for determination of impact significance**

Sensitivity \ Magnitude	Magnitude			
	Negligible	Low	Medium	High
High	Slight	Slight/Moderate	<b>Moderate/ Substantial</b>	<b>Substantial</b>
Medium	Negligible/Slight	Slight	<b>Moderate</b>	<b>Moderate/ Substantial</b>
Low	Negligible	Negligible/Slight	Slight/Moderate	<b>Moderate</b>

*Vehicle Access*

8.2.28 The impact on vehicle access for residential, commercial and industrial properties is focused on properties where, as a result of the proposed scheme, current access arrangements to/from the property would be altered.

8.2.29 The impacts are described with information on the expected increase or decrease in journey distance provided in relation to the direction of travel (north or south) for vehicle users from the property to the A9. Any changes in journey distance have been calculated based on the assumption that either the existing A9 or the proposed scheme would be the preferred route to be used to travel north or south. Where there are different options to maintain vehicle access to the existing A9 or the proposed scheme, the shortest route that negates the need for an at-grade right turn manoeuvre has been assessed. The impact significance was adapted from distances for pedestrians to distances for vehicles using DMRB Volume 11, Section 3, Part 8, Pedestrians, Cyclists, Equestrians and Community Effects (Highways Agency et al., 1993) and determined using professional judgement and as outlined in Table 8.4.

**Table 8.4: Impact significance criteria for vehicle access**

Significance	Description
<b>Substantial</b>	An increase in journey distance of over 5km.
<b>Moderate</b>	An increase in journey distance between 1km and 5km.
Slight	An increase in journey distance between 0.5km and 1km.
Negligible	An increase in journey distance of less than 0.5km.

*Likely Future Commercial Business Viability*

- 8.2.30 DMRB Volume 11, Section 3, Part 6 Land Use (Highways Agency et al., 2001) guidance requires an assessment of the likely impacts on future viability of individual businesses affected by the proposed scheme.
- 8.2.31 A qualitative assessment of impacts on the likely future viability of individual businesses was undertaken using the following criteria:
- **No significant impact:** the business is affected by the land-take or change in access requirements of the proposed scheme, and this may result in a reduction or restructuring of its activities. However, this does not compromise the likely future viability of the commercial business and the business is likely to be able to continue trading, albeit after some restructuring of its operations.
  - **Significant Beneficial Impact:** the business is likely to be able to continue trading and developing as planned and the proposed scheme may make a beneficial contribution to future development of the business.
  - **Significant Adverse Impact:** the business may have to reduce its activities to a point where it becomes unviable, it requires to be relocated, or as a consequence of the adverse impacts it chooses to cease trading.
- 8.2.32 Qualitative assessment of likely future business viability was based on professional judgement, with any impacts on business viability of commercial and industrial businesses assigned into one of the three categories above. It should be noted that this DMRB Stage 3 assessment does not provide more detailed analysis of the scale of impact on business viability.
- 8.2.33 In the event of the loss of any residential, commercial or industrial 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 commercial and industrial businesses, reasonable claims for compensation as assessed by the District Valuer are assumed to have been met.

Community Land and Community Facilities

- 8.2.34 The land-take and access impacts on community land and community facilities are assessed as per the assessment for residential, commercial and industrial property (paragraphs 8.2.21 to 8.2.27).

*Local Communities (Community Severance)*

- 8.2.35 Community severance is defined in DMRB Volume 11, Section 3, Part 8, Pedestrians, Cyclists, Equestrians and Community Effects (Highways Agency et al., 1993) as *'the separation of residents from facilities and services they use within their community caused by new or improved roads or by changes in traffic flows'*.
- 8.2.36 The construction of new roads, or even relatively minor changes to existing roads, can result in significant changes to travel patterns within a community. A road may act as a barrier deterring people from using certain community facilities, or conversely, a diversion of road traffic away from a busy road may make an existing road easier to cross, thereby reducing community severance. A reduction in traffic levels is referred to as severance relief as community facilities are more accessible.

- 8.2.37 It should be noted that the DMRB guidelines on assessing severance are in relation to ‘pedestrians and others’. Within this assessment the criteria were applied to all users, including vehicles, as all users may still be deterred from making journeys which require them to negotiate additional roads and/or junctions. Reference should also be made to Chapter 9 (People and Communities - All Travellers).
- 8.2.38 Existing severance is considered to be the severance of communities from their facilities, as caused by the existing road network. Significance of impacts arising from relief of severance was assessed using the criteria shown in Table 8.5, which are defined in DMRB Volume 11, Section 3, Part 8 Pedestrians, Cyclists, Equestrians and Community Effects (Highways Agency et al., 1993).

**Table 8.5: Significance criteria for relief from existing severance**

Significance	Criteria	
	Built-Up/Urban Area	Rural Area
<b>Substantial</b> (beneficial)	When existing traffic levels are reduced by >60%.	When existing traffic levels are reduced by >90%. However, if the existing road substantially bisects a village or small town, 60% was used.
<b>Moderate</b> (beneficial)	When existing traffic levels are reduced by >30% and 60%.	When existing traffic levels are reduced by > 75% and 90%. However, if the existing road substantially bisects a village or small town, the above figures are >30% and 60%.
Slight (beneficial)	When existing traffic levels are reduced by approximately 30%.	When existing traffic levels are reduced by between 60% and 75%. However, if the existing road passes through a village or on the perimeter of a built-up area, up to 30% was used.

- 8.2.39 New severance is severance of pedestrians and others from community facilities resulting from the proposed scheme.
- 8.2.40 The guidelines provided in DMRB Volume 11, Section 3, Part 8, Pedestrians, Cyclists, Equestrians and Community Effects (Highways Agency et al., 1993) refer specifically to ‘pedestrians and others’ and therefore do not apply to vehicle travellers. Furthermore, the guidance states at paragraph 6.1(c) that for new community severance *‘the guidelines apply specifically to pedestrians and that cyclists and equestrians are less susceptible to severance because they can travel more quickly than people on foot, although they may be deterred from making journeys which require them to negotiate additional roads and especially junctions’*.
- 8.2.41 The assessment of new community severance took this into account and in doing so the criteria detailed in Table 8.6 below have been adapted to reflect the expected impact on travel patterns for pedestrians, cyclists and also vehicle travellers as these travellers may also be deterred from making journeys. Pedestrians within vulnerable groups (such as older people, disabled people and children) are separately identified where they constitute a disproportionate number of users of a route or community facility.
- 8.2.42 DMRB Volume 11, Section 3, Part 6, Land Use (Highways Agency et al., 2001) recommends user access surveys to help identify the value of community land and usage of community facilities (including that by vulnerable groups). In Scotland, the Land Reform (Scotland) Act 2003, Chapter 5, Section 13, states that, *‘it is the duty of the local authority to assert, protect and keep open and free from obstruction or encroachment any route, waterway or other means by which access rights may reasonably be exercised’*. It is therefore considered that regardless of levels of use and types of user, all routes should be maintained and/or improved where practicable, and surveys to determine usage levels of community land and facilities were not required.
- 8.2.43 In assessing new community severance, information has been drawn from Chapter 9 (People and Communities - All Travellers) to identify which routes are used by vulnerable groups. Additionally, professional judgement has been used to identify where vulnerable groups, (such as older people, disabled people and children), constitute a disproportionate number of users of a community facility or community land; for example, severance of a pedestrian route to a school or recreational land (disproportionately used by children); or access to a Doctors’ surgery or church (disproportionately used by older people, disabled people and children).



- 8.2.44 Journey distances for cyclists and vehicle travellers were determined based on the journey distances for pedestrians taking into account the average journey speeds referenced in paragraph 3.2 of DMRB Volume 11, Section 3, Part 8, Pedestrians, Cyclists Equestrians and Community Effects (Highways Agency et al., 1993). An average journey speed of 3km/h is referenced for pedestrians (vulnerable groups), 5km/h for pedestrians (non-vulnerable groups) and 20km/h for cyclists. For vehicle travellers, an average journey speed of 60km/h has been assumed.
- 8.2.45 Local roads have assumed to be used by both cyclists (in addition to local and core paths, and regional and national cycle routes) and vehicle travellers to access community facilities, with pedestrian users using local and core paths and rights of way.

**Table 8.6: Significance criteria for new severance**

Significance	Description
<b>Substantial</b> (adverse)	Local residents are likely to experience considerable hindrance or be deterred from making trips to the extent that routes are changed, for example: <ul style="list-style-type: none"> <li>pedestrian at-grade crossing of a new road carrying &gt;16,000 vehicles Annual Average Daily Traffic (AADT) in the opening year; or</li> <li>an increase in journey distance of over 0.3km for pedestrians (vulnerable groups), 0.5km for pedestrians (non-vulnerable groups), 1km for equestrians, 2km for cyclists and others and/or &gt;6km for vehicles; or</li> <li>three or more of the hindrances set out under 'Slight' or two or more set out under '<b>Moderate</b>'.</li> </ul>
<b>Moderate</b> (adverse)	When some local residents (e.g. vulnerable groups) are likely to be dissuaded from making trips or where trips would become longer or less attractive, for example: <ul style="list-style-type: none"> <li>pedestrian at-grade crossing of a new road carrying between 8,000 and 16,000 vehicles AADT in the opening year; or</li> <li>journey distance would be increased by 0.15km to 0.3km for pedestrians (vulnerable groups), 0.25km to 0.5km for pedestrians (non-vulnerable groups), 0.5km to 1km for equestrians, 1km to 2km for cyclists and others and/or &gt;3km and &lt;6km for vehicles; or</li> <li>two or more of the hindrances set out under 'Slight' applying to single trips.</li> </ul>
Slight (adverse)	The current journey pattern is likely to be maintained but there may be some hindrance to movement, for example: <ul style="list-style-type: none"> <li>pedestrian at-grade crossing of a new road carrying &lt;8,000 vehicles. AADT in the opening year; or</li> <li>an increase in journey distance by up to 0.15km for pedestrians (vulnerable groups), 0.25km for pedestrians (non-vulnerable groups), up to 0.5km for equestrians, up to 1km for cyclists and others and/or up to 3km for vehicles; or</li> <li>one hindrance (e.g. a new bridge or underpass) would need to be negotiated.</li> </ul>

Development Land and Planning Applications

- 8.2.46 DMRB Volume 11, Section 3, Part 6, Land Use (Highways Agency et al., 2001) does not provide specific detailed guidance on how the impact of the proposed scheme on development land should be assessed. This assessment was based upon the professional judgement of a suitably qualified and experienced specialist.
- 8.2.47 The assessment did not assign a standard significance category (e.g. Moderate significance), and instead qualitatively considered whether the ability of the development land to support the proposed use would be impacted by the proposed scheme. This took into consideration land-take, access and potential impacts on amenity (e.g. air, noise and visual impacts). This approach was followed because the uncertain nature of future development (e.g. whether developments will be implemented and their exact layout) made it difficult to determine the magnitude of impacts and therefore a significance level.
- 8.2.48 Development land allocations not already subject to extant planning applications are assessed and reported as development land. Where development land allocations are subject to an extant planning application, the impacts of the proposed scheme are assessed and reported as planning applications.
- 8.2.49 The assessment of impacts on development land allocations and planning applications was undertaken using the following criteria:
- No significant impact – the land would still be available for the proposed use and there would be no discernible impact on the viability of the site for the proposed development. There would be no impact on the amenity of the site that would interfere with its proposed use.

- **Significant Beneficial** impact – the land would still be available for the proposed use and the proposed scheme would improve the viability of the site (generally through improved access e.g. by alleviating infrastructure constraints). Impacts on the amenity of the site would not interfere with its proposed use or the impact on the amenity would be beneficial, because the proposed scheme would improve the site’s appropriateness for its proposed use.
- **Significant Adverse** impact – all or part of the site would no longer be available for the proposed use and the proposed scheme would reduce viability of the proposed development taking place or would impact the amenity of the site in such a way as to interfere with its proposed use.

8.2.50 Mixed impacts includes some adverse and some beneficial factors which has been determined using professional judgement.

