

8 People and Communities – Community and Private Assets

This chapter considers the 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, and areas supporting agriculture, forestry and sporting activity. The main settlements in the study area are Killiecrankie, Blair Atholl, Bruar, Pitagowan Struan, Calvine and Old Struan.

The development of the proposed scheme design has sought to avoid impacts on community and private assets, where possible. 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 one planning application;
- 141ha of agricultural land;
- 37ha of woodland and forestry;
- less than 1ha of sporting land; and
- 20ha of other land.

Residual impacts of Moderate significance are anticipated as a result of land-take at one residential property (1 Essangal Cottages).

Impacts of the proposed scheme for residential, commercial and industrial properties result from changes to the current access arrangement to/from properties. Significant residual impacts in terms of vehicular access for six groupings of residential properties have been identified (Clunebeg, Glackmore, Garrybank, Invervack and Balnastuartach, Tomban Farmhouse and Tomchitchen) and one industrial property (Shierglas Quarry). For Shierglas Quarry the impact for one direction of travel impact is assessed as significant (beneficial) and the other is significant (adverse), and the overall impact on business viability has been assessed as not significant.

No significant impacts on community land, community facilities or community severance have been identified. There are not expected to be any significant impacts on planning applications or development land.

Significant residual impacts have been identified on six agricultural, forestry and sporting interests (Coille Essan, Easy Heat Systems (construction only), Land at Glackmore (construction only), House of Urrard, Pitaldonich Farm and Balnastuartach Farm) as a result of permanent land-take, loss of boundary features, disruption to field drainage system and/or disturbance to sporting activity. A significant Adverse impact on likely future farm business viability is assessed at Balnastuartach Farm as a result of permanent land-take. The remaining nine 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 approximately 27ha of land to agriculture and retain approximately 8ha 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 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 'Effects on 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;
 - Appendix A8.4: Development Land Assessment;
 - Appendix A8.5: Agriculture, Forestry and Sporting Sensitivity Assessment; and
 - Appendix A8.6: Agriculture, Forestry and Sporting Interests - 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 centre line of the proposed scheme.

Baseline Conditions

- 8.2.3 Baseline receptors considered within this assessment include:
- local communities;
 - residential, commercial (including tourist attractions) and industrial properties;
 - 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 Local Development Plans (LDPs). 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 Cairngorms National Park Local Development Plan (CNPLDP) (CNPA, 2015) as well as relevant and approved planning applications lodged with PKC;
 - agricultural land - land used for the practice of cultivation 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 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 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, 2013);
- review of digital Ordnance Survey (OS) maps;
- consultation with the ESG, Environmental Forum, landowners and tenants (refer to Chapter 7: Consultation and Scoping);
- interrogation of the Jacobs Geographical Information Systems (GIS) database;
- review of census data (Statistics, 2016);
- VisitScotland website;
- Perth & Kinross Council Local Development Plan (PKC, 2014);
- Perth & Kinross Council Core Paths Plan (PKC, 2012);
- Cairngorms National Park Local Development Plan (CNPA, 2015);
- 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 August 2016 to May 2017 in relation to land ownership;
- review of relevant planning applications on the PKC 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 July 2016 and October 2017 where necessary to identify the potential 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 CNPLDP (2015) is included within the assessment. There is no open space identified in the PKC LDP.

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 Development land was also identified using development land allocations set out in the CNPLDP (2015).
- 8.2.11 Consultation with PKC was undertaken to identify consented, or yet to be determined, planning applications between 01 October 2014 and valid up to 30 September 2017 (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.
- 8.2.12 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.
- 8.2.13 Applications approved prior to 01 October 2014 (see paragraph 8.2.11) 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 a planning application prior to 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

- 8.2.14 Agricultural business units were defined on the basis of their operation and, in some instances, included areas of land under different ownership.
- 8.2.15 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.
- 8.2.16 Structured interviews were held between October 2016 and December 2016 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.
- 8.2.17 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 8.16 for each potentially affected agricultural, forestry and sporting land interest.

- 8.2.18 Forestry site surveys of the potentially affected woodland coupes within the study area were undertaken between December 2016 and February 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

- 8.2.19 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

- 8.2.20 As indicated at paragraph 8.2.6, title searches were undertaken to identify ownership and occupation of land. Where land has not met one of the land use categories (residential, commercial and industrial property; community land and community facilities; development land and planning applications; or agricultural, forestry and sporting interests), it has been assigned as other land. As such, significance of impact has not been determined and land-take only is reported in the potential impacts section (Section 8.4).
- 8.2.21 The EIA Regulations 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

- 8.2.22 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, significant adverse or mixed) 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

- 8.2.23 Land-take is defined as land acquired through the Compulsory Purchase Order (CPO) process to provide sufficient land to construct and operate the proposed scheme including essential mitigation.
- 8.2.24 For the purpose 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 across some land may also be acquired and where this is the case, this land is also included within the land-take assessment.
- 8.2.25 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.
- 8.2.26 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"> Residential or commercial buildings. Property or land used by the community (e.g. schools and community halls). Community land that attracts users nationally (e.g. national parks). Cemeteries.
Medium	<ul style="list-style-type: none"> Residential or commercial land (e.g. gardens). 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).
Low	<ul style="list-style-type: none"> Derelict or unoccupied buildings. Locally used community land (e.g. local parks and playing fields).

8.2.27 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.

8.2.28 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

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

Vehicle Access

8.2.29 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 are altered.

8.2.30 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. 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 as outlined in Table 8.4.

Table 8.4: Impact significance criteria for vehicle access

Significance	Description
Substantial	An increase in journey distance over 5km.
Moderate	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

- 8.2.31 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.
- 8.2.32 A qualitative assessment of impacts on the likely future viability of individual commercial and industrial businesses was undertaken using the following criteria, developed by Jacobs using professional judgement:
- **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.
- 8.2.33 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.
- 8.2.34 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 or as part of the likely future viability assessment for commercial and industrial businesses. This ensured that a worst-case approach was taken.

Community Land and Community Facilities

- 8.2.35 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 8.2.23 to 8.2.30).

Local Communities (Community Severance)

- 8.2.36 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'*.
- 8.2.37 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.

- 8.2.38 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 they may still be deterred from making journeys which require them to negotiate additional roads and/or junctions. Severance of community land, in relation to NMUs, is also considered in Chapter 9 (People and Communities - All Travellers).
- 8.2.39 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
Substantial (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.
Moderate (beneficial)	When existing traffic levels are reduced by between 30% and 60%.	When existing traffic levels are reduced by between 75% and 90%. However, if the existing road substantially bisects a village or small town, the above figures are between 30% and 60%.
Slight (beneficial)	When existing traffic levels are reduced by up to 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.

- 8.2.40 New severance is severance of pedestrians and others from community facilities resulting from the proposed scheme.
- 8.2.41 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’*.
- 8.2.42 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.
- 8.2.43 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.
- 8.2.44 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 the older people, disabled people and children).

