

22 Summary of Significant Residual Impacts

22.1 Introduction

- 22.1.1 This chapter summarises potential significant residual impacts arising from construction and operation of the Proposed Scheme. These are defined as any significant adverse impacts remaining after the application of mitigation measures, as summarised in **Chapter 21**. Consideration also extends to any significant beneficial effects associated with the Proposed Scheme.
- 22.1.2 Within this ES, significant impacts are identified according to the methodology provided for each environmental topic within **Chapters 8-18** and **Chapter 20**. Impacts are generally defined as significant in the context of the EIA Regulations where they are assessed as Moderate or greater significance. Residual impacts that been assessed as not significant are noted in **Chapters 8-18** and **Chapter 20**; but are not considered in this chapter.
- 22.1.3 This chapter reports medium/ long-term residual impacts only; it does not report significant adverse impacts identified during the construction phase or, for Landscape and Visual aspects, the short-term impacts predicted at operation year 1.
- 22.1.4 The ES topic chapters listed below have concluded that the Proposed Scheme will not result in any permanent (operational) significant adverse residual impacts:
- Chapter 9, Effects on All Travellers
 - Chapter 11, Road Drainage and the Water Environment
 - Chapter 15, Cultural Heritage
 - Chapter 16, Air Quality
 - Chapter 17, Noise and Vibration
 - Chapter 18, Materials
- 22.1.5 Residual significant (adverse) effects are predicted in relation to Chapter 8 (Community and Private Assets), Chapter 10 (Geology, Soils and Groundwater), Chapter 12 (Ecology and Nature Conservation), Chapter 13 (Landscape), Chapter 14 (Visual) and Chapter 20 (Cumulative impacts), as shown in **Table 22-1**.
- 22.1.6 Residual significant (beneficial) effects are also predicted in relation to Chapter 11 (Road Drainage and the Water Environment), Chapter 12 (Ecology and Nature Conservation) and Chapter 20 (Cumulative impacts) as shown in **Table 22-2**.

Table 22-1: Summary of Significant Residual Adverse Effects

Receptor	Summary of Significant Residual Effects	Significance
Community and Private Assets		
Residential and Commercial Land and Property		
Coulintyre Cottage	The Proposed Scheme requires the full extent of land at Coulintyre Cottage (residential property and associated garden land). The area is required for road related earthworks and drainage, including a SuDS basin, so full removal of the property (including demolition of the Cottage) is predicted.	Substantial
Knappach cottage	Partial loss of garden land associated with the property (0.12 ha).	Moderate
Ralia Café and Tourist Information	Partial loss of land (0.89 ha)	Moderate
Milton Lodge holiday let	Partial loss of land (1.08 ha)	Moderate
Access to Residential and Commercial Land and Property		
South Lodge, Fernside House and Invertruim House	Due to alterations for access onto the A9 when travelling southbound, there is expected to be additional journey distance when to the A9 (5.68 km).	Moderate
Upper Nuide Cottage, Lower Nuide Cottage Nuide Farm Cottage	Increased journey distance (5.68 km) onto the A9 from the property, when travelling southbound	Moderate
Milton of Nuide Cottage	Increased journey distance (5.60 km) from the A9 to the property, when travelling southbound	Moderate
Inverton House	Increased journey distance (6.10 km) from the A9 to the property, when travelling southbound	High
Balavil House	Increased journey distance (8.04 km) from the A9 to the property, when travelling southbound	Moderate
Croftcarnoch and Croftcarnoch Farmhouse	Increased journey distance (2.00 km) from the A9 to the property, when travelling southbound	Moderate
Invernahavon Caravan Park	Increased journey distance (2.5 km) onto the A9 from the property, when travelling southbound	Moderate
Glentruim Castle and Cottages	Increased journey distance (2.13 km) from the A9 to the property, when travelling northbound	Moderate
Phoines Lodge holiday let	Increased journey distance (2.13 km) from the A9 to the property, when travelling northbound	Moderate
Nuide House holiday let	Increased journey distance (4.75 km) onto the A9 from the property, when travelling southbound	Moderate
SSE Telecoms mast	Increased journey distance (5.60 km) from the A9 to the property, when travelling southbound	Moderate
Development Land		
Mains of Balavil planning permission and Listed Building Consent for visitor facilities and commercial uses	The Proposed Scheme will result in an Adverse impact on the approved planning permission at the Mains of Balavil, Kingussie, due to changes in access.	Adverse