8.2.51 The cumulative impacts of major developments that are likely to be constructed during similar timeframes as the proposed scheme are reported in Chapter 20 (Cumulative Impacts).

Agricultural, Forestry and Sporting Interests

8.2.52 The proposed scheme may affect the scope and scale of agricultural and forestry-based land management activities and the productive and sporting capacity of the land and water within the study area. The possible impacts may include:

- permanent loss of land or reduction in agricultural capability due to the proposed scheme and associated works;
- severance of fields;
- access restrictions with changes in routes to and from fields;
- disruption to existing drainage and disruption of provision of water to fields;
- loss of, or gaps in, commercial and amenity forestry, shelterbelts and covers;
- increase of woodland windthrow risk;
- landscape and visual changes created by new and exposed woodland edges; and
- changes in permanent and/or seasonal employment patterns due to changes in the scale and nature of agricultural, forestry and sporting enterprises.

8.2.53 The assessment of impacts on agricultural, forestry and sporting interests was undertaken by determining the sensitivity and magnitude according to the criteria in Table 8.7 and Table 8.9 The impact significance was determined using professional judgement and in accordance with Table 8.3.

8.2.54 Professional judgement was used to consider the range of sensitivity characteristics found during the baseline data collection process for each agricultural, forestry and sporting interest, and a sensitivity rating was assigned accordingly. Table 8.7 provides an indication of the characteristics used to inform the assignment of sensitivity for land interests.

**Table 8.7: Criteria for sensitivity of agricultural, forestry and sporting interests**

Sensitivity	Characteristics
High	<ul style="list-style-type: none"> <li>• Small farm size (&lt;50ha).</li> <li>• Presence of prime quality land (Classes 1, 2 and 3.1).</li> <li>• Conventionally farmed intensive arable cropping or intensive livestock systems (e.g. dairying).</li> <li>• Land of any farm type farmed according to organic or biodynamic standards.</li> <li>• High value commercial sporting activity (e.g. driven grouse shooting or salmon fishing).</li> <li>• Trees of high quality (good examples of species; rare or unusual; formal or semi-formal arboriculture species; of particular visual importance as arboricultural and/or landscape features; significant conservation, historical or commemorative value, e.g. veteran trees) with an estimated remaining life expectancy of at least 40 years if undisturbed.</li> </ul>
Medium	<ul style="list-style-type: none"> <li>• Medium farm size (50ha to 150ha).</li> <li>• Presence of land of moderate quality (Classes 3.2 and 4).</li> <li>• Conventionally farmed mixed cropping and livestock systems of moderate intensity.</li> </ul>

Sensitivity	Characteristics
	<ul style="list-style-type: none"> <li>Moderate value commercial sporting activity (e.g. walked up pheasant shooting).</li> <li>Trees of moderate quality (would be of high quality but have impaired condition; unsuitable for retention beyond 40 years; lacking special arboricultural quality; collective landscape qualities; material conservation or other cultural value) with an estimated remaining life expectancy of at least 20 years if undisturbed.</li> </ul>
Low	<ul style="list-style-type: none"> <li>Large farm size (&gt;150ha).</li> <li>Presence of land of low quality (Classes 5, 6 and 7).</li> <li>Conventionally farmed extensive livestock systems or agricultural land in non-agricultural use.</li> <li>Low-value sporting activity (e.g. rough shooting).</li> <li>Trees of low quality (unremarkable trees of limited arboricultural merit; low or transient landscape benefits; no material conservation or other cultural value) with an estimated remaining life expectancy of at least 10 years if undisturbed.</li> <li>Trees in such condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.</li> </ul>

8.2.55 As indicated in Table 8.9, the magnitude of impacts was determined based on a range of characteristics and took into account factors such as land-take, severance and access. Severance impacts refer to situations where:

- the proposed scheme would cut through 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 or important farm buildings would be separated from land parcels.

8.2.56 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 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).

8.2.57 ForestGALES (a tool used to calculate wind risk) was used to assess current windthrow risk and risk of windthrow following the removal of trees as a result of the proposed scheme (The Forestry Commission, 2015). ForestGALES predicts the existing windthrow risk using surveyed stand data (species, spacing, height, stem diameter, soil type etc.) and wind climate data using the Detailed Aspect Method of Scoring (DAMS) system. DAMS uses location, elevation and topographical exposure of a given site to calculate average wind speed and the frequency of strong wind weather occurrences.

8.2.58 ForestGALES uses the current stand data, DAMS and measurements of a potential new open gap adjacent to a new exposed woodland edge (hereafter referred to as 'new brown edge gap') to calculate the risk of windthrow and the potential critical wind speed (CWS) to cause overturning and breakage. Windthrow risk is assessed by wind damage risk status (WDRS) which measures the risk of either overturning or stem breakage. There are six categories of WDRS and these are categorised to signify low, medium and high risk in relation to the approximate number of years until resulting windthrow (return period) as shown in Table 8.8. For the purposes of this assessment, impacts were considered to be 'significant' where the assessment results indicated impacts of 3 WDRS or higher, shown in bold in Table 8.8.

**Table 8.8: Wind damage risk status categories**

WDRS	Return Period (years)	Risk Status
1	>100	Low
2	50-100	Low
3	33-50	<b>Medium</b>
4	20-33	<b>Medium</b>
5	10-20	<b>High</b>
6	<10	<b>High</b>

8.2.59 The magnitudes of the various impacts were determined and an overall magnitude assigned for each agricultural, forestry and sporting interest accordingly.

**Table 8.9: Criteria for magnitude of impacts on agricultural, forestry and sporting interests**

Magnitude	Impact Description
High	<ul style="list-style-type: none"> <li>• loss of &gt;10% of the land holding;</li> <li>• high degree of severance extending to more than 20% of the land holding;</li> <li>• access to agricultural, forestry and sporting land restricted;</li> <li>• high degree of disruption to cultivation patterns and with high risk of change in land use;</li> <li>• disruption to driven shooting and/or high value fishing (e.g. salmon);</li> <li>• noticeable change to the woodland over a wide area or an intensive change over a limited area; and</li> <li>• high windthrow risk.</li> </ul>
Medium	<ul style="list-style-type: none"> <li>• loss of between 5% and 10% of the land holding;</li> <li>• moderate degree of severance extending to between 10% and 20% of the land holding;</li> <li>• access to agricultural, forestry and sporting land compromised;</li> <li>• moderate degree of disruption to cultivation patterns with moderate risk of change in land use;</li> <li>• disruption to walked-up shooting (e.g. pheasant) and/or medium value fishing (e.g. trout);</li> <li>• small changes to the woodland over a wide area or a noticeable change over a limited area; and</li> <li>• medium windthrow risk.</li> </ul>
Low	<ul style="list-style-type: none"> <li>• loss of &lt;5% of the land holding;</li> <li>• low degree of severance extending to less than 10% of the land holding;</li> <li>• minimal change in access to agricultural, forestry and sporting land;</li> <li>• minimal degree of disruption to cultivation patterns and low risk of change in land use;</li> <li>• disruption to rough shooting and/or low value fishing (e.g. no permit charged);</li> <li>• very minor changes to the woodland over a wide area or minor changes over a limited area; and</li> <li>• low windthrow risk.</li> </ul>
Negligible	<ul style="list-style-type: none"> <li>• negligible change to all of the above factors.</li> </ul>

8.2.60 The overall impact significance was determined taking into account sensitivity and magnitude, as set out in Table 8.3. 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. Where such an adjustment was made, an explanation is provided in the assessment.

*Likely Future Farm Business Viability*

8.2.61 DMRB Volume 11, Section 3, Part 6, Land Use (Highways Agency et al., 2001) guidance requires an assessment of the likely future viability of individual farms and for the purposes of this assessment this includes agricultural, forestry and sporting interests affected by the proposed scheme.

8.2.62 The impacts on likely future farm viability, particularly relating to land-take and severance issues, were considered for agricultural, forestry and sporting interests. In undertaking this farm viability assessment, the general principles that were applied relate to whether the farming unit has the potential to adapt its operations and whether it could continue to operate as a farming, forestry or sporting unit.

8.2.63 A qualitative assessment of impacts on the likely future viability of individual farm businesses was undertaken using criteria as outlined in paragraphs 8.2.30 to 8.2.32.

8.2.64 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.

**Limitations to Assessment**

- 8.2.65 Land-take estimates are based on the areas shown on the Draft CPO which include the land required for proposed scheme design elements, the extent of earthworks and the mitigation measures identified in this ES. The locations of temporary construction compounds would depend on the appointed contractor, taking into account constraints identified by this ES. Whilst the appointed contractor may locate these within land made available to him within the CPO, 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.
- 8.2.66 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.
- 8.2.67 In assessing the impact of the proposed scheme on access and change in journey distance, the assessment considers the change in journey distance arising from the proposed scheme and does not make allowance for the overall trip length.

**8.3 Baseline Conditions**

**Socio-economic Conditions**

- 8.3.1 Socio-economic conditions have been provided as part of the baseline to provide context surrounding the study area including population data, occupational status, tourism, and transport infrastructure.

Centres of Population

- 8.3.2 The main communities within and in close proximity are shown on Figure 8.1, comprising Dowally, Guay and Kindallachan. Ballinluig is located immediately beyond the northern extent of the study area, and Dunkeld is located approximately 3km south of the southern extent of the study area.

Population and Demographics

- 8.3.3 According to the latest (2011) census data (Statistics, 2016), the population of Perth & Kinross local authority area is 146,850, approximately 2.8% of the population of Scotland.
- 8.3.4 The demographic profile of the Perth & Kinross local authority area in comparison to Scotland as a whole is shown in Table 8.10 below. The table demonstrates that, across all age ranges, Perth & Kinross local authority area has a similar population profile to Scotland.

**Table 8.10: Population profile**

Settlement/Area	Age Range (years)						Total
	0-14	15-29	30-44	45-59	60-74	75+	
Perth & Kinross Population (No.)	23,270	24,334	26,529	32,280	26,365	14,072	146,850
	16%	17%	18%	22%	18%	10%	n/a
Scotland Population (No.)	854,752	1,038,760	1,053,551	1,120,010	821,243	411,584	5,299,900
	16%	20%	20%	21%	15%	8%	n/a

Source: Census 2011, sourced from Statistics <http://statistics.gov.scot>

- 8.3.5 The Job Seeker Allowance claimant count, which represents the number of people claiming unemployment-related benefits in an area, gives an idea of the health of the local and regional economy. In this case, Perth & Kinross local authority area is at a rate of 1.5% (1,980), lower than the national rate of 2.6% (132,460). This suggests that, if used as an indicator of the condition of the economy, that the economy of Perth & Kinross is stronger than Scotland as a whole.
- 8.3.6 Perth & Kinross has a lower median income than Scotland as a whole, which can be seen in Table 8.11 showing the average weekly earnings. The difference between workplace-based and residence-



based earnings suggests that most jobs within the region pay less than jobs outside of the region to which residents may be commuting.

**Table 8.11: Average weekly earnings within the study area (2012)**

	Perth & Kinross	Scotland
Weekly Earnings (residence-based)	£492.60	£498.30
Weekly Earnings (workplace-based)	£458.10	£497.60

Source: Statistics <http://statistics.gov.scot>

8.3.7 Data on occupational status are only available at the Local Authority level as presented in Table 8.12. These data can be interpreted to give an indication of important industries in the Perth & Kinross local authority area.

8.3.8 The largest differences between Perth & Kinross and Scotland as a whole are in the sectors of (1) primary industries, (2) administration and support services and (3) accommodation and food services. Administration and support services support a greater proportion of employment in Scotland whereas primary industries and accommodation and food services support a greater proportion of employment in Perth & Kinross.