- 8.2.45 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.
- 8.2.46 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
Substantial (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"> pedestrian at-grade crossing of a new road carrying >16,000 vehicles Annual Average Daily Traffic (AADT) in the opening year; or 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 >6km for vehicles; or three or more of the hindrances set out under 'Slight' or two or more set out under 'Moderate'.
Moderate (adverse)	When some local residents 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"> pedestrian at-grade crossing of a new road carrying between 8,000 and 16,000 vehicles AADT in the opening year; or 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 >3km and <6km for vehicles; or two of the hindrances set out under 'Slight' applying to single trips.
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"> pedestrian at-grade crossing of a new road carrying <8,000 vehicles AADT in the opening year; or 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 one hindrance (e.g. a new bridge or underpass) would need to be negotiated.

Development Land and Planning Applications

- 8.2.47 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 a road scheme on development land should be assessed. This assessment was based upon the professional judgement of a suitably qualified and experienced specialist.
- 8.2.48 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.
- 8.2.49 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.
- 8.2.50 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 suitability 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.

8.2.51 Mixed impacts includes some adverse and some beneficial factors which have been determined using professional judgement.

8.2.52 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

8.2.53 The proposed scheme may affect on 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.

8.2.54 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.

8.2.55 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"> • Small farm size (<50ha). • Presence of prime quality land (Classes 1, 2 and 3.1). • Conventionally farmed intensive arable cropping or intensive livestock systems (e.g. dairying). • Land of any farm type farmed according to organic or biodynamic standards. • High value commercial sporting activity (e.g. driven grouse shooting or salmon fishing). • 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.

Sensitivity	Characteristics
Medium	<ul style="list-style-type: none"> • Medium farm size (50ha to 150ha). • Presence of land of moderate quality (Classes 3.2 and 4). • Conventionally farmed mixed cropping and livestock systems of moderate intensity. • Moderate value commercial sporting activity (e.g. walked up pheasant shooting). • 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.
Low	<ul style="list-style-type: none"> • Large farm size (>150ha). • Presence of land of low quality (Classes 5, 6 and 7). • Conventionally farmed extensive livestock systems or agricultural land in non-agricultural use. • Low value sporting activity (e.g. rough shooting). • 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. • 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

8.2.56 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 fields 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.

8.2.57 Land-take is calculated based on the land required to construct and operate the proposed scheme including essential mitigation. The assessment also takes into consideration any areas of severed land parcels that would be rendered redundant for future 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).

8.2.58 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.

8.2.59 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	Medium
4	20-33	Medium
5	10-20	High
6	<10	High

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

8.2.61 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

8.2.62 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.

8.2.63 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.

- 8.2.64 A qualitative assessment of impacts on the likely future viability of individual farm businesses was undertaken using the criteria as outlined in paragraphs 8.2.31 to 8.2.34.
- 8.2.65 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 or as part of the likely future viability assessment for agricultural, forestry and sporting businesses. This ensured that a worst-case approach was taken.

Limitations to Assessment

- 8.2.66 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.
- 8.2.67 In assessing the impact of the proposed scheme on a development capacity and the amenity of the 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.
- 8.2.68 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 settlements within and in close proximity to the study area are shown on Figure 8.1. These include:
- Killiecrankie is located close to the south-western extent of the proposed scheme. The settlement is situated approximately 7km from the centre of Pitlochry; a 10-12 minute drive.
 - Aldclune is located approximately 8km from the centre of Pitlochry; a 12-15 minute drive. The settlement is approximately 200m south of the proposed scheme.
 - Blair Atholl is located approximately 12km from the centre of Pitlochry; a 15-20 minute drive. The settlement is situated north of the proposed scheme, on the opposite side of the River Garry.
 - Bruar is situated just off the proposed scheme, adjacent to the B847 which links to the proposed scheme. The settlement is 17km from Pitlochry; a 16-18 minute drive.
 - Pitagowan is located approximately 40m north of the proposed scheme. The settlement is situated approximately 18km from the centre of Pitlochry; a 15-17 minute drive.
 - Calvine is located between the River Garry and the proposed scheme. The settlement is 20km from Pitlochry; a 20-25 minute drive.
 - Struan is situated approximately 250m south of Calvine. The settlement is also 20km from Pitlochry; a 20-25 minute drive.

- Old Struan is located approximately 21km from the centre of Pitlochry; a 22-25 minute drive. The settlement is approximately 500m south of the proposed scheme.

Population and Demographics

- 8.3.3 According to the 2011 Census (Statistics 2016), the population of Perth & Kinross local authority area is 134,949, approximately 2.7% of the population of Scotland.
- 8.3.4 The demographic profile of Perth & Kinross local authority area in comparison to Scotland as a whole is shown in Table 8.10. This demonstrates that 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.)	23,858	20,894	29,418	28,242	20,991	11,546	134,949
	18%	15%	22%	21%	16%	9%	n/a
Scotland Population (No.)	906,882	948,963	1,162,958	976,575	707,766	358,867	5,062,011
	18%	19%	23%	19%	14%	7%	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 indication 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), contrasting with Scotland's national rate of 2.5% (132,460). This suggests that, if used as an indicator of the condition of the economy, that the economy of Pitlochry 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 not available below the local council 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: Business 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. Between Killiecrankie and Glen Garry tourist attractions include the Pass of Killiecrankie where there is a visitor centre which explains about the Jacobite Battle of Killiecrankie that took place in the 17th century and dramatic ‘Soldier’s Leap’. Killiecrankie is a popular area for watersports located on the River Garry. Mountain biking is also a very popular sporting activity within the area, with specialised trails located near Blair Atholl, Glen Bruar and the Gaick Pass. There are two large sporting estates, Urrard Estate and Dalnacardoch Estate, which both offer a mix of stalking, shooting and fishing. Other tourist attractions include Atholl Country Life Museum, Blair Castle and Gardens, Clan Donnachaidh Museum and the House of Bruar. The PKC LDP (PKC 2014) mentions the tourism sector which accounts for 13% of all employment in Perth & Kinross local authority area. The PKC LDP seeks to enhance existing tourism facilities and provision as well as promote scope for additional or improved opportunities for tourism.
- 8.3.11 Some properties within the study area are advertised as hotels, guesthouses, bed and breakfasts and campsites, providing a diverse range of accommodation options to tourists.

Transport Infrastructure

- 8.3.12 There are limited public transport services in the area, however local bus services in the study area are currently operated by Elizabeth Yule (Monday to Saturday) and Stagecoach Perth (Sunday). Long distance bus services are operated by Citylink, National Express and Fisher Tours. The Highland Main Line railway also runs broadly parallel to the existing A9, with a train station in Blair Atholl. 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 Killiecrankie, Aldclune, Blair Atholl, Bruar and Calvine. In addition, there are several small holdings and farm steadings located along the length of the proposed scheme. It is recognised that commercial (home based) businesses are operated from within some residential properties inside the study area. Where this is the case, and as detailed in paragraph 8.2.4, these community and private assets have been allocated to one category based on their primary or future land use: residential properties.

