

**EC DIRECTIVE 2014/52
ENVIRONMENTAL IMPACT ASSESSMENT (SCOTLAND) REGULATIONS 1999 AS AMENDED
ROADS (SCOTLAND) ACT 1984**

RECORD OF DETERMINATION

<p>Name of Project: A9 Dualling: Killiecrankie to Glen Garry</p>	<p>Location: Killiecrankie to Glen Garry, Perth & Kinross, Scotland.</p>
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Description of Project:

Upgrading of the A9 trunk road to dual carriageway for approximately 21.6km between Killiecrankie and Glen Garry. This project is one of a programme of 11 separate A9 dualling projects proposed between Perth and Inverness. Dualling between Killiecrankie and Glen Garry would be achieved generally through the retention of the existing A9 road and constructing a parallel carriageway, to provide two lanes in each direction. Two grade separated junctions would be provided at Aldclune and Bruar, providing access to Blair Atholl, Calvine, Killiecrankie and Pitagowan. The proposed scheme also includes numerous watercourse crossings via culverts and overbridges, implementation of a new Sustainable Drainage System (SuDS), and new and upgraded local accesses.

Description of Local Environment

The sections below provide a brief description of the local environment in the vicinity of the existing A9. The extent of the areas discussed, or the study areas referred to, vary according to the environmental parameter under consideration. The baseline information is based on review of currently available information; primarily the findings of the DMRB Stage 2 Environmental Assessments (Jacobs, 2016a and Jacobs, 2016b).

People & Communities: Community and Private Assets

The main residential communities along this section of the A9 are Killiecrankie, Aldclune, Blair Atholl, Bruar, Pitagowan and Calvine. In addition there are several residential properties, small holdings and farm steadings along the route of the proposed scheme along with larger scale farm businesses, commercial, tourism and industrial properties. There are multiple community facilities located within the study area which extends to 500m from the existing A9. These include primary schools, a health centre, a post office, village halls and a church.

The land use within the study area is predominantly agricultural, with parcels of forestry and woodland. Farming is intensive arable in the west of the study area and pastoral in the east of the study area. Community land includes public parks and gardens; play spaces; residential, business and transport areas; school grounds; green access routes; allotments; cemeteries and playing fields.

People & Communities: Effects on All Travellers

The Effects on All Travellers assessment considers the impact of the proposed scheme on pedestrians, cyclists, equestrians (referred to as Non-Motorised Users: NMUs), and also on vehicle travellers in terms of changes to views from the existing A9 and the proposed scheme.

The existing A9 between Killiecrankie and Glen Garry is a single carriageway with several northbound and southbound lay-bys and existing junctions located at Blair Atholl associated with the B8079 and Pitagowan/Calvine associated with the B847. Current levels of driver stress for the A9 between Killiecrankie and Glen Garry during peak hours is considered to be moderate, due to driver frustration and fear of accidents.

Located within approximately 1km of the proposed scheme are: 18 core paths, designated in the Perth and Kinross Core Paths Plan (2012) and the Cairngorms National Park Authority Core Paths Plan (2015); four paths designated as public rights of way; and a number of undesignated paths. These routes were recorded as being used by NMUs, particularly recreational walkers and ramblers. During the DMRB Stage 2 Environmental Assessments (Jacobs, 2016a and Jacobs, 2016b) a number of existing NMU crossing points for the existing A9 were identified which include: underpasses, under-bridges and at-grade crossings.

National Cycle Route 7 (NCR7) runs through the study area, linking Glasgow with Inverness.

Geology, Soils and Groundwater

The superficial geology within the study area, which extends approximately 250m from the existing A9, is dominated by glacial till, river terrace deposits and alluvium. Hummocky glacial deposits, glaciofluvial deposits and areas with no superficial deposits are also noted to be present. Underlying the superficial geology is metamorphic bedrock of

Dalradian age belonging to the Argyll, Appin and Grampian Groups. The Glen Garry Geological Site of Special Scientific Interest (SSSI) is located within the study area between Calvine and Dalreoch. In addition, Tulach Hill and Glen Fender Meadows Special Area of Conservation (SAC) and the Tulach Hill SSSI are both located 150m south of the existing A9 and encompass most of the hill ground west of the Pass of Killiecrankie, including the summits of Tulach Hill, Meall na h-Imrich and Craig Fonvuick. The Dalradian bedrock in the form of limestone pavements are listed as one of the qualifying interests for the designation of the SAC. There are no Regionally Important Geological Sites (RIGS) within the study area.

The study area is underlain by a mixture of brown forest soils, humus-iron podzols with some gleys and peat associated with hummocky valley moraines. The majority of soil types occurring in the study area are Class 5 quality, which is defined as land suited only to grass production or rough grazing.

During the DMRB Stage 2 desk based assessments (Jacobs, 2016a and Jacobs, 2016b) 83 potentially contaminated land sources were identified within the study area, comprising land associated with the existing Perth to Inverness railway, septic tanks and disused quarries.

The groundwater within the study area has been classified by SEPA as 'good with high confidence' for both quantity and quality, with no trend of pollutants. There are a number of abstractions for private water supply within the study area.

Road Drainage and the Water Environment

Within a study area of approximately 500m from the proposed scheme, a total of 93 water features were identified at DMRB Stage 2, ranging from large water bodies with European-level designations to minor straightened road and field drains that provide only a functional drainage benefit. Medium and large sized watercourses crossed by the A9 in the study area include the River Garry, Allt Bhaic and Allt Girnaig, which are included within the River Tay SAC designation, as well as others such as Allt a' Chrombaidh and Allt Anndeir.