**Table 8.12: Employer profile (2014)**

Business Sector	Perth & Kinross		Scotland	
	Population	% of Total Population	Population	% of Total Population
Total employees	49,700	-	1,789,800	-
Arts, entertainment and recreation and other services	2,100	4.2%	61,300	3.4%
Construction	4,600	9.3%	129,700	7.2%
Education, human health and social work	5,400	10.8%	217,300	12.1%
Information and communication	500	1.0%	58,900	3.3%
Manufacturing	3,800	7.6%	188,300	10.5%
Primary	3,800	7.6%	78,000	4.4%
Professional, scientific and technical	3,400	6.8%	164,600	9.2%
Accommodation and food services	7,700	15.5%	178,600	10.0%
Transport and storage	2,100	4.2%	101,300	5.7%
Wholesale, retail and repairs	11,000	22.1%	368,700	20.6%
Administration and support services	3,200	6.4%	178,800	10.0%
Real estate	1,000	2.0%	29,300	1.6%
Other services	1,000	2.0%	35,000	2.0%

Source: Statistics <http://statistics.gov.scot>

### Tourism and Recreation

8.3.9 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.

8.3.10 Tourist attractions have been identified through site visits and the review of the VisitScotland website. There are no tourist attractions listed on the VisitScotland website within the study area. However, some properties within the study area are advertised as holiday cottages, provide B&B, lodge or caravan facilities, providing a diverse range of accommodation options to tourists. Dowally Craft Centre is also located in close proximity to the proposed scheme, although not listed as a tourist attraction by VisitScotland.

8.3.11 Pitlochry and Dunkeld, which are outwith the study area, are situated to the north and south of the proposed scheme respectively, and contain several tourist attractions and destinations including the town of Pitlochry, Pitlochry Festival Theatre, Loch Faskally, the Enchanted Forest, Craigower Wood and Ben Vrackie. Pitlochry has the unusual attraction of a salmon ladder which can be seen at Pitlochry Power Station and Dam. Additional attractions within Pitlochry include the Edradour and Blair

Athol distilleries which offer guided tours. Dunkeld and its surrounds includes Loch of the Lowes Visitor Centre, Birnam Arts and the Beatrix Potter Exhibition and The Hermitage. The PKC LDP (PKC, 2014), mentions the tourism sector which accounts for 13% of all employment in Perth & Kinross area. The LDP seeks to enhance existing tourism facilities and provision as well as promote scope for additional or improved opportunities for tourism.

Transport Infrastructure

8.3.12 Traveline Scotland (2018) notes that Stagecoach East Scotland bus services (Perth - Aberfeldy 23, and Perth - Pitlochry 27) can be joined at A9 northbound and southbound bus stops at Kindallachan. Buses are available hourly during weekdays. The Highland Main Line railway also runs broadly parallel to the existing A9, however there is no train station within the study area. The nearest train stations are in Pitlochry and Dunkeld & Birnam which are north and south of the proposed scheme, respectively, and these offer northbound and southbound services to Inverness and Perth. Potential impacts on public transport (service provision and facilities) during construction and operation are covered in more detail in Chapter 9 (People and Communities - All Travellers).

**Residential, Commercial and Industrial Property**

Residential Areas

8.3.13 The majority of residential properties in the area are located in the settlements of Dowally, Guay and Kindallachan. In addition, there are several smallholdings and farm steadings located along the length of the proposed scheme.

Commercial and Industrial Property

8.3.14 Commercial and industrial properties are situated along the full length of the proposed scheme. These are listed in order from south to north which include:

- Network Rail (Highland Main Line railway);
- Inchmagrannachan Farm Holiday Cottages;
- Dowally Chalet and Caravan Park;
- R.A. Laird Contractors Ltd;
- Dowally Craft Centre;
- Tayview Lodges;
- Alex Butter Landscaping;
- Cuil-an-Duin Country House; and
- House of Bruar Mail Order Warehouse.

8.3.15 The number and percentage of different types of businesses in Perth & Kinross area and Scotland are shown in Table 8.13. The data show that compared with Scotland as a whole, Perth & Kinross has a larger rate of non-manufacturing production businesses, likely to be farms and a lower rate in the construction and professional, scientific and technical sectors.

**Table 8.13: Business profile (2017)**

Business Sector	Perth & Kinross		Scotland	
	Population	% of Total Population	Population	% of Total Population
Total business sites	7,060	-	208,265	-
Accommodation and Food Services	580	8	16,265	8
Administrative and Support Services	530	8	15,440	7
Arts, Entertainment and Recreation	220	3	5,900	3
Construction	760	1	20,680	10

Business Sector	Perth & Kinross		Scotland	
	Population	% of Total Population	Population	% of Total Population
Education, Health & Social Work	390	6	12,560	6
Financial and Insurance	90	1	3,805	2
Information and Communication	265	4	11,095	5
Manufacturing	305	4	10,120	5
Non-Manufacturing Production	1,105	16	19,615	9
Other service activities	280	4	9,485	5
Professional, Scientific & Technical	905	13	34,435	17
Real Estate activities	230	3	6,360	3
Transport and Storage	200	3	7,255	3
Wholesale, Retail and Repairs	1,200	17	35,255	17

Source: Statistics <http://statistics.gov.scot>

### Community Land

- 8.3.16 Community land includes public parks and gardens; play spaces; residential, business and transport areas; school grounds; green access routes; cemeteries and playing fields. With the exception of the River Tay and Dowally Church cemetery, there are no other community land identified within the 500m study area (refer to Figure 8.1). There is no Open Space, as identified in the PKC LDP, within the 500m study area, therefore this is not discussed further in this section.
- 8.3.17 It should be noted that the impacts of the proposed scheme on woodlands which permit public access are reported under the forestry land section (Section 8.4: Potential Impacts) as forestry is considered to be the primary land use. Chapter 9 (People and Communities - All Travellers) has assessed how the proposed scheme would affect paths used to access these outdoor areas.
- 8.3.18 Stretches of the River Tay are used for recreational angling for trout, salmon and grayling. Public access to the River Tay for angling and other recreational pursuits is provided through a network of paths along the river banks. Impacts of the proposed scheme on fishing beats that permit public access are reported under the agricultural, forestry and sporting section as game fishing is considered to be the primary land use.

### Community Facilities

- 8.3.19 The majority of community facilities are located outwith the 500m study area in the village of Ballinluig. Dowally Church at Dowally and the two bus stops on the existing A9 at Kindallachan are the only community facilities located within the study area and their location in relation to the proposed scheme are shown on Figure 8.1 (Dowally Church) and Figure 9.1 (bus stops). Figure 8.1 also shows school catchments areas including that for Grandtully Primary School, Logierait Primary School and Royal School of Dunkeld Primary School.
- 8.3.20 There are two permanent bus stops within the study area which are outlined in Chapter 9 (People and Communities – All Travellers) and illustrated on Figure 9.2

### Development Land and Planning Applications

- 8.3.21 There are no development land allocations identified in the PKC LDP (PKC, 2014) within the 500m study area. Therefore, this is not discussed further within this section.
- 8.3.22 Four extant planning applications were identified within the study area. A summary of the extant planning applications is provided in Table 8.14 along with the development land reference (e.g. PA01) which has been developed for the purpose of this assessment. The location of the extant planning applications in relation to the proposed scheme is shown on Figure 8.1.

**Table 8.14: Extant planning applications**

Reference	PKC Application Reference	Application Site	Overview
PA01	17/01574/IPL	Land 30 metres North of St Colmes, Dowally	Erection of holiday accommodation unit (in principle)
PA02	15/00937/FLL	Tay View Lodges	Removal of condition 3 (occupancy of buildings) of permission 08/02350/FUL (Demolition of existing building and erection of recreation and training centre and 4 chalets).
PA03*	09/00433/FUL	Land to the North of Morven, Kindallachan	Renewal of previous consent (04/00974/FUL) for erection of 6 dwelling houses
PA04	14/00834/FLL	Land 80m north west of Inch of Tulliemet Farm	Erection of four warehouse, office and associated works.
PA05	18/00858/FLL	Inch of Tulliemet Farm Building, Ballinluig	Extension to staff accommodation building to form office and additional staff accommodation

\*As noted in paragraph 8.2.12, this planning application is outwith the assessment period (due to development being initiated but not completed) but has been identified through landowner consultation and has been included in the assessment.

### **Agricultural, Forestry and Sporting Interests**

- 8.3.23 The predominant land use in the study area is agriculture, interspersed with parcels of forestry and woodland. The land supports a range of agricultural systems although livestock production (cattle and sheep) predominates with arable crops (mainly cereals) grown on more productive land.
- 8.3.24 Scottish Planning Policy (Scottish Government, 2014) states that development on prime quality agricultural land or land of lesser quality that is locally important should not be permitted except where it is essential, for example for essential infrastructure. There is no prime agricultural land found within the study area. The Scottish Soil Framework (Scottish Government, 2009) promotes the sustainable management and protection of soils for a range of functions which include food production, biodiversity, regulating water flow and quality.

#### Land Use and Land Capability

- 8.3.25 The most productive land in the study area is categorised as Class 3.2 (land capable of growing a moderate range of crops). No prime agricultural land is located within the study area. Figure 8.2 shows the distribution of LCA classes in the study area which illustrates that the most productive land (Class 3.2) in the study area is land along the valley floor and adjacent to the River Tay.

#### Agriculture, Forestry and Sporting Land Interests

- 8.3.26 The range of agricultural activities in the study area is typical of farming types and practices in Scotland; principally upland sheep and suckler beef systems. Arable crops (including spring and winter cereals) and vegetable crops (including seed potatoes and turnips) are grown within the study area.
- 8.3.27 Most of the land is farmed conventionally, however a proportion of land at Rotmell Farm (refer to figure 8.2) is farmed organically including organic egg production.
- 8.3.28 Parcels of commercial forestry are located within the study area on land owned by a number of different landowners. The majority of forestry is owned by Atholl Estate and is shown on Figure 8.2.
- 8.3.29 Sporting interests within the study area include managed shooting and stalking as well as game fishing (trout, salmon and grayling) on the River Tay.
- 8.3.30 Six agricultural, forestry and sporting land interests have been identified as being affected by the proposed scheme. Most of the farmed land falls within the ownership of Atholl Estate and Robert Laird with the extents of the land holdings shown on Figure 8.2. Other land interests include Dalmarnock Fishing Beat and Dalguise Fishings which are shown on Figure 8.2. A summary of the affected land interests is provided in Table 8.15.

Sensitivity Assessment

8.3.31 The baseline data collected during the farm business and forestry surveys were used to inform an individual sensitivity assessment for each land interest affected by the proposed scheme (refer to Figure 8.2 for land interests). The sensitivity assessment for each land interest is provided in Table 8.15.