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 and include:

- Network Rail (Highland Main Line railway);
- Highland Fling Bungee;
- Squirrel Cottage self-catering accommodation;
- Secret Bothy self-catering accommodation;
- Killiecrankie House Hotel;
- Killiecrankie Water Treatment Works;
- Killiecrankie Visitor Centre;
- Explore Scotland;
- Holiday Lodges at Old Faskally;
- Old Faskally Apartment;
- Home from Home Perthshire;
- Thebe Mor Creative Studio;
- The Hayloft and The Barn Bed & Breakfast;
- Lettoch Holiday Lets;
- The White Cottage self-catering accommodation;
- Shierglas Quarry;
- River Tilt Caravan Park;
- Blair Atholl Golf Club;
- Blair Atholl Water Treatment Works;
- Blair Atholl Watermill and Café;
- Blair Castle Caravan Park;
- Millside Cottage self-catering accommodation;
- Atholl Arms Hotel;
- Atholl Premier Stores;
- Alex McIntyre Joinery;
- Sitech Racing;
- Dental A2Z Ltd;
- Farthings at Home;

- Saw Mill west of Blair Atholl;
- Blair Castle;
- The Old Manse of Blair (wedding business);
- The House of Bruar (including shops, gallery and restaurant);
- Clan Donnachaidh Centre, Museum and Gift Shop;
- Bruar Hydro Scheme;
- The Struan Inn; and
- Calvine Caravan Park.

8.3.15 The number and percentage of different types of businesses in Perth & Kinross and Scotland are shown in Table 8.13. The data show that compared to Scotland as a whole, Perth & Kinross has a larger rate of primary industry businesses, likely to be farms, and a lower rate in the professional, scientific and technical sector.

Table 8.13: Business profile (2014)

Business Sector	Perth & Kinross		Scotland	
	Businesses	% of Total Businesses	Businesses	% of Total Businesses
Total business sites	6,875	-	197,925	-
Arts, entertainment and recreation and other services	505	7.3%	15,195	7.7%
Construction	765	11.1%	19,120	9.7%
Education, human health and social work	370	5.4%	12,115	6.1%
Financial, insurance and real estate	310	4.5%	9,695	4.9%
Manufacturing	295	4.3%	9,405	4.6%
Primary	1,095	15.9%	19,580	9.9%
Professional, scientific and technical	795	11.1%	31,975	16.2%
Accommodation and food services	580	8.4%	15,895	8.0%
Transport, storage, information and communication	435	6.3%	15,760	8.0%
Wholesale, retail and repairs	1,260	18.3%	36,365	18.4%
Administration and support services	465	6.8%	12,825	6.5%

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; allotments; cemeteries and playing fields. The main areas of community land identified within the study area are provided in Figure 8.1 and detailed below:

- all public parks;
- River Garry;
- Pass of Killiecrankie (including The Soldier's Leap, the Trooper's Den and surrounding woodlands);
- Killiecrankie Battlefield Memorial Field;
- Glackmore woodlands;
- River Tilt;
- Black Island Woodland;
- Baluain Wood;
- The Falls of Bruar;
- Errochty Water;

- Calvine woodlands;
- Clunes Wood; and
- Dalnamein Forest.

8.3.17 A number of open spaces and land which contribute to the setting of Blair Atholl are present within the study area and are protected from development (CNPA, 2015). Open Space as set out by CNPLDP is shown on Figure 8.1.

8.3.18 The Falls of Bruar and Blair Castle Gardens and Designed Landscapes (GDLs) are situated within the study area and recorded on Historic Environment Scotland’s Inventory of GDL’s in Scotland (Historic Scotland, 2015). Potential impacts on Falls of Bruar and Blair Castle GDL’s are assessed in Chapter 13 (Landscape) and Chapter 15 (Cultural Heritage).

8.3.19 It should be noted that the impacts of the proposed scheme on woodlands which permit public access are reported under the forestry land section, 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.

8.3.20 Stretches of the River Garry are used for recreational angling for salmon, trout and grayling. Pitlochry Angling Club manages permit fishing on the Ruan Ruarie fishing beat which is located along the east bank of the River Garry from the footbridge to the north of Garry Bridge (located in the Pass of Killiecrankie) to the confluence with the Allt Girnaig near Killiecrankie.

8.3.21 It should be noted that the impacts of the proposed scheme on fishing beats that permit public access are reported under the sporting land section, as game fishing is considered to be the primary land use.

Community Facilities

8.3.22 Community facilities within the study area include primary schools, health centre, village halls, a church, post office and a railway station. A full list of community facilities is provided in Table 8.14 and their locations are displayed on Figure 8.1. This figure also shows school catchment areas including that for Struan Primary School and Blair Atholl Primary School. Struan Primary School is currently mothballed by PKC and as a result school children are required to attend Blair Atholl Primary School. The whole study area falls within the Pitlochry High School catchment.

8.3.23 There are 16 bus stops within the study area, which are outlined in Chapter 9 (People and Communities - All Travellers).

Table 8.14: Community facilities

Type of Community Facility	Community Facility Name
Educational facility	Struan Primary School (currently mothballed)
	Blair Atholl Primary School
Health centre	Atholl Medical Centre
Recreational/leisure facility	Killiecrankie Village Hall
	Blair Atholl Village Hall
Church	Struan Church
Post Office	Blair Atholl Post Office
Transport service	Blair Atholl Train Station

Development Land and Planning Applications

8.3.24 Two development land allocations and 11 planning applications were identified within the study area.

8.3.25 A summary of the development land and extant planning applications is provided in Appendix A8.4 (Development Land Assessment), with each assigned a development land reference for the purposes of referencing in this assessment (e.g. LA01: Land Allocation or PA01: Planning Application). Where

planning applications are located within areas of development land this is highlighted. The location of development land and planning applications in relation to the proposed scheme is shown Figure 8.1.

Agricultural, Forestry and Sporting Interests

- 8.3.26 The predominant land use in the study area is agriculture, with parcels of forestry and woodland. The land supports a limited range of extensive agricultural systems with livestock production (cattle and sheep) the main farming type.
- 8.3.27 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 quality agricultural land (Classes 1, 2 and 3.1) found within the study area. The Scottish Soil Framework (The 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

- 8.3.28 The predominant land class in the study area is Class 5 (land suited only to grass production or rough grazing). Figure 8.2 shows the distribution of LCA classes in the study area which illustrates that the most productive land (Classes 4.1 and 4.2: primarily grassland with some limited potential for other crops) in the study area is land adjacent to the River Garry at Pitagowan and Calvine and the River Garry valley floor at Blair Atholl. The land at the southern end of the study area around Killiecrankie is categorised as Class 5.2 with Classes 5.1, 5.2 and 5.3 found at Dalreoch and Dalnamein, (northern end of the study area), Clunes Lodge (central section of the study area). All other land falls into LCA Class 6 (severe site, soil or wetness limitations).