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<p>Planning Permissions (ref: 09/048/CP, 2013/0190/MS/PPA-001-2013 and 2015/0316/DET) and application (2018/0067/DET) for residential development on land to the north east of Kingussie (Davall Developments Ltd.)</p>	<p>As a result of the Proposed Scheme encroaching onto land with the benefit of planning permission (Ref: 09/048/CP, 2013/0190/MS/PPA-001-2013 and 2015/0316/DET) and subject to a current planning application (2018/0067/DET) relating to residential development (to the north east of Kingussie), it is considered that the Proposed Scheme will have an Adverse impact.</p>	<p>Adverse</p>
<p>Agricultural, Forestry and Sporting Interests</p>		
<p>Ralia Estate</p>	<p>It is considered that the Proposed Scheme will result in the loss of grazings (including rough grazings) as well as loss of good quality farmland, including improved permanent pasture and loss of estate amenity (due to loss of trees). It is also anticipated, that there will be loss of ground forming part of low ground drives, loss of roe deer habitat and impacts on low ground gamebird habitat. As such, the Proposed Scheme is expected to result in the total loss of 37.16 ha of agricultural (LCA grade 5.2) and 10.97 ha of forestry land, having therefore Moderate adverse impacts on sporting and in-combination interests of the Estate.</p>	<p>Moderate</p>
<p>Ruthven Park</p>	<p>The Proposed Scheme will result in the loss of 2.07 ha of good quality grazing land (LCA grade 4.2). The overall impact on agricultural interests on a permanent basis is assessed as being Substantial Adverse, based on a significant loss of good grazing land compared to the size of the whole landholding. As the affected area represents a significant proportion of the holding, the resultant effect on future viability of agricultural interests is assessed as Adverse. It is also anticipated, that there will be loss of forestry land amounting to 0.19 ha. As such, the Proposed is expected to result in Substantial adverse impacts on agricultural and in-combination interests of the Estate, and Adverse impacts on agricultural land viability.</p>	<p>Substantial/ Adverse</p>
<p>Church of Scotland land (Glebe)</p>	<p>The Proposed Scheme will result in the severance and loss of a significant proportion of the good quality grazing land (7.89 ha of LCA grade 4.2), resulting in Substantial Adverse impacts on agricultural interests of the land. As such, it is considered that available land will be reduced to an extent that the tenant will be unable to continue farming on the land. Therefore, the potential effect on future viability of agricultural interests, including farm tenancy viability is therefore assessed as Adverse. It is also anticipated, that there will be a loss of land associated with sporting Interests of the land. As such, the Proposed Scheme is expected to result in Substantial Adverse impacts on in-combination interests of the Church of Scotland land.</p>	<p>Substantial/ Adverse</p>
<p>Laggan Croft No. 1</p>	<p>The overall impact of the Proposed Scheme on agricultural interests of the croft is assessed as Substantial Adverse, based on loss of good grazing land (2.24 ha of LCA grade 4.2), changes in access and land severance. The extent of land take is considered significant in terms of size of the croft as a whole, and reduced ability to directly access land to the north on the opposite side of the A9 (alternative access to be taken via Kerrow Cottage) results in severance from the current croft buildings. Therefore, the likely effect on future viability of agricultural interests is Adverse. It is also anticipated, that there will be a loss of forestry land (0.23 ha in total) and land take associated with sporting interests of the croft. As such, the Proposed Scheme is likely to result in Substantial Adverse in-combination impacts on Laggan Croft No. 1.</p>	<p>Substantial/ Adverse</p>
<p>Laggan Croft No. 2</p>	<p>The overall impact of the Proposed Scheme on agricultural interests of the croft is assessed as Substantial Adverse, based on loss of good grazing land (2.54 ha of LCA grade 4.2), and changes in access. As the affected area represents a significant proportion of the croft, the resultant effect on future viability of agricultural interests is assessed as Adverse. It is also anticipated, that there will be a loss of forestry land (0.21 ha in total) and land take associated with sporting interests of the croft. As such, the Proposed Scheme is likely to result in Moderate/ Substantial Adverse in-combination impacts.</p>	<p>Substantial/ Adverse</p>