**Table 8.15: Agricultural, forestry and sporting land interests affected by the proposed scheme**

Land Interest	Agricultural, Forestry and Sporting Interests	Sensitivity
Atholl Estate (The Bruar Trust) (Ref. A)	<ul style="list-style-type: none"> <li>• large sporting estate extending to 18,000ha of which 2,000ha of land is farmed in-hand (Home Farm) at Ballachallan;</li> <li>• grassland supports 1600 breeding ewes and 150 herd of suckler cows;</li> <li>• livestock managed conventionally;</li> <li>• sporting activity includes small walked up grouse shoot, private driven pheasant shoot on two beats near Kindallachan, walked up rough shooting and Fallow and Roe deer stalking (guests).;</li> <li>• forestry managed for amenity, commercial and sporting purposes;</li> <li>• in receipt of Basic Payment Scheme, Scottish Suckler Beef Support Scheme, and Less Favoured Area Support Scheme;</li> <li>• additional environmental agreements include winter retention of stubbles, muirburn and predator control; and</li> <li>• other business interests managed separately by Atholl Estate.</li> </ul>	Medium
Rotmell Farm (Ref. B)	<ul style="list-style-type: none"> <li>• large tenanted farm extending to in excess of 3,500ha and comprising Rotmell Farm, Riemore Estates, Dungarhill and seasonal grazings (Atholl Estates). Rotmell extends to 1000ha;</li> <li>• land includes mix of organic and conventionally farmed land and livestock;</li> <li>• current grazing livestock includes 1700 breeding ewes and 100 breeding suckler cows (autumn and spring calves);</li> <li>• 4,000 free-range laying hens producing organic eggs in two mobile houses (marketed as 'The Egg Shed');</li> <li>• sporting activity includes deer stalking and rough shooting;</li> <li>• forestry managed by estate;</li> <li>• in receipt of Basic Payment Scheme, Scottish Suckler Beef Support Scheme, Scottish Upland Sheep Support Scheme and Less Favoured Area Support Scheme;</li> <li>• Forest of Cluny Moorland Management Scheme (outwith study area); and</li> <li>• other business interests include Gallagher fencing materials distribution business and Urban Rural Design Studio.</li> </ul>	High
Dalmarnock Fishing Beat	<ul style="list-style-type: none"> <li>• salmon fishing rights in the River Tay; and</li> <li>• two fishing huts directly accessed from two at-grade accesses from the existing A9.</li> </ul>	High
Mains of Airleywight Farm (Ref. C)	<ul style="list-style-type: none"> <li>• large farm extending to 283ha;</li> <li>• cropping includes winter wheat and spring barley. Some kale grown;</li> <li>• livestock enterprises comprise spring calving cows and beef finishing enterprise. Lambs also finished;</li> <li>• within a Nitrate Vulnerable Zone;</li> <li>• no known sporting interests; and</li> <li>• no known environmental agreements.</li> </ul>	Medium
Dalguse Fishings (Ref. D)	<ul style="list-style-type: none"> <li>• Approximately 16ha of the River Tay and access from both sides of the river bank.</li> </ul>	High
Dowally, Guay and Haugh of Tulliemet Farms: Robert Laird (Ref. E)	<ul style="list-style-type: none"> <li>• large farm extending to 342ha which includes owned land at Dowally, Guay, Westhaugh of Tulliemet and Logierait plus rented land at Balmacneil;</li> <li>• livestock enterprises comprise 70 suckler cows plus followers and 450 ewes with lambs;</li> <li>• cropping includes spring barley, turnips, seed potatoes and grass for hay and silage;</li> <li>• forestry managed for shelter and amenity purposes;</li> <li>• no known sporting activity;</li> <li>• other business interests include a plant and contracting business (R.A. Laird Contractors Ltd) and caravan and chalet accommodation for tourists (Dowally Chalet and Caravan Park); and</li> <li>• BEAR Scotland occupies land at Westhaugh of Tulliemet for salt storage.</li> </ul>	Medium



- 8.3.32 Six agricultural, forestry and sporting land interests have been assigned sensitivity; three have been categorised as of high sensitivity and three as of medium sensitivity.
- 8.3.33 Note that in the case of Mains of Airleywight Farm, land is also farmed within Project 01 (Luncarty to Pas of Birnam) and sensitivity has been determined based on information provided for that project.
- 8.3.34 There are several land interests that as well as having agricultural land or forestry, also contribute to another form of land use activity. Where the other form of land use activity is more important to the land interest than the agricultural land or forestry, it has been scoped out of the agricultural, forestry and sporting assessment. The land-take from these land interests to the proposed scheme is included within the assessment of non-agricultural private assets covered elsewhere in this chapter. This includes forestry at Cuil-an-Duin Country House which has been assessed under 'Commercial and Industrial Property'.

## **8.4 Potential Impacts**

### **Introduction**

- 8.4.1 Potential impacts on community and private assets have been identified for the study area and are discussed below. Construction and operation impacts have been assessed together, as impacts on community and private assets are expected to be similar during both construction and operation phases. All potential impacts are adverse unless otherwise stated.
- 8.4.2 Potential impacts are assessed in the absence of mitigation, with residual impacts taking account of mitigation identified in Section 8.6 (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, development land and community impacts which use different assessment criteria as outlined in Section 8.2 (Approach and Methods).

### **Loss of Land as a Result of the Proposed Scheme (Land-take)**

- 8.4.3 The proposed scheme requires approximately 69.52ha of land-take, of which 4.32ha would be subject to servitude rights (granting access rights only to the Scottish Ministers). The potential significance of impact resulting from land-take is considered in the context of each land use type and reported in the relevant sections of this chapter.
- 8.4.4 Of the above land-take arising from the proposed scheme, 5.05ha of other land (which is of unknown ownership) has been identified where the land has not met one of the land use categories identified in paragraph 8.2.3. Only land-take values in relation to other land are reported above and significance (potential or residual) is not attributed.
- 8.4.5 The loss of land reported is based on the Draft Compulsory Purchase Order (CPO) which is reported within the Draft Orders to the nearest metre squared. Land-take areas reported are presented in hectares and rounded to two decimal places (i.e. rounded to the nearest 100m<sup>2</sup>). Reported land-take in hectares may therefore differ slightly from that reported in the Draft CPO as a consequence of this rounding. Furthermore, in some cases where multiple land interests are affected and aggregate land-take is reported, there may be minor differences between the sum of the land-take values reported overall when compared to the sum of the individually reported land-take values. This is also due to the effect of rounding to two decimal places.

### **Residential Land and Property**

#### Land-take

- 8.4.6 There are two groups of residential properties and three single residential land interests affected by land-take (totalling approximately 0.62ha) as a result of the proposed scheme as shown on Figure 8.2. A summary of land-take impacts for the residential properties is provided in Table 8.16.

**Table 8.16: Land-take areas for residential land and property**

Land Interest	Description of Land-take	Loss of Land		Sensitivity	Magnitude	Significance
		ha	%			
1 Dowally Cottages	Partial loss of garden for Dowally to Kindallachan Side Road	0.01	23	medium	medium	<b>Moderate</b>
Guay Farmhouse	Alteration to Wing of Guay Farmhouse and partial loss of parking area and garden for main alignment	0.36*	100	high	high	<b>Substantial</b>
Croft Croy properties (No. 1 and No. 2)	Partial loss of garden for main alignment	0.22	42	medium	medium	<b>Moderate</b>
Haugh of Kilmorich	Partial loss of garden for main alignment	0.01	5	medium	low	Slight
Haugh Cottages (North and South)	Partial loss of access track for main alignment	0.01	7	medium	low	Slight

\*Of the land-take from Guay Farmhouse, 0.01ha discrete from the property would be subject to servitude rights.

- 8.4.7 There is one property and two groups of properties where a significant potential impact is identified; 1 Dowally Cottage, Guay Farmhouse and Croft Croy properties.
- 8.4.8 1 Dowally Cottage would be subject to 0.01ha of land-take as a result of Dowally to Kindallachan Side Road. The significance of potential impact is assessed as **Moderate** due to loss of land.
- 8.4.9 The entire curtilage of Guay Farmhouse, including the Range (farmhouse) and Wing (outbuildings), located approximately 5m east of the proposed scheme, has been purchased by agreement by Transport Scotland (0.36ha). The direct impacts on this property relate to the partial loss of garden and parking area and the alteration of the Wing. These impacts would arise due to the construction of the main alignment and the Dowally to Kindallachan Side Road for the proposed scheme. The significance of potential impact is assessed as **Substantial** due to the loss of land and the building alteration.
- 8.4.10 There are two properties at Croft Croy, with the nearest to the proposed scheme approximately 30m to the east. Direct land-take (0.22ha) is expected from the western edge of the garden due to the construction of the main alignment over the Kindallachan Burn. The significance of potential impact is assessed as **Moderate** due to loss of land.

#### Vehicle Access

- 8.4.11 Fourteen groupings of residential properties would experience a change in access when travelling to the A9 as a result of the proposed scheme. As noted in paragraph 8.2.28 to 8.2.29, the assessment of the impacts of the proposed scheme on access focused on properties where direct access is provided to/from the existing A9. Expected change in access route for each grouping of residential properties is outlined in Table 8.17 and illustrated in Figure 8.3. All groups would experience **Moderate** or higher significance potential impacts for journeys to the north and/or south.

**Table 8.17: Groupings of residential properties change in vehicle access – to the north and south from the properties**

Residential Grouping	Change in Journey Distance (km)		Significance		Figure Ref.
	North	South	North	South	
Woodlands and Ledpetty Lodge	+3.4	+3.3	<b>Moderate</b>	<b>Moderate</b>	8.3a
Warren Lodge	+3.4	+2.8	<b>Moderate</b>	<b>Moderate</b>	8.3b
St Colmes	+5.1	+<0.1	<b>Substantial</b>	Negligible	8.3c
Rotmell Cottages (4 residential properties)	+5.1	+<0.1	<b>Substantial</b>	Negligible	8.3c
Properties at Dowally (11 residential properties)	+0.2	+3.6	Negligible	<b>Moderate</b>	8.3d
Dowally Cottage	+0.1	+3.5	Negligible	<b>Moderate</b>	8.3e

Residential Grouping	Change in Journey Distance (km)		Significance		Figure Ref.
	North	South	North	South	
Balnabeggan	+0.1	+2.4	Negligible	<b>Moderate</b>	8.3f
Properties at Guay (14 residential properties)	+0.6	+1.7	Slight	<b>Moderate</b>	8.3g
Ballintium	+0.6	+1.7	Slight	<b>Moderate</b>	8.3g
Properties at Kindallachan (20 residential properties)	+2.9	+<0.1	<b>Moderate</b>	Negligible	8.3h
Croftnascallaig	+2.9	+<0.1	<b>Moderate</b>	Negligible	8.3h
Haug of Kilmorich	No change	+4.8	No impact	<b>Moderate</b>	8.3i
Haug Cottages	-0.1	+3.9	Negligible (beneficial)	<b>Moderate</b>	8.3j
Westhaugh of Tulliemet	+0.1	+3.6	Negligible	<b>Moderate</b>	8.3k

8.4.12 Five groupings of residential properties would experience a change in access when travelling to the grouping of residential properties from journeys originating in the north or the south as a result of the proposed scheme. Expected change in access route for each grouping of residential properties is outlined in Table 8.18 and illustrated on Figure 8.4. All groups would experience **Moderate** or higher significance potential impacts for journeys from the north and/or south.

**Table 8.18: Groupings of residential properties change in vehicle access – from the north and south to the properties**

Residential Grouping	Change in Journey Distance (km)		Significance		Figure Ref.
	North	South	North	South	
Properties at Dowally (11 residential properties)	+0.2	+1.7	Negligible	<b>Moderate</b>	8.4a
Dowally Cottage	+0.2	+1.4	Negligible	<b>Moderate</b>	8.4b
Balnabeggan	+0.1	+0.4	Negligible	Negligible	8.4c
Properties at Guay (14 residential properties)	+<0.1	+0.4	Negligible	Negligible	8.4d
Ballintium	+<0.1	+0.4	Negligible	Negligible	8.4d
Properties at Kindallachan (20 residential properties)	+0.5	+0.5	Slight	Slight	8.4e
Croftnascallaig	+0.5	+0.5	Slight	Slight	8.4e
Haug of Kilmorich	+5.3	+0.3	<b>Substantial</b>	Negligible	8.4f
Haug Cottages	+6.1	+0.2	<b>Substantial</b>	Negligible	8.4g
Westhaugh of Tulliemet	+6.4	+<0.1	<b>Substantial</b>	Negligible	8.4h

## Commercial and Industrial Property

### Land-take

8.4.13 Three commercial and industrial land interests would be affected by land-take (totalling approximately 1.93ha) as a result of the proposed scheme as described in Table 8.19 and shown on Figure 8.2,

**Table 8.19: Land-take areas for commercial and industrial land interests**

Land Interest	Description of Land-take	Loss of Land		Sensitivity	Magnitude	Significance
		ha	%			
Network Rail	Partial loss of non-operational railway land and land to allow construction of SuDS outfalls and culverts.	0.24*	n/a**	medium	low	Slight
PKC	Patial loss of land from mainline alignment.	0.19	n/a**	medium	low	Slight

Land Interest	Description of Land-take	Loss of Land		Sensitivity	Magnitude	Significance
		ha	%			
Cuil-an-Duin Country House	Partial loss of woodland for main alignment	1.49	18	medium	medium	<b>Moderate</b>

\*Of the land-take from Network Rail, 0.15ha would be subject to servitude rights.