Agriculture

- 8.3.29 The range of agricultural activity in the study area is typical of farming types and practices in Scotland; principally upland sheep and suckler beef systems. Arable crops (e.g. spring and winter cereals) are not grown within the study area.
- 8.3.30 Collectively, the 13 agricultural land interests in the study area farm in excess of 60,000ha. Atholl Estate owns the majority of land within the study area with part of it farmed in-hand (Home Farm) and part let to five tenants. The six other agricultural land interests are owner occupiers. Home Farm is farmed organically with the remaining farmland in the study area farmed conventionally.

Forestry

- 8.3.31 Woodland is owned and tenanted by a number of agricultural land interests forming amenity woodland, shelterbelts and commercial forestry. Large blocks of commercial forestry (Clunes Wood and Dalnamein Forest) are located at the northern extents of the proposed scheme within the ownership of Atholl Estate.

Sporting Interests

- 8.3.32 The study area supports a range of sporting interests including high value sporting pursuits. The lower lying land supports a range of shooting interests from rough shooting to driven shooting for pheasants. It also supports deer (Roe) stalking. The moorland in the northern extents of the study area supports high value grouse shooting and deer (Red) stalking. Fishing is undertaken on the River Garry and on the River Tilt (salmon, trout and grayling). There is one sporting interest within the study area.

Sensitivity Assessment

- 8.3.33 The baseline data collected during the farm business and forestry surveys were used to give an individual sensitivity assessment for each land interest affected by the proposed scheme (refer to Figure 8.2 for land interests). The sensitivity assessments for each land interest can be found in Appendix A8.5 (Agriculture, Forestry and Sporting Sensitivity Assessment).

- 8.3.34 Fifteen agricultural, forestry and sporting land interests have been assigned sensitivity; three have been categorised with a high sensitivity, ten with medium sensitivity and two with a low sensitivity.
- 8.3.35 There are several land interests that as well as agriculture, forestry or sporting land 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, forestry or sporting land, 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 woodland at 1 Essangal Cottages which has been assessed under 'Residential Land and Property' and Land at Glackmore 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 an estimated 202.03ha of land-take, of which approximately 2.70ha would be subject to servitude rights (granting of access rights only to Transport Scotland). The potential impact and significance of 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, 0.18ha of other land 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.

Residential Land and Property

Land-take

- 8.4.5 There are four residential land interests affected by land-take (totalling approximately 0.45ha) as a result of the proposed scheme as shown in Table 8.15.

Table 8.15: Land-take areas for residential land and property

Land Interest	Description of Land-take	Loss of Land		Sensitivity	Magnitude	Significance
		ha	%			
The Coach House	Partial loss of access track for acquisition and extension of access track.	0.03	12	medium	low	Slight
Darroch Cottage	Partial loss of grassland for access track.	<0.01	3	medium	low	Slight
1 Essangal Cottages	Partial loss of amenity woodland within the curtilage of the property for SuDS feature, Aldclune Junction and Essangal Underbridge.	0.40	25	medium	medium	Moderate
Tomban Farmhouse	Partial loss of garden for access track	0.02	6	medium	low	Slight

8.4.6 There is one property where a significant potential impact on land-take is assessed; 1 Essangal Cottages.

8.4.7 1 Essangal Cottages comprises one residential property, approximately 50m north of the proposed scheme, surrounded by mixed woodland. Although there would be no direct impacts on the residential property or garden, 0.40ha would be expected to be lost from the adjacent area of woodland. This loss of woodland is not expected to change the wind damage risk status (WDRS); therefore, the windthrow risk remains low. The significance of potential impact is assessed as **Moderate** as the proposed scheme results in land-take (refer to Chapter 14 (Visual) and Chapter 17 (Noise) for amenity impacts on the property).

8.4.8 The Coach House also operates a commercial business (Explore Scotland) from the residential property. No impacts on the commercial business are expected.

Vehicle Access

8.4.9 Eight groupings of residential properties have been identified as experiencing a change in access/travel distance as a result of the proposed scheme. As noted in paragraph 8.2.29 to 8.2.30, 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 8.16 and illustrated in Figure 8.3. Six of the groups would experience potential impacts of **Moderate** or higher significance for journeys to the north and/or south.

Table 8.16: Groupings of residential properties change in vehicle access

Residential Grouping	Change in Journey Distance (km)		Significance		Figure Ref.
	North	South	North	South	
Clunebeg	+1.4	-<0.1	Moderate	Negligible (beneficial)	8.3a
Glackmore	+0.9	+12.8	Slight	Substantial	8.3b
Garrybank	+6.7	+<0.1	Substantial	Negligible	8.3c
Invervack & Balnastuartach	No change	+4.1	No impact	Moderate	8.3d
Tomban Farmhouse	+1.7	+4.0	Moderate	Moderate	8.3d
Tomchichen	+3.8	+0.1	Moderate	Negligible	8.3e
Properties at Calvine (15 in total)	+0.1	No change	Negligible	No impact	8.3e
Properties in Struan (five in total)	+0.1	No change	Negligible	No impact	8.3e

8.4.10 Northbound journeys from Garrybank and Clunebeg would require the use of the grade separated Aldclune junction extending journey distance for northbound and/or southbound journeys. However,

this would remove the need for vehicle travellers to make the current at-grade right turn manoeuvre across the existing A9.

- 8.4.11 Southbound movements from three groupings of residential properties at Glackmore, Invervack & Balnastuartach, and Tomban Farmhouse would require use of the grade separated Bruar junction and consequently increase journey distance. However, this would remove the need for vehicle travellers to make the current at-grade right turn manoeuvre across the existing A9. Groupings of residential properties at Clunes Lodge, Dalreoch Cottage, Dalnamein Lodge and Tigh-na-Coille along with a further 20 properties at Calvine and Struan would also all use the grade separated Bruar junction for southbound journeys, again removing the need to make the current at-grade right turn manoeuvre. Change in vehicle access for Tomchitchen would require the use of the Bruar junction for northbound journeys, removing the need for the current at-grade right turn manoeuvre across the existing A9.

Commercial and Industrial Property

Land-take

- 8.4.12 Four commercial and industrial land interests would be affected by land-take (totalling approximately 2.56ha) as a result of the proposed scheme as shown in Table 8.17.

Table 8.17: Land-take areas for commercial and industrial land interests

Land Interest	Description of Land-take	Loss of Land		Sensitivity	Magnitude	Significance
		ha	%			
PKC	Partial loss of land from mainline alignment	0.09	n/a*	medium	low	Slight
Network Rail	Partial loss of railway infrastructure for mainline alignment	1.42**	n/a*	medium	low	Slight
Shierglas Quarry	Partial loss of land for mainline alignment	0.77***	1	medium	low	Slight
House of Bruar	Partial loss of amenity grassland for side road	0.28	<1	medium	low	Slight

* % area loss has not been calculated due to the extent of the land holding.