Receptor	Summary of Significant Residual Effects	Significance
Balavil Estate	<p>The overall impact of the Proposed Scheme on agricultural interests of the Estate is assessed as Moderate Adverse, based on loss of good quality and mixed grazing land (26.42 ha of LCA grade 4.1, 4.2 and 6.3 in total), and potential for restricted stock movements.</p> <p>It is also anticipated, that there will be loss forestry land (3.38 ha in total), loss of potential low ground gamebird habitat and increase in traffic noise, resulting in Slight adverse impacts on forestry and sporting interests of the Estate.</p> <p>As such, the Proposed Scheme is likely to result in Moderate Adverse in-combination impacts on Balavil Estate.</p>	Moderate
Geology, Soils and Groundwater		
Groundwater Levels and Flow	Localised impacts on groundwater levels and flows in the vicinity of some larger areas of widening and cutting within superficial deposits of medium and high sensitivity (glacial/ glaciofluvial/ alluvial deposits).	Moderate to Moderate/ Large
Ecology and Nature Conservation		
Ancient Woodland	<p>Loss of 10.78 ha of habitat designated as Ancient Woodland.</p> <p>Measures such as compensation planting of native species in former Ancient Woodland sites will be implemented.</p> <p>The compensation planting will not mitigate for the permanent loss of the biodiversity and intrinsic importance of ancient woodland habitats as a result of the Proposed Scheme, but it will mitigate for the functions and importance of the woodland in respect of habitat connectivity and carrying capacity for other species, and over the long-term, significant residual impacts are predicted to reduce.</p>	Significant
Landscape		
Ralia	<p>Impact throughout the local landscape character as a result of the road widening, a lay-by, SuDS, drainage and earthworks predominantly located to the east.</p> <p>Introduction of a left in left out at ch. 41,600, Glentruim access road, and Newtonmore underbridge resulting in loss of birch woodland.</p> <p>The incorporation of passing places on the NMU route north of Newtonmore Junction will result in the loss of coniferous trees, of which some are Ancient Woodland.</p>	Moderate
Insh Marshes	<p>Impact on local landscape character through incorporation of SuDS basins, drainage and extensive earthworks around the River Spey crossing.</p> <p>Incorporation of noise barriers at Laggan (ch. 51,000) which is not in line with the open character of the area.</p>	Moderate
Visual		
Viewpoint 29 – Visitors to Ruthven Barracks	<p>The Proposed Scheme moves the A9 to the east, and therefore closer to Ruthven Barracks.</p> <p>The proposed carriageway footprint will be twice the size than it currently is, and there will be additional features such as safety barriers to the centre of the mainline that will be visible.</p> <p>The roadside embankment on the southbound carriageway will be visible but will look similar to the existing and will merge with the Insh Marshes.</p> <p>The proposed River Spey crossing will be a larger structure in width and length, but will still sit in a low position within the view, as the current bridge does.</p> <p>SuDS basin 493 will be visible to the south west of the barracks.</p> <p>The oblique view from the Barracks means that all of the piers are visible and cast shadow below.</p> <p>There is existing woodland being removed from either side of the scheme adjacent to the mainline north of the B970 that will open up the view in this location and make the Proposed Scheme more visible.</p> <p>Drawing 14.74 and 14.75 in Volume 3 are indicative photomontages from this Viewpoint at Year 15-25.</p>	Moderate/ Slight