\*\*% area loss has not been calculated due to the overall extent of the land interests land holdings.

- 8.4.14 A significant potential impact of **Moderate** significance has been identified at Cuil-an-Duin Country House, due to land-take required to construct an embankment for the main alignment at ch7000-7320 and bat mitigation.

#### Vehicle Access

- 8.4.15 Six commercial/industrial properties have been identified that would experience a change in access/travel distance when travelling to the A9 as a result of the proposed scheme, constituting potential impacts of **Moderate** or higher significance for journeys to the north or south. Expected change in access route for each commercial/industrial property is outlined in Table 8.20 and illustrated on Figure 8.3.

**Table 8.20: Commercial/industrial properties change in vehicle access – to the north and south from the properties**

Commercial/Industrial Property	Change in Journey Distance (km)		Significance		Figure Ref.
	North	South	North	South	
Dowally Chalet and Caravan Park	+0.1	+3.5	Negligible	<b>Moderate</b>	8.3e
R.A. Laird Contractors Ltd	+0.1	+3.5	Negligible	<b>Moderate</b>	8.3e
Dowally Craft Centre	+0.1	+2.4	Negligible	<b>Moderate</b>	8.3f
Tayview Lodges	+0.6	+1.7	Slight	<b>Moderate</b>	8.3g
Alex Butter Landscaping	+2.9	+<0.1	<b>Moderate</b>	Negligible	8.3h
House of Bruar Mail Order Warehouse	+0.1	+3.6	Negligible	<b>Moderate</b>	8.3k

- 8.4.16 Three commercial/industrial properties have been identified that would experience a change in access/travel distance when travelling from the A9 as a result of the proposed scheme, constituting potential impacts of **Moderate** or higher significance for journeys from the north or south. Expected change in access route for each commercial/industrial property is outlined in Table 8.21 and illustrated on Figure 8.4.

**Table 8.21: Commercial/industrial properties change in vehicle access – from the north and south to the properties**

Commercial/Industrial Property	Change in Journey Distance (km)		Significance		Figure Ref.
	North	South	North	South	
Dowally Chalet and Caravan Park	+0.2	+1.4	Negligible	<b>Moderate</b>	8.4b
R.A. Laird Contractors Ltd	+0.2	+1.4	Negligible	<b>Moderate</b>	8.4b
Dowally Craft Centre	+0.1	+0.4	Negligible	Negligible	8.4c
Tayview Lodges	+<0.1	+0.4	Negligible	Negligible	8.4d
Alex Butter Landscaping	+0.5	+0.5	Slight	Slight	8.4e
House of Bruar Mail Order Warehouse	+6.4	+<0.1	<b>Substantial</b>	Negligible	8.4h

Indirect Socio-economic Impacts

- 8.4.17 During construction, there is likely to be additional spend in the local area by workers and others associated with 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 Dowally, Ballinluig and the surrounding area would therefore be expected during construction.
- 8.4.18 It is expected that some other businesses may not be able to adapt and that there would be disturbance during construction (noise and vibration, landscape and visual). Tourism related businesses that rely on the character and setting of the area would be particularly sensitive to such effects. Consequently, an adverse impact on such businesses and people in Dowally, Guay, Kindallachan and the surrounding area would be expected.
- 8.4.19 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.

**Community Land and Community Facilities**

Land-take

- 8.4.20 Dowally Church is located within Dowally. The proposed scheme is expected to directly affect 0.04ha of the church car park (66% of the car park area), owned by PKC, as a result of the Dowally to Kindallachan Side Road at ch4100. The significance of this potential impact is assessed as being **Moderate**.

Community Severance

- 8.4.21 Changes in traffic volumes on the local road network and through settlements are not sufficient to meet the criteria outlined in Table 8.5 to provide relief from existing severance.
- 8.4.22 Dowally Church, Dowally Church cemetery and two bus stops at Kindallachan are the only community land and community facilities identified within the study area for this assessment. The church is currently closed. Should it re-open, the main routes for residents and visitors to access this facility in relation to the proposed scheme are detailed in Table 8.22 and shown on Figure 9.1.

**Table 8.22: Main access routes to community facilities**

Community	Type	Main Access Routes	Figure 9.1 Ref.	Main User(s)
Dowally	Core Path	DUNK/109 and DUNK/141	56 and 57	Pedestrians
	Right of Way	TP64	57	Pedestrians
	Regional Cycle Route	RCR83	56	Pedestrians/Cyclists

- 8.4.23 These main access routes are anticipated to be maintained for vehicles, cyclists and pedestrians as a result of the proposed scheme. As a result, there will be no change in journey distance to Dowally Church using the main access routes outlined in Table 8.20. Additionally, the provision of a bus stop and bus turning facility at Dowally adjacent to Dowally Church would improve public transport links to the facility.
- 8.4.24 Two bus stops, one on the northbound carriageway north of Dowally Farm (approx. ch4450) and one on the southbound carriageway south of Guay (approximately ch5150), are included as part of the proposed scheme. These replace two bus stops located in the vicinity of Kindallachan at approx. ch5900 (northbound) and approximately ch5800 (southbound). For residents in Kindallachan, NMU's would be required to travel south via the RCR83, involving an increase in journey distance of approximately 1.6km for both northbound and southbound bus stops. The potential impact is assessed as a **Substantial** significance for pedestrians (vulnerable groups and non-vulnerable groups).



- 8.4.25 As a result of the two bus stops located between Dowally and Guay, residents in Dowally and Guay would no longer be required to travel to the bus stops in the vicinity of Kindallachan, resulting in a reduced journey distance for NMU's. A **Substantial** (beneficial) impact is assessed for pedestrians (vulnerable and non-vulnerable groups) from Dowally to the northbound and southbound bus stop and from Guay to the southbound bus stop. There is a reduction in journey distance for access to the northbound bus stop from Guay which is assessed as a Slight (beneficial) impact.
- 8.4.26 The proposed scheme includes provision of new bus stops on the Dowally to Kindallachan Side Road at Dowally and south of Kindallachan, enhancing the bus service provisions on the side road network (refer to Chapter 9: People and Communities – All Travellers).

**Planning Applications**

- 8.4.27 Five extant planning applications were identified within the study area, as outlined in Table 8.14 and illustrated on Figure 8.1. PA04 would be subject to 0.21ha loss of land as a result of the proposed scheme, which will be from land owned by the Scottish Ministers across which the applicant has a right of access. Access and rights of access will be maintained as part of the proposed scheme. The loss of land is not considered to be significant as it is not expected to interfere with its proposed use as additional staff accommodation and an office at House of Bruar Mail order Warehouse. Noise levels are anticipated to decrease for PA04 resulting in a beneficial impact on amenity. For further details, refer to Appendix A17.4 (Noise Impacts on Committed Developments).
- 8.4.28 No impacts are predicted on planning applications PA01 to PA03 and PA05.

**Agricultural, Forestry and Sporting Interests**

- 8.4.29 Table 8.23 provides a summary of the potential impact significance, in the absence of mitigation, for six agricultural, forestry and sporting interests affected by the proposed scheme.

**Table 8.23: Significance of potential impacts on agricultural, forestry and sporting interests (unmitigated)**

Type	Substantial	Moderate/ Substantial	Moderate	Slight/ Moderate	Slight	Negligible/ Slight	Negligible
Agriculture, Forestry and Sporting Interests	2	0	0	2	2	0	0

- 8.4.30 The potential impacts for each interest are detailed within Appendix A8.4 (Agricultural, Forestry and Sporting Interests: Pre- and Post-Mitigation Impacts) and are summarised for each activity below.

Land-take from Agricultural, Forestry and Sporting Land

- 8.4.31 The total land lost from six agricultural, forestry and sporting interests equates to approximately 61.88ha. Of this, 5.52ha is classed as prime agricultural land, 27.98ha is classed as non-prime agricultural land, 23.45ha classed as forestry and 4.93ha as other land. The proposed scheme is expected to directly impact 35 agricultural fields and 26 parcels of forestry. Thirteen land parcels (21% of all fields and forestry compartments) would be lost.
- 8.4.32 Agricultural machinery and vehicles operated by Robert Laird and accessing Dowally Farm would use the left-in left-out Guay to Kindallachan Side Road Junction (ch5790) for journeys originating to the north of the property. This would result in an increased journey distance of 0.2km (refer to Figure 8.4i). To access the property for journeys originating to the south of the property, vehicle travellers would be required to use the Dowally Farm Access (ch4820). This would result in an increased journey distance of 1.4km (refer to Figure 8.4i). Vehicle travellers intending to travel south from the property using the proposed scheme would be required to drive northwards to the Kindallachan Direct Access at ch5800 via the Guay South Overbridge at ch4700. This would result in an increased journey distance of 3.4km (refer to Figure 8.3l). Vehicle travellers intending to travel north from the property using the proposed scheme would experience an increase in journey distance of 0.1km. These changes in journey distance form part of the assessment of potential impacts on the business of Robert Laird which has been assessed to be of **Substantial** significance as shown in Table 8.24.

- 8.4.33 Dalmarnock Fishing Beat currently has access to the existing A9 at two locations at which they have two Fishing Bothies, corresponding with ch1020 and ch2760 of the proposed scheme. As a result of the proposed scheme these accesses would be replaced by left-in left-out accesses. Users of the fishing beat travelling north between each bothy would not experience a change in journey distance. However, to travel from Fishing Bothy 2 (northernmost) to Fishing Bothy 1 (southernmost), fishermen and ghillies would require to travel north and use the Guay South Overbridge, the left-in left-out access on the southbound carriageway at ch5800 (Kindallachan Direct Access) and then travel south to the A9 Southern Tie-in Interim Roundabout before doubling back using the northbound carriageway to the Fishing Bothy 1 access track. This would result in an increased journey distance of 7.3km (as shown on Figure 8.3m). This increased journey distance is assessed as a **Substantial** significance potential impact.
- 8.4.34 There are significant potential impacts (i.e. **Moderate** or above) on two agricultural, forestry and sporting land interests. These impacts are described in Table 8.24, and generally relate to loss of land, loss of access and disruption to fishing activities.

**Table 8.24: Description of significant impacts on agricultural interests**

Land Interest	Description of potential impacts
Dalmarnock Fishing Beat	<ul style="list-style-type: none"> <li>No direct loss of land.</li> <li>Direct access to existing A9 replaced with left-in left-out access at ch1020 and ch2760 resulting in additional journey distance when travelling south (7.3km).</li> <li>Significance assessed as Substantial.</li> </ul>
Dowally, Guay and Haugh of Tulliemet Farms: Robert Laird (Ref. D)	<ul style="list-style-type: none"> <li>Loss of 31.51ha of which 5.15ha is LCA Class 3.1, 0.80ha is LCA Class 3.2, 17.76ha is LCA Class 5.2, 1.12ha is LCA Class 5.3, 0.22ha is LCA Class 6.1, 0.23ha is LCA Class 6.3, 3.43ha is woodland and 2.80ha is other land.</li> <li>23 fields and four woodland parcels affected.</li> <li>Land-take from fields currently providing refuge for livestock during flood events.</li> <li>Loss of boundary features and disruption to field drainage system.</li> <li>Demolition of Guay Cattle Shed.</li> <li>Change in access to Dowally Farm, loss of access to Guay Farm Dutch barn, change in access to Fishing Hut and change of access to Westhaugh of Tulliemet.</li> <li>Increased journey distance when travelling from the north and south to Dowally Farm (0.2km and 1.4km, respectively).</li> <li>Increased journey distance when travelling north and south from Dowally Farm (0.1km and 3.4km, respectively).</li> <li>Increased journey distance when travelling from the north and south to Westhaugh of Tulliemet (6.4km and &lt;0.1km respectively).</li> <li>Increased journey distance when travelling to the north and south from Westhaugh of Tulliemet (0.2km and 3.6km respectively). Significance assessed as Substantial.</li> </ul>

Windthrow Risk

- 8.4.35 The windthrow assessment using ForestGALES has indicated that, following creation of a new exposed (brown) edge and wider gap arising from tree felling within the CPO, the critical wind speeds required to result in damage are reduced. However, the windthrow risk (WDRS) is unchanged, at Low (not significant) for all assessed coupes (refer to Appendix A8.3 Forestry Survey).