** Of the land-take from Network Rail, 0.39ha would be subject to servitude rights.

***In addition to Shierglas Quarry land-take, an estimated further 0.32ha of development land, 1.20ha of agricultural land and 0.25ha of woodland would be subject to compulsory purchase and is included in the development land land-take figures (refer to paragraphs 8.4.23 to 8.4.25) and agricultural/forestry land-take figures (refer to paragraph 8.4.29 and Table 8.25) respectively.

- 8.4.13 No other commercial or industrial land interests are expected to experience significant impacts as a result of land-take.

Vehicle Access

- 8.4.14 Five commercial/industrial properties have been identified that would experience a change in access/travel distance as a result of the proposed scheme, outlined in Table 8.18. Figure 8.3 illustrates the expected change in access route for each commercial/industrial property as outlined below. Only one of the properties, Shierglas Quarry, would experience significant impacts.

Figure 8.18: Commercial/Industrial properties change in vehicle access

Commercial/Industrial Property	Change in Journey Distance (km)		Significance		Figure Reference
	North	South	North	South	
Shierglas Quarry	-7.6	+7.7	Substantial (beneficial)	Substantial	8.3f
House of Bruar	+0.3	No change	Negligible	No impact	8.3g
Clan Donnachaidh Centre	+0.3	No change	Negligible	No impact	8.3g
Struan Inn	+0.1	No change	Negligible	No impact	8.3g
Calvine Caravan Park	+0.1	No change	Negligible	No impact	8.3g

- 8.4.15 The change in vehicle access for House of Bruar and the Clan Donnachaidh Centre would result in northbound movements from the businesses using the grade separated Bruar junction removing the need for the current at-grade right turn manoeuvre across the existing A9. Similarly, journeys for visitors to the businesses from the south would be able to use the grade separated Bruar junction. The change in vehicle access for Shierglas Quarry, Struan Inn and Calvine Caravan Park would also result in the use of the grade separated Bruar junction for southbound journeys. Shierglas Quarry would experience **Substantial (beneficial)** impacts for journeys from the quarry to the north due to the provision of the left-in left-out junction although this would be offset by a **Substantial** impact on journeys to the south due to an increase in journey distance.

Indirect Socio-economic Impacts

- 8.4.16 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 Killiecrankie, Blair Atholl and the surrounding area would therefore be expected during construction.
- 8.4.17 It is expected that some other businesses would not be able to adapt and that there would be disturbance during construction (noise and vibration, air quality emissions, landscape and visual). Tourism related businesses that rely on the character and setting of the area would be particularly sensitive to such effects. Consequently, an adverse impact on such businesses and people in Killiecrankie, Blair Atholl and Calvine would be expected.
- 8.4.18 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.
- 8.4.19 Indirect socio-economic impacts during operation for Blair Atholl and the surrounding area are expected to be beneficial overall, due to the benefits associated with the A9 dualling programme.

Community Land and Community Facilities

Land-take

- 8.4.20 There is no land-take expected from community land or community facilities.

Community Severance

- 8.4.21 The proposed scheme will reduce traffic volumes on the local road network and through settlements with HGV traffic in Killiecrankie predicted to be reduced by 40% due to changes in access arrangements for Shierglas Quarry. While this has the potential to alleviate Killiecrankie community concerns over existing high levels of Shierglas Quarry related HGV traffic in the village, existing traffic volumes in Killiecrankie and Aldclune are such that there is no existing community severance and so the reduction in HGV traffic is not considered to be significant change to severance in terms of the methodology set out in DMRB Volume 11, Section 3, Part 8, Pedestrians, Cyclists, Equestrians and Community Effects (Highways Agency et al., 1993). Refer to Chapter 9 (People and Communities – All Travellers) for impacts on NMUs.
- 8.4.22 Community facilities are mainly located within Killiecrankie, Blair Atholl, Calvine and Struan. The main routes in relation to the proposed scheme for residents and visitors to access the community facilities within these locations are detailed in Table 8.19. These main routes are displayed on Figure 9.1.

Table 8.19: Main access routes to community facilities

Community	Type	Main Access Routes	Figure 9.1 ref.	Main User(s)
Killiecrankie	Local Path (non-designated)	105 and 106	105 and 106	Pedestrians
	National Cycle Route	NCR7	NC7	Pedestrians/Cyclists/Vehicles
	Local Road	B8079	-	Cyclists/Vehicles
Blair Atholl	Core Path	BAST/123	103	Pedestrians/Cyclists
	Core Path	BAST/128	114	Pedestrians
	National Cycle Route	NCR7	NCR7	Pedestrians/Cyclists/Vehicles
	Local Road	B8079	-	Cyclists/Vehicles
Calvine/ Struan	Core Path and Right of Way	BAST/8 and TP16 (east)	129	Pedestrians
	Core Path	BAST/8 (west)	130	Pedestrians
	Core Path	BAST/10	132	Pedestrians
	National Cycle Route	NCR7	NCR7	Cyclists/Vehicles
	Local Road	Existing A9 and B847	-	Cyclists/Vehicles

8.4.23 Two of the core paths (path 129 and path 130) which provide access to community facilities in Calvine are anticipated to increase in journey length by 36m and 53m respectively. Path 129 would be realigned along a new access route through a new underpass across the A9. Path 130 would follow the same realignment as Path 129. This change in journey length is not expected to be significant.

8.4.24 The remaining access routes in Table 8.19 are anticipated to be maintained for vehicles, cyclists and pedestrians as a result of the proposed scheme. Therefore, no further changes in journey distance to community facilities are anticipated.

Development Land and Planning Applications

8.4.25 Two of the 11 planning applications identified within the study area would be affected by the proposed scheme. Land-take (approximately 0.32ha) would be required from PA05 (Shierglas Quarry), and the proposed scheme would potentially affect the amenity of PA08 (Dalnamein Lodge). Direct land-take from PA05 (Shierglas Quarry) is not considered to be significant as it is not expected to affect the land’s consented use as an extension of the neighbouring quarry. Potential amenity impacts on PA08 (Dalnamein Lodge) are not considered to be significant as any change in amenity would not be expected to interfere with its proposed use as holiday cabins.

8.4.26 No development land allocations are expected to be impacted by the proposed scheme.

8.4.27 Further details of the impact assessment are provided in Appendix A8.4 (Development Land Assessment) and both the development land allocations and planning applications are illustrated on Figure 8.1.

Agricultural, Forestry and Sporting Interests

8.4.28 A summary of the potential impact significance in the absence of mitigation for the 15 agriculture, forestry and sporting interests affected by the proposed scheme is provided in Table 8.20.

Table 8.20: 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	0	4	2	0	5	4	0

- 8.4.29 The potential impacts for all agricultural, forestry and sporting land interests are detailed within Appendix A8.6 (Agricultural, Forestry and Sporting Interests: Pre- and Post-Mitigation Impacts). Significant impacts are summarised below.