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Viewpoint 30 – Users of farm and properties on B970 to east of Ruthven	The Proposed Scheme moves to the east from the baseline therefore the mainline and Spey Bridge will be more prominent and obvious within the view from these receptors. The bridge will be wider and longer but will still sit in a low position within the view. Drawing 14.76 in Volume 3 is an indicative photomontage from this Viewpoint at Year 15-25. This shows that due to the oblique angle of the Spey Bridge the piers are obvious within this view.	Moderate/ Slight
R7 - Knappach Cottage	The road widens to the southbound side of the mainline and there will be a loss of existing vegetation including trees. A noise barrier is proposed at the top of the embankment at this location (Mitigation item P09-NV1 in Chapter 17). The 4m high noise barrier will be visible in views to the north and west from the property. Works to the south and east include land re-profiling and installation of woodland.	Moderate
Cumulative Impacts (Type 1)		
Ralia Estate	Given that the Community and Private Assets assessments identified potential for significant in-combination effects on Estate agricultural, sporting and forestry interests, and a Moderate effect on Inverton House, Milton of Nuide, Nuide Farm and Upper Nuide Cottage, all principally related to access, a significant type 1 cumulative impact is predicted at the Estate level.	Significant
Balavil Estate	Adverse impacts were identified with respect to development planning permission for the conversion of the existing farm estate courtyard and mill into a mixed-use visitor attraction (Mains of Balavil). When considered in conjunction with the effects on agricultural, sporting and forestry interests, the Proposed Scheme is predicted to result in significant type 1 cumulative impact for Balavil Estate.	Significant
Knappach Cottage	The combination of permanent significant land take and visual impacts are likely to result in a significant cumulative impact on Knappach Cottage.	Significant
Mains of Balavil	There is potential for the Proposed Scheme to adversely affect planning permission for the conversion of the existing farm estate courtyard and mill into a mixed-use visitor attraction, principally due to change in access, together with non-significant increases in road noise, visual impacts and air quality.	Significant
RSPB Land	Although there are beneficial effects predicted in relation surface water quality and hydromorphology associated with the River Spey and bridge crossing, there will be land-take within National Nature Reserve, impacts on agricultural and ecological interests and visual impacts on the landscape character and visitor experience.	Significant
Cumulative Impacts (Type 2)		
Kerrow Cottage	The combination of visual impacts from the Proposed Scheme and Housing Development in Kingussie (08/184/CP, 2013/0190/MS/PPA-001-2013, 2015/0316/DET, 2018/0067/DET) are likely to result in a significant cumulative impact on Kerrow Cottage.	Significant
Ancient Woodland	The Proposed Scheme in conjunction with other A9 Dualling Scheme Projects is likely to result in significant cumulative impacts on Ancient Woodland, as any loss of Ancient Woodland, due to its age and high intrinsic value, is not readily replaceable.	Significant