**8.5 Mitigation**

- 8.5.1 This chapter makes reference to overarching standard measures applicable across A9 dualling projects ('SMC' mitigation item references), and also to project-specific measures ('P03' mitigation item references). Those that specifically relate to community and private assets are assigned a 'CP' reference.
- 8.5.2 Mitigation measures for the proposed scheme in relation to community and private assets are detailed below and take into account best practice, legislation, guidance and professional experience.
- 8.5.3 Where the proposed scheme results in the loss of land, it is assumed landowners will be compensated financially for their loss subject to a valid claim and assessment of compensation by the Valuation Office 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 therefore unknown at this stage of the project. As such, and as noted in paragraph 8.2.33 and 8.2.64, any potential compensation payments were not considered as mitigation.

**Embedded Mitigation**

- 8.5.4 The DMRB Stage 3 design process has avoided or reduced many potential impacts by reducing land-take and providing alternative access arrangements wherever possible.
- 8.5.5 The DMRB Stage 3 design includes measures to provide access to residential land and property as well as agricultural, forestry and sporting interests, 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.
- 8.5.6 The revised access provision forming part of the proposed scheme is detailed in Table 5.2 of Chapter 5 (The Proposed Scheme). In addition to these access arrangements, the following accesses to agricultural fields and fishing rights have been provided as part of the proposed scheme:
  - Dalmarnock Fishing Beat access to Fishing Bothy 1 (ch1000);
  - Dalmarnock Fishing Beat access to Fishing Bothy 2 (ch2770);
  - Dowally Farm access (ch4820); and
  - Westhaugh of Tulliemet access (ch7620).
- 8.5.7 The DMRB Stage 3 design has also reduced land-take through iterative design development (Chapter 4: Iterative Design Development). This is in line with Strategic Environmental Design Principle M1 (Appendix A2.1: Strategic Environmental Design Principles).
- 8.5.8 The replacement of Dowally Church car park forms part of the proposed scheme which is detailed in Chapter 5 (The Proposed Scheme). This would also provide a bus turning facility. The replacement car park and bus turning facility is located to the north of the churchyard.
- 8.5.9 Embedded mitigation relating to the alleviation of severance for NMUs across the A9 is described in detail in Chapter 9 (People and Communities - All Travellers) and shown on Figure 9.2. The proposed scheme design includes measures to provide road connections between local settlements and more specifically includes the maintenance of NMU provision between Rotmell and Ballinluig.
- 8.5.10 Replacement bus stops are provided on the main alignment at approximately ch4450 (northbound) and approximately ch5150 (southbound). Embedded mitigation includes NMU access to these community facilities utilising the Guay South Overbridge.

**Standard Mitigation**

- 8.5.11 Standard measures to mitigate potential impacts on community and private assets during construction are set out in Table 8.25. In line with the Strategic Environmental Design Principles S5 and S6, **Mitigation Item SMC-CP8** aims to ensure that soil mitigation measures are fully implemented and soil resources are protected.

**Table 8.25: Standard Mitigation for Community and Private Assets**

Mitigation Item	Description
<b>SMC-CP1</b>	Access to/from residential, commercial and industrial and agricultural, forestry and sporting assets 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.
<b>SMC-CP2</b>	Existing access arrangements to agricultural and forestry land outwith the land made available (LMA) boundary will not be prevented by the construction works during or post construction, unless alternative access is provided.

Mitigation Item	Description
<b>SMC-CP3</b>	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.
<b>SMC-CP4</b>	Notice of intention to commence construction work will be provided to owners and occupiers of agricultural land adjacent to the proposed scheme before works commence.
<b>SMC-CP5</b>	Where practicable, temporary construction compounds that are required outwith the LMA boundary will not be sited on prime agricultural land or on areas of woodland and forestry.
<b>SMC-CP6</b>	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).
<b>SMC-CP7</b>	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.
<b>SMC-CP8</b>	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.
<b>SMC-CP9</b>	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.
<b>SMC-CP10</b>	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.
<b>SMC-CP11</b>	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.
<b>SMC-CP12</b>	LMA that is declared surplus following completion of construction of the proposed scheme (including redundant road pavement and/or access tracks) will be offered back to former owners or their successors in accordance with the Crichton Down Rules.
<b>SMC-CP13</b>	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.
<b>SMC-CP14</b>	Where stands of trees are to be affected an arboricultural and/or windthrow assessment will be undertaken pre-construction by the Contractor. Tree surgery and/or felling will be carried out as necessary to ensure the safety of land and infrastructure.
<b>SMC-CP15</b>	On completion of works, any land required temporarily 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.

### Specific Mitigation

- 8.5.12 In addition to the standard A9 mitigation described above, project-specific measures (**Mitigation Items P03-CP16 to P03-CP21**) as set out in the following section are required to reduce specifically identified potential impacts on community and private assets.

#### Residential Property

- 8.5.13 During construction, there will be temporary disturbance on access to/from some properties adjacent to the proposed scheme and this will be addressed through the standard mitigation items identified above. No further specific mitigation is required.

Commercial and Industrial Property

- 8.5.14 Consideration will be given by Transport Scotland to the replacement of existing roadside signage on the proposed scheme for certain businesses whose access has changed and whose business is particularly dependent upon vehicular movements from the A9 (**Mitigation Item P03-CP16**).
- 8.5.15 A Traffic Sign Strategy has been developed that seeks to rationalise the existing sign provision providing signs where a clear need is identified based on the proposed dualling. The proposed signage design has been incorporated into the DMRB Stage 3 design.
- 8.5.16 In relation to tourist signs it is noted that IAN 144/16 'Directional Signs on Motorway and All-Purpose Trunk Roads Grade Separated Junctions' (Highways England, 2016) states that up to three tourist destinations may be shown where the sign is on a road with a speed limit of 50mph or more, and up to four destinations on lower speed roads. Based on this guidance it will be necessary to potentially reduce the number of destinations shown on certain proposed tourist signs. All currently signed tourist attractions or facilities will need to be assessed in terms of eligibility to establish whether these are included on proposed tourist signs. This assessment will be undertaken in accordance with the criteria set out in 'Trunk Road and Motorway Tourist Signposting Guidance' (Transport Scotland 2016). The assessment of the eligibility of tourist signs will be undertaken prior to commencement of construction to determine the currency of the tourist destinations. Until such time as this assessment is undertaken the existing tourist sign destinations will be incorporated into the DMRB Stage 3 design.

Community Land and Community Facilities

- 8.5.17 During construction, there will be temporary disturbance to the car park for Dowally Church in Dowally. Standard mitigation commitments include measures to ensure access will be maintained throughout the construction period, necessary diversions are signed, and the contractor will liaise with landowner and users of the community facility over the estimated duration and locations of diversions before they are put in place.
- 8.5.18 Where the proposed scheme results in the loss of land, it is assumed landowners will be compensated financially for the loss in accordance with the District Valuer's assessment. Further details of the extent of financial compensation are beyond the scope of this assessment and will be provided by the District Valuer.

Development Land and Planning Applications

- 8.5.19 As there are no significantly affected development land allocations or planning applications, no specific mitigation is required.

Agricultural, Forestry and Sporting Interests

- 8.5.20 Mitigation measures with respect to agricultural, forestry and sporting land interests have been developed with the aim of protecting the agricultural capability of land and soils and the maintenance of the viability of farming units. Land-take requirements (i.e. CPO) have been reduced through the DMRB Stage 3 design and assessment process.
- 8.5.21 Consultation with landowners and tenants is ongoing and it is normal practice for the details of specific accommodation works to continue beyond the EIA process. Agreed accommodation works will be included within the construction contract. Although specific details are unknown at this stage, it is assumed for the purposes of the identifying residual impacts that accommodation works necessary to enable the ongoing operation of agricultural, forestry and sporting interests will be applied.
- 8.5.22 The majority of the proposed standard mitigation commitments relate to measures that ensure provision of access to fields and severed areas, reinstatement of boundary features (fences, hedges and drystone walls) as well as watering points for livestock, and provision of new or reinstated field drainage systems.
- 8.5.23 Project-specific mitigation measures to avoid or reduce potential impacts on agricultural, forestry and sporting activities in specific locations are listed in Table 8.26. Appendix A8.4 (Agriculture, Forestry



and Sporting Land Pre- and Post-Mitigation Impacts) lists the standard and specific mitigation measures as applicable to each affected agricultural, forestry and sporting land interest.

**Table 8.26: Project-specific mitigation for Community and Private Assets**

Mitigation Item	Mitigation Measure
<b>P03-CP17</b>	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, these shall be offered back to the former owner for return to agricultural/forestry use following imposition of appropriate burdens by The Scottish Ministers in accordance with normal procedures (Crichel Down Rules) .
<b>P03-CP18</b>	Where field access points require temporary or permanent alteration as a result of construction, alternative field access will be provided in consultation with the land owner/occupier. Where recessed field access from local roads is identified as being required, this shall be provided.
<b>P03-CP19</b>	Where individual stands of trees and woodland compartments will be affected, and risk of windthrow or damage to root protection areas has been identified as a safety risk to land within the proposed scheme, appropriate mitigation will be applied to address safety risk to land within the proposed scheme. Any felling to create a windfirm edge or stabilise trees will take account of potential ecological, landscape and visual impacts and designed where feasible to maximise ecological, landscape and visual opportunities.
<b>P03-CP20</b>	Where individual stands of trees and woodland compartments will be affected, and where there are no windthrow or landscape/visual issues, a tree protection plan will be prepared and tree felling restricted to that necessary to allow the safe construction and operation of the proposed scheme.
<b>P03-CP21</b>	Tree felling will be avoided where possible in areas of woodland identified as having the potential to be retained for landscape and visual purposes (areas to be retained identified on Figure 13.5), taking cognisance of the tree protection plan and/or windthrow assessment.
<b>P03-CP22</b>	<p>A Soil Resource Plan (SRP) will be prepared for the Compensatory Flood Storage areas where this land has the potential to be returned to agriculture. This will be prepared in accordance with the 'Construction Code of Practice for the Sustainable Use of Soils on Construction Sites' (Defra, 2009). The SRP will be informed by pre-construction soil surveys, soil nutrient and texture analysis and Land Capability Classification for Agriculture in accordance with MLURI Land Capability Classification or Agriculture guidelines (MLURI 1991). The SRP will:</p> <ul style="list-style-type: none"> <li>• identify, describe and record the soil resources and LCA Class of land that will be disturbed by construction activities;</li> <li>• identify the volumes of the different types of soil resources that will be stripped, stored and re-used in the construction of the Compensatory Flood Storage areas;</li> <li>• define the methods to be employed in stripping, handling, storing and replacing soils and the moisture conditions under which soils will be moved;</li> <li>• specify the volumes of the different types of soil resources that will be disturbed and re-used to construct the Compensatory Flood Storage areas and identify the volumes and use of soil resources surplus to requirements.</li> </ul> <p>The SRP will provide the factual basis for the specification of contracts for works involving the restoration of land to agricultural and other land uses, and provide the target LCA class to be achieved.</p> <p>The SRP will include the following (where applicable):</p> <ul style="list-style-type: none"> <li>• maps showing the LCA grade;</li> <li>• maps showing topsoil and upper and lower subsoil types and thicknesses and volumes;</li> <li>• maps showing the areas to be stripped and those left in-situ;</li> <li>• schedules of volumes for each material, soil audits based on the thicknesses, textures and volumes of soils to be stripped, volumes of soils to be separately stored;</li> <li>• specification of the thicknesses of topsoils and subsoils in reinstated soil profiles for return to each Compensatory Flood Storage area and the identification of any surpluses or shortages; and</li> <li>• methods for stripping, stockpiling, reinstating and ameliorating the soils.</li> </ul>

## 8.6 Residual Impacts

### Residential, Commercial and Industrial Property

8.6.1 Residual impacts for residential, commercial and industrial property are presented in Table 8.27. All residual impacts are adverse unless otherwise stated.