Land-take from Agricultural, Forestry and Sporting Land

- 8.4.30 The total land-take from 15 agricultural, forestry and sporting interests equates to approximately 196.70ha. Of this, 139.98ha is classed as non-prime agricultural land, 36.94ha classed as forestry, 0.42ha classed as sporting and 19.36ha as other land. The proposed scheme is expected to directly impact 103 agricultural fields and 60 parcels of forestry. Seventeen land parcels (10% of all fields and forestry compartments affected) would be lost.
- 8.4.31 There are significant potential impacts (i.e. **Moderate** or above) on six agricultural, forestry and sporting land interests. These impacts are described in Table 8.21, and generally relate to land-take, loss of access, loss of field boundaries (including fences, hedges and walls), disruption of existing field drainage systems and disruption to shooting and stalking activities.

Table 8.21: Description of significant impacts

Agricultural, Forestry and Sporting Interest	Description of potential impacts
Coille Essan	Loss of 2.45ha (1.60ha is LCA Class 5.2, 0.59ha is woodland and 0.26ha is other land). Land lost equates to 25% of total farmed area. Two fields and two woodland coupes affected. Loss of one field. Loss of boundary features and disruption to field drainage system. Significance assessed as Moderate .
Easy Heat Systems	Loss of 0.22ha of bankside and River Garry. Temporary disturbance during construction to fishing rights on part of the River Garry. Significance assessed as Moderate/Substantial (construction only).
Land at Glackmore	Loss of 0.20ha of bankside and River Garry and 0.38ha of other land. Temporary disturbance during construction to fishing rights on part of the River Garry. Significance assessed as Moderate/Substantial (construction only).
House of Urrard	Loss of 7.57ha (3.82ha is LCA Class 5.2, 2.96ha is woodland and 0.78ha is other land). Land lost equates to less than 1% of total farmed area. Seven fields and seven woodland coupes affected. Loss of two fields and two woodland coupes. Loss of boundary features and disruption to field drainage system. Loss of pheasant feeding areas, release pens and areas used for shooting and stalking. Significance assessed as Moderate/Substantial .
Balnastuartach Farm	Loss of 13.68ha (8.23ha is LCA Class 4.2, 4.25ha is LCA Class 6.2, 0.39ha is LCA 6.3 and 0.81ha is other land). Land lost includes 4.58ha for flood compensatory storage. Total land loss equates to 39% of total tenanted farmed area. Seven fields affected. Loss of boundary features and disruption to field drainage system. Significance assessed as Moderate/Substantial .
Pitaldonich Farm	Loss of 20.33ha (15.52ha is LCA Class 4.2, 1.67ha is LCA Class 5.3, 1.54ha is woodland and 1.60ha is other land). Land lost includes 8.63ha for flood compensatory storage. Total land lost equates to 9% of total tenanted farmed area. 12 fields and three woodland coupes affected. Loss of five fields. Loss of boundary features and disruption to field drainage system. Significance assessed as Moderate .

Windthrow Risk

- 8.4.32 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 WDRS is unchanged at Low (not significant) for all assessed coupes (refer to Appendix A8.3 Forestry Survey).

Sporting Activity

- 8.4.33 Impacts on sporting interests (shooting, stalking and fishing) have been included in the impact assessment for each land interest.
- 8.4.34 Whilst part of the River Garry at Essangal and at Bruar would be subject to compulsory purchase, fishing rights would be excluded. The proposed scheme would result in temporary disturbance during construction to fishing activity on the River Garry at Essangal with existing fishing rights retained by Lands at Glackmore, The Bruar Trust and Easy Heat Systems. Additionally, the proposed scheme would result in temporary disturbance to fishing activity on the River Garry at Bruar with existing fishing rights retained by The Bruar Trust. Refer to Appendix A8.6 (Agriculture, Forestry and Sporting Pre- and Post-Mitigation Impacts).

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 ('P05' mitigation item references). Those that specifically relate to community and private assets are assigned an '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 the loss in accordance with the District Valuer's assessment. Further details 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 8.2.34 and 8.2.65, any potential compensation payments were not considered as 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.

Embedded Mitigation

- 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 forestry have been provided as part of the proposed scheme:
- Glackmore field access (ch6050, Figure 5.1d);
 - Fishing access track (ch6080, Figure 5.1d);
 - Atholl Estate - Home Farm field access (ch6880, Figure 5.1d);
 - Balnastuartach access (ch7700, Figure 5.1e);
 - Tomban access (ch10100-10800, Figure 5.1e);
 - Pitaldonich field access (ch11270, Figure 5.1f); and
 - Dalnamein Forest Access (ch18900-20400, ch20150, ch20400, Figure 5.1j).
- 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 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.

Standard Mitigation

8.5.9 Standard measures to mitigate potential impacts on community and private assets during construction are set out in the Table 8.22.

Table 8.22: Standard Mitigation for Community and Private Assets.

Mitigation Item	Description
SMC-CP1	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.
SMC-CP2	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.
SMC-CP3	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.
SMC-CP4	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.
SMC-CP5	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.
SMC-CP6	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).
SMC-CP7	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.
SMC-CP8	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.
SMC-CP9	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.
SMC-CP10	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.
SMC-CP11	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.
SMC-CP12	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.
SMC-CP13	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.
SMC-CP14	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.
SMC-CP15	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.

- 8.5.10 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.

Specific Mitigation

- 8.5.11 In addition to the standard A9 mitigation described above, project-specific measures (**Mitigation Items P05-CP16 to P05-CP21**) as set out in the following section are required to reduce specifically identified potential impacts on community and private assets.

Residential Property

- 8.5.12 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

- 8.5.13 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 P05-CP16**).
- 8.5.14 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.
- 8.5.15 In relation to tourist signs it is noted that IAN 144/16 'Directional signs on Motorway and all-purpose Trunk roads Grade separated junctions' 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 eligibility 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

- 8.5.16 As there are no significantly affected community land or facilities and no expected community severance, no specific mitigation is required.

Development Land and Planning Applications

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

Agricultural, Forestry and Sporting Interests

- 8.5.18 Mitigation measures with respect to agricultural, forestry and sporting 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 minimised through the DMRB Stage 3 design and assessment process.
- 8.5.19 Consultation with landowners and tenants is ongoing and it is normal practice for the details of specific accommodation works that don't require planning consents, (for example specific fencing requirements), 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 identifying residual impacts that accommodation works necessary to enable the ongoing operation of agricultural, forestry and sporting interests will be applied.

- 8.5.20 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.
- 8.5.21 Project-specific mitigation measures to avoid or reduce potential impacts on agricultural, forestry and sporting interests in specific locations are listed in Table 8.23. Appendix A8.6 (Agriculture, Forestry and Sporting Interests: Pre- and Post-Mitigation Impacts) lists the standard and specific mitigation measures as applicable to each affected agricultural, forestry and sporting interest.