Table 22-2: Summary of Significant Residual Beneficial Effects

Receptor	Summary of Significant Residual Effects	Significance
Road Drainage and Water Environment		
Residential properties in Kingussie	The flood modelling shows that extending the span of the River Spey Bridge (Hydro ID 152) results in significant reductions in River Spey (MW9.1) water levels (29mm to 112mm) for five residential properties immediately upstream of the crossing in Kingussie. One residential property is removed from the functional floodplain.	Large Beneficial to Very Large Beneficial
Non-residential properties in Kingussie	Results in significant reductions in River Spey (MW9.1) Spey water levels (36 to 112mm) for eight non-residential receptors immediately upstream of the crossing (Hydro ID 152)	Large Beneficial to Very Large Beneficial
Non-residential property at the Highland Wildlife Park	The flood modelling shows a reduction in flood levels of 51mm at one non-residential property in the Highland Wildlife Park	Very Large Beneficial
Road (B970)	A reduction of 39mm in River Spey (MW9.1) is predicted on the B970 Ruthven Road at Kingussie due to the effect of the Spey crossing opening (Hydro ID 152).	Large Beneficial
Property access in Kingussie	The area of Manse Road and the railway underpass in Kingussie sees a decrease in flood levels of 117mm	Very Large Beneficial
Utilities in Kingussie	Flood levels at the Waste Water Treatment Works in Kingussie are predicted to decrease by 117mm	Very Large Beneficial
River Spey (MW 9.1/ hydro ID 152)	Increasing channel-floodplain connectivity and natural flow conditions in this reach of the river	Large Beneficial
Ecology and Nature Conservation		
Otter	Mammal ledges and SuDS features improve road runoff water quality and permeability at River Spey SAC (embedded mitigation)	Significant (beneficial)
FWPM	SuDS features with provision of spillage containment reduces risk to River Spey SAC (embedded mitigation)	Significant (beneficial)
Atlantic salmon and sea lamprey	SuDS features and provision of natural bed material in watercourse crossings in River Spey SAC (embedded mitigation)	Significant (beneficial)
Oligotrophic to mesotrophic standing water	SuDS features improve road runoff water quality in Insh Marshes SAC (embedded mitigation)	Significant (beneficial)
Arctic charr	SuDS features improve road runoff water quality in River Spey – Insh Marshes SSSI (embedded mitigation)	Significant (beneficial)
Cumulative Impacts (Type 2)		
River Spey SAC	It is considered that A9 Dualling Programme drainage design requirements including SuDS, will improve overall water quality being discharged to the River Spey and its tributaries. This will result in Neutral to Large Beneficial Impacts on the River Spey catchment around the A9. Accordingly, operation of the Proposed Scheme and other relevant developments will result in beneficial significant cumulative impacts on water quality in the River Spey catchment.	Significant Beneficial

- 22.1.7 The table above identifies significant beneficial effects; however, it should also be noted that there will be an overall reduction in driver stress (reported in **Chapter 9**), which is one of the key A9 Dualling Programme Objectives.
- 22.1.8 As set out in **Chapter 9**, the dualled road will improve the opportunities for overtaking, which will reduce journey times and frustration. Removal of right turn manoeuvres across the carriageway and inclusion of extended lay-bys with separation strips is anticipated to provide an improvement to safety, further reducing fear and frustration which both contribute to driver stress. Overall, the Proposed Crubenmore to Kincaig A9 Dualling Scheme is predicted to result in safety benefits for vehicle travellers on the A9, and for non-motorised users needing to cross the A9.
- 22.1.9 A number of beneficial impacts are also predicted in terms of reducing flood risk, enabling more natural river morphology by reducing morphological pressures, and in relation to water quality by providing SuDS treatment for road surface runoff.
- 22.1.10 The Proposed Scheme will result in the loss of some soils and habitats to hard standings and excavations associated with the road; however, with adoption of the mitigation developed for the Proposed Scheme there will be benefits achieved through replacement planting with native woodland species, route permeability benefits for mammals and water quality benefits aquatic species.
- 22.1.11 There will be short term landscape and visual impacts given the extent of the construction works; however, the Proposed Scheme follows the route of the existing A9, and it is considered that these effects will reduce over time.
- 22.1.12 When considered in conjunction with legislative compliance, and the need for further consultations and working method agreements with statutory advisors and regulatory bodies, it is recognised that environmental impact controls will continue to be addressed through future detailed design and construction stages.
- 22.1.13 Most impact risks are related to the construction stage and this Environmental Statement, including the Schedule of Mitigation Commitments, will become key contract documents for Contractor compliance.