**Table 8.27: Residual impacts of residential, commercial and industrial property**

Receptor	Impact	Mitigation Item	Significance of Residual Impact		
			Vehicle Access		Land-take
			To the A9 from the properties	From the A9 to the properties	
<b>Residential</b>					
Woodlands and Ledpetty Lodge	Direct access to existing A9 replaced with left-in left-out access resulting in additional journey distance when travelling north (3.4km) and south (3.3km) from the properties.	<b>SMC-CP1</b>	North: <b>Moderate</b> South: <b>Moderate</b>	No impact	No impact
Warren Lodge	Direct access to existing A9 replaced with left-in left-out access resulting in additional journey distance when travelling north (3.4km) and south (2.8km) from the property.	<b>SMC-CP1</b>	North: <b>Moderate</b> South: <b>Moderate</b>	No impact	No impact
St Colmes	Direct access to existing A9 replaced with left-in left-out access resulting in additional journey distance when travelling north (5.1km) and south (<0.1km) from the property.	<b>SMC-CP1</b>	North: <b>Substantial</b> South: Negligible	No impact	No impact
Rotmell Cottages (4 residential properties)	Direct access to existing A9 replaced with left-in left-out access resulting in additional journey distance when travelling north (5.1km) and south (<0.1km) from the properties.	<b>SMC-CP1</b>	North: <b>Substantial</b> South: Negligible	No impact	No impact
Properties at Dowally (11 residential properties)	Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling north (0.2km) and south (3.6km) from the properties. Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling from the north (0.2km) and south (1.7km) to the properties.	<b>SMC-CP1</b>	North: Negligible South: <b>Moderate</b>	North: Negligible South: <b>Moderate</b>	No impact
1 Dowally Cottage	Partial loss of garden from main alignment (0.01ha). Access – as above for properties at Dowally.	<b>SMC-CP1</b>			<b>Moderate</b>
Dowally Cottage	Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling north (0.1km) and south (3.5km) from the property. Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling from the north (0.2km) and south (1.4km) to the property.	<b>SMC-CP1</b>	North: Negligible South: <b>Moderate</b>	North: Negligible South: <b>Moderate</b>	No impact
Balnabeggan	Direct access to existing A9 replaced with left-in left-out access resulting in additional journey distance when travelling north (0.1km) and south (2.4km) from the property. Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling from the north (0.1km) and south (0.4km) to the property.	<b>SMC-CP1</b>	North: Negligible South: <b>Moderate</b>	North: Negligible South: Negligible	No impact
Properties at Guay (14 residential properties)	Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling north (0.6km) and south (1.7km) from the property. Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling from the north (<0.1km) and south (0.4km) to the properties.	<b>SMC-CP1</b>	North: Slight South: <b>Moderate</b>	North: Negligible South: Negligible	No impact

Receptor	Impact	Mitigation Item	Significance of Residual Impact		
			Vehicle Access		Land-take
			To the A9 from the properties	From the A9 to the properties	
Guay Farmhouse	Partial demolition and partial loss of parking area and garden from main alignment and access track (0.36ha). Access – as above for properties at Guay.	<b>SMC-CP1</b>			<b>Substantial</b>
Ballintium	Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling north (0.6km) and south (1.7km) from the property. Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling from the north (<0.1km) and south (0.4km) to the property.	<b>SMC-CP1</b>	North: Slight South: <b>Moderate</b>	North: Negligible South: Negligible	No impact
Properties at Kindallachan (20 residential properties)	Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling north (2.9km) and south (<0.1km) from the properties. Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling from the north (0.5km) and south (0.5km) to the properties.	<b>SMC-CP1</b>	North: <b>Moderate</b> South: Negligible	North: Slight South: Slight	No impact
Croft Croy Properties (No.1 and No.2)	Partial loss of garden from side road (0.22ha). Changes to access – as above for properties at Kindallachan.	<b>SMC-CP1</b>			<b>Moderate</b>
Croftnascallaig	Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling north (2.9km) and south (<0.1km) from the property. Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling from the north (0.5km) and south (0.5km) to the property.	<b>SMC-CP1</b>	North: <b>Moderate</b> South: Negligible	North: Slight South: Slight	No impact
Haug of Kilmorich	Partial loss of garden from main alignment and side road (0.01ha). Direct access to existing A9 replaced with left-in left-out access resulting in additional journey distance when travelling south (4.8km) from the property. Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling from the north (5.3km) and south (0.3km) to the property.	<b>SMC-CP1</b>	North: No impact South: <b>Moderate</b>	North: <b>Substantial</b> South: Negligible	Slight
Haug Cottages	Partial loss of garden from main alignment (0.01ha). Direct access stopped up and an alternative left-in left-out access provided resulting in a reduced journey distance when travelling north from the property (0.1km) and an additional journey distance when travelling south from the property (3.9km). Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling from the north (6.1km) and south (0.2km) to the property.	<b>SMC-CP1</b>	North: Negligible (beneficial) South: <b>Moderate</b>	North: <b>Substantial</b> South: Negligible	Slight
Westhaugh of Tulliemet	Direct access stopped up and an alternative left-in left-out access provided resulting in	<b>SMC-CP1</b>	North: Negligible	North: <b>Substantial</b>	No impact

Receptor	Impact	Mitigation Item	Significance of Residual Impact		
			Vehicle Access		Land-take
			To the A9 from the properties	From the A9 to the properties	
	additional journey distance when travelling north (0.2km) and south (3.6km) from the property. Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling from the north (6.4km) and south (<0.1km) to the property.		South: <b>Moderate</b>	South: Negligible	
<b>Commercial and Industrial</b>					
Network Rail	Partial loss of land from main alignment (0.24ha).	<b>SMC-CP1</b>	No impact	No impact	Slight
PKC	Partial loss of land from main alignment (0.19ha).	<b>SMC-CP1</b>	No impact	No impact	Slight
Dowally Chalet and Caravan Park	Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling north (0.1km) and south (3.5km) from the property. Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling from the north (0.2km) and south (1.4km) to the property.	<b>SMC-CP1</b> <b>SMC-CP2</b>	North: Negligible South: <b>Moderate</b>	North: Negligible South: <b>Moderate</b>	No impact
R.A. Laird Contractors Ltd	Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling north (0.1km) and south (3.5km) from the property. Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling from the north (0.2km) and south (1.4km) to the property.	<b>SMC-CP1</b> <b>SMC-CP2</b>	North: Negligible South: <b>Moderate</b>	North: Negligible South: <b>Moderate</b>	No impact
Dowally Craft Centre	Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling north (0.1km) and south (2.4km) from the property. Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling from the north (0.1km) and south (0.4km) to the property.	<b>SMC-CP1</b> <b>SMC-CP2</b>	North: Negligible South: <b>Moderate</b>	North: Negligible South: Negligible	No impact
Tayview Lodges	Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling north (0.6km) and south (1.7km) from the property. Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling from the north (<0.1km) and south (0.4km) to the property.	<b>SMC-CP1</b> <b>SMC-CP2</b>	North: Slight South: <b>Moderate</b>	North: Negligible South: Negligible	No impact
Alex Butter Landscaping	Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling north (2.9km) and south (<0.1km) from the property. Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling from the north (0.5km) and south (0.5km) to	<b>SMC-CP1</b> <b>SMC-CP2</b>	North: <b>Moderate</b> South: Negligible	North: Slight South: Slight	No impact

Receptor	Impact	Mitigation Item	Significance of Residual Impact		
			Vehicle Access		Land-take
			To the A9 from the properties	From the A9 to the properties	
	the property.				
Cuil-an-Duin Country House	Partial loss of woodland from main alignment (1.49ha). Change in alignment of side road to access the property.	<b>SMC-CP1</b> <b>SMC-CP2</b>	No impact	No impact	<b>Moderate</b>
House of Bruar Mail Order Warehouse	Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling north (0.1km) and travelling south (3.6km) from the property. Direct access stopped up and an alternative left-in left-out access provided resulting in additional journey distance when travelling from the north (6.4km) and south (<0.1km) to the property.	<b>SMC-CP1</b> <b>SMC-CP2</b>	North: Negligible South: <b>Moderate</b>	North: <b>Substantial</b> South: Negligible	No impact

Likely Future Impacts on Commercial Business Viability

- 8.6.2 Cuil-an-Duin Country House would be affected by permanent land-take (1.49ha of forestry) and temporary disruption to access during construction from the realignment of the Cuil-an-Duin access road. The amenity of the property would also be affected during construction due to noise and visual change. These construction impacts would be temporary and may affect the visitor experience during the construction period. The permanent land-take impacts taking into account both the construction disturbance and the permanent land-take, it is anticipated that the business will still be able to continue to operate, therefore it is assessed that there would be no significant impact on likely future business viability.
- 8.6.3 Network Rail would be affected by land-take (0.24ha) which would occur due to the Network Rail Access Track, working space required for the Kindallachan Burn underbridge as well as the underpass crossing the A9 and four drainage outfalls at approximately ch4850, ch5500, ch7040 and ch8200 linking to the River Tay and one access track at ch7050. At two of these locations, underground drilling would be required resulting in disturbance during construction. This temporary disturbance is expected to have no impact on Network Rail operations.
- 8.6.4 Impacts of the proposed scheme on other commercial businesses relate to access only and consequent increase in journey distance to/from the property. Significant change in journey distance is experienced by R.A. Laird Contractors Ltd, Dowally Chalet and Caravan Park, and Alex Butter Landscaping.
- 8.6.5 Access to the R.A. Laird Contractors Ltd business premises at Dowally Farm (registered office and workshop), would be altered, creating diversions and increased journey distances particularly for journeys from the premises to the south (3.5km). Journeys from the property to the south would be increased by 1.4km. The increase in journey distance (and by proxy time and cost) is expected to have no significant impact on likely future business viability.
- 8.6.6 Similarly, the change in access arrangements to Dowally Chalet and Caravan Park (increase in journey distances the same as R.A. Laird Contractors Ltd) are expected to have no significant impact on likely future business viability. The access arrangements to the Dowally Chalet and Caravan Park provided by the proposed scheme (through Dowally Farm, refer to Figure 8.3) will provide a width limit of 14 feet (4.3m). This will allow post scheme replacement of existing caravans with a width up to 14 feet (new caravans are generally 12 feet (3.7m) in width). Should replacement of caravans be required in the future and width be a limiting factor in their delivery to site, alternative accommodation could be provided as replacement, for example chalets or lodges either transported to site or built in-situ. This width limitation to the site is not expected to have a significant impact on likely future business viability.
- 8.6.7 In the case of Alex Butter Landscaping, an increase in journey distance is expected for journeys to the north (2.9km). The increase in journey distance (and by proxy time and cost) is expected to have no significant impact on likely future business viability.

**Community Land and Community Facilities**

- 8.6.8 Dowally Church car park is subject to 0.04ha of land-take (66% of the total car park area). A replacement car park is provided as part of the proposed scheme design, which would also provide a bus turning facility. The replacement car park and bus turning facility is located to the north of the churchyard. During construction it is expected that the amenity of the facility would be affected (access arrangements, noise and visual impacts) and therefore residual impact during construction and operation is assessed as **Moderate** and Slight/Moderate, respectively.
- 8.6.9 The provision of bus stops on the main alignment between Dowally and Guay is expected to result in an increase in journey distance for pedestrians when compared with the location of the existing bus stops near Kindallachan. The residual impact is assessed as **Substantial** for pedestrians (vulnerable groups and non-vulnerable groups) for residents in Kindallachan. The residual impact for pedestrians (vulnerable and non-vulnerable groups) from Dowally to the northbound and southbound bus stop and



from Guay to the southbound bus stop is assessed as **Substantial** (beneficial) due to a decrease in journey distance for pedestrians from these settlements to the bus stops.