Table 8.23: Project-specific Mitigation for Community and Private Assets.

Mitigation Item	Mitigation Measure
P05-CP17	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 Transport Scotland.
P05-CP18	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.
P05-CP19	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.
P05-CP20	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.
P05-CP21	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 in Figure 13.5), taking cognisance of the tree protection plan and/or windthrow assessment.

8.6 Residual Impacts

Residential, Commercial and Industrial Property

- 8.6.1 Residual impacts for residential, commercial and industrial property are presented in Table 8.24. All residual impacts are adverse unless otherwise stated.
- 8.6.2 During construction there would be temporary disturbance to vehicle access to/from some properties adjacent to the proposed scheme.

Table 8.24: Significance of residual impacts of residential, commercial and industrial property

Receptor	Impact	Mitigation Item	Significance of Residual Impact	
			Vehicle Access (direction of travel from property)	Land-take
Residential				
The Coach House	Partial loss of scrubland from access track (0.03ha).	SMC-CP1	No impact	Slight
Darroch Cottage	Partial loss of grassland from access track (<0.01ha).	SMC-CP1	No impact	Slight
Clunebeg	Direct access to existing A9 stopped up resulting additional journey distance for residents when travelling north (1.4km). A reduced journey distance for residents travelling south is expected (<0.1km).	SMC-CP1	North: Moderate South: Negligible (beneficial)	No impact
1 Essangal Cottages	Partial loss of woodland due to provision of SuDS feature, Aldclune Junction and Essangal Crossing (0.40ha).	SMC-CP1	No impact	Moderate

Receptor	Impact	Mitigation Item	Significance of Residual Impact	
			Vehicle Access (direction of travel from property)	Land-take
Glackmore	Direct access to existing A9 stopped up resulting additional journey distance for residents when travelling south (12.8km) and travelling north (0.9km).	SMC-CP1	North: Slight South: Substantial	No impact
Garrybank	Direct access to existing A9 stopped up resulting additional journey distance for residents when travelling south (<0.1km) and travelling north (6.7km).	SMC-CP1	North: Substantial South: Negligible	No impact
Invervack and Balnastuartach	Direct access to existing A9 stopped up resulting additional journey distance for residents when travelling south (4.1km).	SMC-CP1	North: No impact South: Moderate	No impact
Tomban Farmhouse	Partial loss of garden from access track (0.02ha). Direct access to existing A9 stopped up resulting additional journey distance for residents when travelling north (1.7km) or south (4.0km).	SMC-CP1	North: Moderate South: Moderate	Slight
Tomchitchen	Direct access to existing A9 stopped up resulting additional journey distance for residents when travelling north (3.8km). A reduced journey distance for residents travelling south is expected (-0.1km).	SMC-CP1	North: Moderate South: Negligible (beneficial)	No impact
Properties at Calvine (15 in total)	Direct access to existing A9 stopped up resulting additional journey distance for residents when travelling north (0.2km).	SMC-CP1	North: Negligible South: No impact	No impact
Properties at Struan (five in total)	Changes to access - as above for properties at Calvine.	SMC-CP1	North: Negligible South: No impact	No impact
Commercial and Industrial				
Network Rail*	Partial loss of land from main alignment (1.42ha).	SMC-CP1	No impact	Slight
Shierglas Quarry **	Partial loss of land from main alignment (0.77ha). Direct access (restricted) to existing A9 stopped up resulting in reduced journey distance for movement of quarry products, employees and visitors when travelling north (-7.6km) and additional journey distance when travelling south (7.7km).	SMC-CP1	North: Substantial (beneficial) South: Substantial	Slight
House of Bruar	Partial loss of amenity grassland from side road (0.28ha). Direct access to existing A9 stopped up resulting additional journey distance for customers and employees when travelling north (0.3km).	SMC-CP1 and P05-CP16	North: Negligible South: No impact	Slight
Clan Donnachaidh Centre	Direct access to existing A9 stopped up resulting additional journey distance for customers and employees when travelling north (0.3km).	SMC-CP1	North: Negligible South: No impact	No impact
The Struan Inn	Direct access to existing A9 stopped up resulting in additional journey distance for customers when travelling north (0.1km).	SMC-CP1	North: Negligible South: No impact	No impact
Calvine Caravan Park	Changes to access - as above for The Struan Inn.	SMC-CP1	North: Negligible South: No impact	No impact

* Of the land-take from Network Rail, 0.39ha would be subject to servitude rights.

**In addition to Shierglas Quarry land-take, an estimated further 0.32ha of development land, 1.20ha of agricultural land and 0.25ha of woodland would be subject to compulsory purchase and is included in the development land land-take figures (refer to paragraphs 8.4.23 to 8.4.25) and agricultural/forestry land-take figures (refer to Table 8.25) respectively.

Likely Future Impacts on Commercial Business Viability

- 8.6.3 Network Rail would be affected by land-take (1.42ha) of which 0.39ha would be subject to servitude rights where the proposed scheme crosses the Highland Main Line railway at the Essangal Crossing (ch4200) and south of Calvine (ch12600). New structures would comprise the extension of the Pitagowan Rail Underbridge and Essangal Underbridge for northbound carriageway. The provision of new structures is expected to have no significant impact on likely future business viability.
- 8.6.4 Shierglas Quarry would be affected by both land-take and changes in access. Land-take would be from an area that would not be actively quarried for mineral deposits although the site working area would be reduced. The impacts of changes in access and journey distance are assessed as **Substantial** for journeys to the south and **Substantial (beneficial)** for journeys to the north. Overall, it is expected that there would be no significant impact on likely future business viability as a consequence of the proposed scheme.
- 8.6.5 During construction of Bruar Junction, House of Bruar and Clan Donnachaidh Centre are expected to experience some disturbance. Once constructed, the Bruar Junction will provide customers and employees with a safer grade separated junction for access to and from the proposed scheme. It is expected that there would be no significant impact on likely future commercial business viability for these two businesses.

Community Land and Community Facilities

- 8.6.6 There are no significant residual impacts on community land and community facilities or on community severance.
- 8.6.7 Mitigation relating to paths is identified in Chapter 9 (People and Communities - All Travellers).

Development Land and Planning Applications

- 8.6.8 The proposed scheme would require land-take of 0.32ha from land forming Shierglas Quarry that is subject to an extant planning application. No development land allocations or planning applications are expected to be significantly affected by the proposed scheme.

Agricultural, Forestry and Sporting Interests

- 8.6.9 The residual agricultural and forestry land-take impacts of the proposed scheme are summarised in Table 8.25. 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.
- 8.6.10 As noted in paragraph 8.4.30, it is estimated that 196.70ha of agricultural, forestry and sporting land would be required for the proposed scheme. In addition, as noted in Table 8.17, a further 1.20ha of agricultural land and 0.25ha of forestry would be subject to land-take at Shierglas Quarry increasing the overall land-take to 198.15ha. Of the total land-take, 141.18ha is from non-prime agricultural land, 37.19ha is from forestry, 0.42ha from sporting and a further 19.36ha is from land not in agricultural use.
- 8.6.11 Fishing rights on part of the River Garry at Land at Glackmore, The Bruar Trust and Easy Heat Systems would be subject to temporary disturbance during construction.

Table 8.25: Residual land-take of agricultural, forestry and sporting interests

	Prime Agricultural Land (ha)			Non-Prime Agricultural Land (ha)			Forestry (ha)	Sporting (ha)	Other Land (ha)	Total (ha)
	LCA Class			LCA Class						
	1	2	3.1	3.2	4	5-7				
Land-take in agricultural, forestry and sporting use	-	-	-	-	66.41	74.77	37.19	0.42	19.36	198.15*

	Prime Agricultural Land (ha)			Non-Prime Agricultural Land (ha)			Forestry (ha)	Sporting (ha)	Other Land (ha)	Total (ha)
	LCA Class			LCA Class						
	1	2	3.1	3.2	4	5-7				
Land potentially to be returned to agriculture /retained as forestry	-	-	-	-	26.73	0.51	8.06	-	-	35.30
Net agricultural, forestry and sporting land-take	-	-	-	-	39.68	74.26	29.13	0.42	19.36	162.85

* Of the land-take from agricultural, forestry and sporting interests, 2.31ha would be subject to servitude rights.

- 8.6.12 Within the Draft CPO, 35.30ha 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 grading out of embankment slopes such that they are suitable for agricultural use, return of areas required for flood storage and retention of woodland within the land-take boundary (refer to Appendix A8.6 Agriculture, Forestry and Sporting Pre- and Post-Mitigation Impacts pages 3-5, 7-9 and 13-14 and Appendix A11.3: Flood Risk Assessment pages 19-27).
- 8.6.13 When assessing likely future farm business viability, a worst-case scenario is assumed whereby residual impacts exclude any reduction in land-take associated with return to agriculture, retention of forestry land and land returned subject to burdens.
- 8.6.14 The following land interests have been identified for land to be potentially returned to agricultural use subject to appropriate burdens (restriction on development) set by Transport Scotland:
- Strathgarry Farm and Glackmore Farm – potential for return of 0.23ha of flood storage area.
 - Atholl Estate (The Bruar Trust) – potential for return of 5.01ha to agriculture through re-grading of embankment slopes and 2.86ha of flood storage area.
 - Balnastuartach Farm – potential for return of 4.58ha of flood storage area.
 - Invervack Farm – potential for return of 5.93ha of flood storage area.
 - Pitaldonich Farm – potential for return of 8.63ha of flood storage area.
- 8.6.15 The return of agricultural land through re-grading of embankment slopes and return of flood storage areas would not change the significance of impact on any of the land interests.
- 8.6.16 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). This is located within forestry coupes on the following agricultural, forestry and sporting interests: Old Faskally Farm (0.39ha); Coille Essan (0.16ha); House of Urrard (0.88ha); Strathgarry and Glackmore Farm (1.36ha); Atholl Estate (The Bruar Trust) (4.32ha); Atholl Estate (The Blair Trust) (0.83ha); and Pitaldonich Farm (0.12ha).
- 8.6.17 The return of agricultural land through re-grading of embankment slopes, return of flood storage areas and retention of areas of forestry would not change the significance of impact on any of the affected land interests.
- 8.6.18 With land returned to agriculture and retention of areas of forestry, the total area of agricultural land-take would reduce to 113.94ha and forestry lost to 29.13ha as shown in Table 18.25. With a further 0.42ha of land-take from sporting land and 19.36ha from other land, potential total net agricultural, forestry and sporting land-take would be 162.85ha.
- 8.6.19 The residual impacts are summarised in Table 8.26 and further details are provided in Appendix A8.6 (Agriculture, Forestry and Sporting Land Pre- and Post-Mitigation Impacts) for each affected agricultural, forestry and sporting land-interest.

Table 8.26: Residual impacts on agricultural, forestry and sporting interests

Type	Substantial	Moderate/ Substantial	Moderate	Slight/ Moderate	Slight	Negligible/ Slight	Negligible
Agriculture, Forestry and Sporting Interests	0	4	2	0	5	4	0

Likely Future Impacts on Farm Business Viability

- 8.6.20 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.
- 8.6.21 There is one farm business; Balnastuartach Farm, where the likely future farm business viability is assessed as a **significant Adverse** impact due primarily to land-take and consequent operational impacts on the business. Land-take at Balnastuartach Farm would equate to 39% of the farm area and would be required from land currently used for grazing and silage making. This would be likely to reduce the capacity of the farm to support current livestock production, restrict future ambitions for growth of the livestock enterprise (to 15 breeding suckler cows and 80 breeding ewes), and affect the developing farm diversification enterprise (dog kennels and boarding for up to 24 dogs). The impacts of the proposed scheme on the farming business would be likely to be such that the business may have to reduce its activities to a point where it becomes commercially unviable, it requires to relocate, or it chooses to cease trading. Should the business relocate or cease trading and the tenancy be relinquished, the occupation of the land would revert to the landowner and it would have the potential to continue to be able to be used for agricultural purposes.

Cumulative Impacts

- 8.6.22 Dalnacardoch Estate is only marginally affected by the proposed scheme (refer to Appendix A8.6 Agriculture, Forestry and Sporting Pre- and Post-Mitigation Impacts) but also has land holdings likely to be affected by Project 07 (Glen Garry to Dalwhinnie) of the A9 dualling programme, and therefore may 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. However, based on the cross-project baseline and assessment information currently available and using professional judgement, it is assessed that the cumulative impact on these land interests would not be significant in the context of the EIA Regulations and would not affect likely future viability. Refer to Chapter 20 (Cumulative Impacts).

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 residential property (1 Essangal Cottages).
- 8.7.2 In addition, significant residual impacts are expected due to changes in journey distance at six groupings of residential properties (Clunebeg, Glackmore, Garrybank, Invervack and Balnastuartach, Tomban Farmhouse and Tomchitchen) as a result of the proposed scheme. Residual impacts of **Substantial** significance are anticipated at one industrial property (Shierglas Quarry) for journeys to the south.
- 8.7.3 Beneficial impacts of **Substantial** significance would result from changes in journey distance at Shierglas Quarry for quarry products, employees or visitors travelling north.

Agricultural, Forestry and Sporting Interests

- 8.7.4 With the proposed scheme in place, and taking into account mitigation measures as described in Section 8.5 (Mitigation), significant residual impacts are anticipated at six agricultural land interests (Coille Essan, Easy Heat Systems (construction only), Land at Glackmore (construction only), House of Urrard, Balnastuartach Farm and Pitaldonich Farm) as a result of land-take and severance. A **significant Adverse** impact on likely future farm business viability is assessed at Balnastuartach.
- 8.7.5 No other impacts are considered to be significant in the context of the EIA Regulations.

8.8 References

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