- 8.6.10 Mitigation relating to potential impacts on paths is identified in Chapter 9 (People and Communities - All Travellers).

**Agricultural, Forestry and Sporting Land Interests**

- 8.6.11 The residual agricultural and forestry land-take impacts of the proposed scheme are summarised in Table 8.28. The areas presented in the table are based on the Draft CPO and represent the total agricultural, forestry and sporting land-take from the proposed scheme.

- 8.6.12 As noted in paragraph 8.4.31, 61.88ha of agricultural, forestry and sporting land would be required for the proposed scheme and of this, 57.74ha would be permanently acquired and 4.16ha would be subject to a servitude right. Of the total land-take, 5.52ha is classed as prime agricultural land, 27.98ha is classed as non-prime agricultural land, 23.45ha classed as forestry and 4.93ha is from land not in agricultural use.

**Table 8.28: Residual land-take of agricultural, forestry and sporting land interests**

	Prime Agricultural Land (ha)			Non-Prime Agricultural Land (ha)			Forestry (ha)	Sporting (ha)	Other Land	Totals (ha)
	LCA Class			LCA Class						
	1	2	3.1	3.2	4	5-7				
Land-take in agricultural, forestry and sporting use*	-	-	5.52	1.94	-	26.04	23.45**	-	4.93	61.88
Land potentially to be returned to agriculture/ retained as forestry	-	-	2.54	0.55	-	9.93	8.94	-	1.97	23.93
Net agricultural, forestry and sporting land-take	-	-	2.98	1.39	-	16.11	14.51	-	2.96	37.95

\* Permanently acquired and subject to a servitude right

\*\* Of the land-take from forestry, 1.10ha is of unknown landownership

- 8.6.13 Within the Draft CPO, 25.76ha of agricultural land and forestry has been identified as having the potential to be returned to agriculture and retained as forestry following completion of construction works. This is primarily through return of areas of land required for construction of the proposed scheme and for compensatory flood storage (refer to Appendix A8.4: Agriculture, Forestry and Sporting Pre- and Post-Mitigation Impacts).

- 8.6.14 When assessing likely future farm business viability, a worst-case scenario is assumed whereby residual impacts exclude any reduction in land-take associated with servitude rights, return to agriculture, retention of forestry land, and land returned subject to burdens.

- 8.6.15 The potential for return of 2.05ha to agriculture through return of land required for construction and 10.82ha of compensatory flood storage at Dowally, Guay and Haugh of Tulliemet Farms: Robert Laird has been identified. In addition, land which is subject to a servitude right (3.59ha) would also have the potential to continue to be used for agriculture. There is similarly the potential to return 0.24ha of flood storage area at Mains of Airleywight to agriculture in addition to the continued use of land subject to a servitude right (0.15ha) for agriculture.

- 8.6.16 Atholl Estates would have 0.40ha of land subject to a servitude right and Dalguise Fishings would similarly have 0.02ha of land subject to a servitude right. This land would have the potential for continued use for agricultural, forestry and sporting purposes.

- 8.6.17 The return of any agricultural land would be subject to appropriate rights and burdens (restriction on development) set by Transport Scotland. The return of agricultural land subject to rights and burdens would not change the significance of impact on the land interests reported in this chapter.
- 8.6.18 Forestry land identified as having the potential to be retained is located throughout the proposed scheme and is illustrated on Figure 13.5 (Chapter 13: Landscape). The potential for retaining 6.67ha of forestry is anticipated at Atholl Estate (The Bruar Trust).
- 8.6.19 The total area of agricultural land-take would reduce to approximately 20.48ha, forestry lost to 14.51ha and other land lost to 2.96ha, as shown in Table 18.28. The potential total net agricultural, forestry and sporting land-take would be approximately 37.95ha.
- 8.6.20 The residual impacts are summarised in Table 8.29 and further details are provided in Appendix A8.4 (Agriculture, Forestry and Sporting Land Pre- and Post-Mitigation Impacts) for each affected agricultural, forestry and sporting land interest.

**Table 8.29: Residual impacts on agricultural, forestry and sporting land interests**

Type	Substantial	Moderate/ Substantial	Moderate	Slight/ Moderate	Slight	Negligible/ Slight	Negligible
Agriculture, Forestry and Sporting Interests	2	0	0	2	2	0	0

Likely Future Impacts on Farm Business Viability

- 8.6.21 Those agricultural, forestry and sporting interests assessed with a residual impact significance below Moderate, (i.e. not significant) were assumed to remain viable. Any farm businesses with adverse residual impacts of **Moderate** or higher significance, were further reviewed to determine whether or not the businesses would remain viable. Two agricultural, forestry and sporting interests have been assessed as having residual impacts of Moderate or higher significance.
- 8.6.22 Dowally, Guay and Haugh of Tulliemet Farms: Robert Laird has been assessed as having residual impacts of **Substantial** significance. These impacts arise from a combination of: land-take (9% of total farmed area from 21 fields and four woodland parcels); land-take from fields currently providing refuge for livestock during flood events; loss of boundary features with severance of one field into two parcels and creation of some awkward field shapes and sizes in others; disruption to field drainage systems; demolition of Guay Cattle Shed and cattle handling area; change in access to Dutch barn; changes in access to Dowally Farm, Guay Farm and Westhaugh of Tulliemet and increased journey distance for Dowally Farm (3.5km for journeys to the south and 1.4km for journeys from the south) and for Westhaugh of Tulliemet (3.6km for journeys to the south and 6.4km for journeys from the north).
- 8.6.23 Mitigation ensures that access to farm buildings, farm infrastructure and fields is maintained (albeit changed) and fences, drainage and livestock watering systems are restored. Mitigation does not include the provision of alternative cattle accommodation for that lost through the demolition of Guay Cattle Shed, nor does it include financial compensation. The residual impact of **Substantial** significance reflects that impacts on the farm business cannot be fully mitigated.
- 8.6.24 The business would be eligible to make a claim for compensation taking into account the value of any property lost and the value of related effects (severance, injurious affection and disturbance). The business may take action to mitigate its losses through, for example, reorganisation of its operations and potentially farming systems. The reduced agricultural area will result in lower overall productivity, particularly but not exclusively from the arable enterprise and the loss of the other land and demolition of Guay Cattle Shed will affect the livestock enterprise. It is accepted that this may necessitate a change in enterprise scale, particularly for the cattle and crop enterprises, and it may also require more generic operational reorganisation. This operational reorganisation may include replacement cattle accommodation and cattle handling facilities, some change in use of fields (such as grazing by livestock rather than crop production) and changes in rotational management (crop and grass).

- 8.6.25 Assuming full action is taken by the owner to mitigate losses, these changes in enterprise scale and operational reorganisation would be such that it would be considered likely that the business would be able to continue trading. Although the business is anticipated to reduce in scale, no significant impact on likely future farm business viability is assessed.

Likely Future Impacts on Sporting Business Viability

- 8.6.26 Dalmarnock Fishing Beat has been assessed as having a residual impacts of **Substantial** significance. These impacts arise from disruption to high value salmon fishing activities, through change in access arrangements and increase in journey distance of 7.3km when travelling from Fishing Bothy 2 (north) to Fishing Bothy 1 (south). It has not been possible to mitigate change in access beyond that embedded within the proposed scheme design.
- 8.6.27 The business may take action to mitigate its losses through, for example, reorganisation of the manner in which the two Fishing Bothy huts are managed and utilised. Fishing Bothy 1 is used as a venue for lunch for fisherman using the two sections of the beat. Reorganisation of welfare arrangements and the need/frequency to travel between the two locations may be possible, thus limiting the travel and overall increase in journey distance. Assuming full action is taken by Dalmarnock Fishing Beat to mitigate their losses, these changes in management of the fishings would be considered likely to allow the business to continue trading. Consequently, no significant impact on likely future business viability is assessed.

Cumulative Impacts

- 8.6.28 Atholl Estates is only marginally affected by the proposed scheme (refer to Rotmell Farm in Appendix A8.4: Agriculture, Forestry and Sporting Pre- and Post-Mitigation Impacts) but also has land holdings affected by Project 05 (Killicrankie to Glen Garry) and likely to be affected by Project 02 (Pass of Birnam to Tay Crossing) of the A9 Dualling Programme, and therefore would experience additional land-take and disturbance to agricultural, forestry and sporting operations. Due to the differing stages of projects within the A9 Dualling Programme, these impacts have not yet been fully assessed and defined within a published ES for Project 02 (Pass of Birnam to Tay Crossing). However, based on the cross-project baseline and assessment information currently available and using professional judgement, it is assessed that the cumulative impact on this land interest would not be significant in the context of the EIA Regulations and would not affect likely future viability. Further detail is provided in Chapter 20 (Cumulative Impacts).
- 8.6.29 Mains of Airleywight is only marginally affected by the proposed scheme but also has land holdings affected by Project 01 (Luncarty to Pass of Birnam) of the A9 Dualling Programme. The significance of residual impact was assessed as Negligible for this land interest in Project 01. Construction works for Project 01 have commenced and are expected to be completed prior to commencement of the proposed scheme and so cumulative impacts are not expected.

## **8.7 Statement of Significance**

### **Residential, Commercial and Industrial Property**

- 8.7.1 With the proposed scheme in place, and taking into account mitigation measures as described in Section 8.5 (Mitigation), residual impacts of **Moderate** significance are anticipated as a result of land-take at one group of residential properties (Croft Croy properties), one residential property (1 Dowally Cottage) and one commercial property (Cuil-an-Duin Country House). Residual impacts of **Substantial** significance are anticipated at one residential property (Guay Farmhouse).
- 8.7.2 In addition, significant residual impacts are expected due to changes in journey distance from properties to the A9 at 14 groupings of residential properties (Woodlands and Ledpetty Lodge; Warren Lodge; St Colmes; Rotmell Cottages; properties at Dowally; Dowally Cottage; Balnabeggan; properties at Guay; Ballintium; properties at Kindallachan; Croftnascallaig; Haugh of Kilmorich; Haugh Cottages; and Westhaugh of Tulliemet) and six commercial/industrial properties (Dowally Craft Centre, Dowally Chalet and Caravan Park, R.A. Laird Contractors Ltd, Tayview Lodges, Alex Butter Landscaping and House of Bruar Mail Order Warehouse) as a result of the proposed scheme.

- 8.7.3 Similarly, significant residual impacts are expected due to changes in journey distance to properties from the A9 at five groupings of residential properties (properties at Dowally; Dowally Cottage; Haugh of Kilmorich; Haugh Cottages; and Westhaugh of Tulliemet) and three commercial/industrial properties (Dowally Chalet and Caravan Park, R.A. Laird Contractors Ltd, and House of Bruar Mail Order Warehouse) as a result of the proposed scheme.

#### **Community Land and Community Facilities**

- 8.7.4 During construction of the proposed scheme, and taking into account mitigation measures as described in Section 8.5 (Mitigation), significant residual impacts are only anticipated at one community facility (Dowally Church car park) as a result of land-take and change in access during construction.

The provision of bus stops along the main alignment between Dowally and Guay are expected to result in an increased journey distance from the existing bus stops located in Kindallachan. A significant residual impact is anticipated for pedestrians (vulnerable groups and non-vulnerable groups) travelling from Kindallachan to the relocated northbound and southbound bus stops. A significant beneficial impact is anticipated for pedestrians (vulnerable and non-vulnerable groups) travelling from Dowally to the northbound and southbound bus stops and from Guay to the southbound bus stop.

#### **Agricultural, Forestry and Sporting Interests**

- 8.7.5 With the proposed scheme in place, and taking into account mitigation measures as described in Section 8.5 (Mitigation), residual impacts of **Substantial** significance are anticipated at one agricultural, forestry and sporting land interest (Dowally, Guay and Haugh of Tulliemet Farms: Robert Laird) and residual impacts of **Substantial** significance at one sporting land interest (Dalmarnock Fishing Beat).
- 8.7.6 No other impacts are considered to be significant in the context of the EIA Regulations.

## **8.8 References**

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