SEPA holds records of 13 discharge consents within approximately 500m of the proposed scheme (six for private septic tanks, six for various public sewage treatment overflows and one trade effluent discharge for a quarry). There are three private water supply consents from surface waters in the study area.

Existing road drainage treatment in the study area between Killiecrankie and Glen Garry is generally limited, consisting of kerbs and gullies which direct untreated road runoff to the nearest water feature via a piped outfall.

Ecology and Nature Conservation

There are a number of species of conservation interest confirmed within the study area, which extends to approximately 500m from the existing A9, including:

- otters;
- bats (soprano pipistrelle, common pipistrelle and brown long-eared bat);
- bird species (including Schedule 1, UK BAP, LBAP and red/amber listed);
- aquatic species including freshwater pearl mussels, Atlantic salmon, brook lamprey and trout;
- badger; and,
- reptiles (including adder, common lizard and slow worm).

Suitable habitat for the following protected species has also been identified within the study or wider area for the following:

- Scottish wildcat;
- red squirrel;
- pine marten;
- wood ant; and,
- water vole.

Habitats of significance to conservation in the study area include:

- salmonid waters of the River Garry;
- River Tay SAC;
- Struan Wood SSSI;
- Aldclune and Invervack Meadows SSSI;
- Tulach Hill and Glen Fender Meadows SAC;
- Cairngorms Massif Special Protection Area (SPA);
- fragments of Ancient Woodland Inventory (AWI) woodland; and,
- dry dwarf shrub heath.

Landscape

The majority of this section of the A9 passes through the Cairngorms National Park, highly valued for its natural

beauty. The Loch Tummel National Scenic Area, Ben Vrackie Special Landscape Area, Cairngorms Wild Land Area, Tay Forest Park and the Blair Atholl Conservation Area are all partially located within the study area.

There are a variety of vegetation types within the study area including ancient woodland, riparian and roadside vegetation, farmland, parkland, woodland screening and specimen trees.

Twelve Landscape Character Areas (LCAs) were identified at DMRB Stage 2 within the study area, which extends approximately 5km from the existing A9. The study area is characterised by both lowland and highland landscapes with simple and graded hill slopes and ridges enclosing the broad and flat highland glen of the River Garry. The River Garry meanders through the study area and its tributaries form incisions along hill slopes and drain towards the valley with waterfalls and gorges.

Visual

The DMRB Stage 2 Environmental Assessments (Jacobs, 2016a and Jacobs, 2016b) identified 56 viewpoints within the study area, which extends approximately 5km from the existing A9; these are considered to be representative of the range of visual receptors at publically accessible locations. Residential receptors identified included those located in the settlements of Aldclune, Blair Atholl, Bruar/Pitagowan, Calvine, Killiecrankie and Struan/Old Struan in addition to scattered clusters of properties and farmsteads set on the lower hill slopes and along the valley floor. Mobile receptors include users of the Perth-Inverness Railway Line, National Cycle Route 7 (NCR7), the existing A9 and surrounding B roads. The existing A9 is currently visible from a number of these viewpoints.

The existing A9 is a notable feature in many views across Glen Garry as it winds its way along the floor of the glen, although established forestry plantations and mature woodland areas help to provide screening on some sections. The topography of the area generally limits views to within the glen itself, with the rising hills to the north and south helping to screen more distant views into the surrounding area.

Cultural Heritage

The DMRB Stage 2 Environmental Assessments (Jacobs, 2016a and Jacobs, 2016b) identified 79 archeological remains, 96 historic buildings and 16 historic landscape types (including Killiecrankie Battlefield) within the study area which extends approximately 500m from the existing A9. This included six Scheduled Monuments, 51 listed buildings and Blair Atholl Conservation Area.

The area generally has strong evidence of considerable settlement, ritual and battle activity dating from the Neolithic period through the Bronze Age, Iron Age, post-medieval, Jacobian and up to modern day (A WWII Prisoner of War camp was present within the study area). It is considered that there is high potential for the discovery of currently unknown remains of cultural heritage significance within the study area. Should these be identified, their discovery would be added to the records of those that are currently known.

Air Quality

This section of the A9 passes through a rural environment with generally good air quality: levels of pollutants calculated as part of the DMRB Stage 2 Environmental Assessments (Jacobs, 2016a and Jacobs, 2016b) were well below Objectives/Thresholds set by national and international legislation.

There are no Air Quality Management Areas (AQMAs) within the study area, which considers sensitive receptors within 200m of the modelled road links. The closest AQMA is located 40km south and south west in the area of Perth and Crieff. Neither DEFRA nor the local authority (Perth & Kinross Council) operate any monitoring sites within or in the vicinity of the study area.

Noise and Vibration

A variety of residential, industrial, commercial and community facilities are located along the route of the existing A9. The route is generally sparsely populated with small clusters of dwellings which are generally in close proximity to the existing A9, plus the larger settlements of Killiecrankie, Aldclune, Blair Atholl, Bruar, Pitagowan and Calvine. Road traffic using the existing A9 is identified as the primary source of noise along the route. It was estimated in the DMRB Stage 2 report that 495 residential properties are located within the noise calculation area (a 600m buffer around the proposed route, plus existing roads within 1km where noise changes of 1dB were predicted in the opening year). Other sensitive receptors identified include churches, cemeteries, hotels, caravan parks, village halls, bowling/tennis clubs, schools, a war memorial and a museum. There are no designated Candidate Noise Management Areas or Candidate Quiet Areas in or near to the study area.

Materials

Existing ground conditions are set out under Geology, Soils and Groundwater. Registered landfill sites and existing waste landfill capacity information was sourced from the SEPA 'Landfill sites and capacity report for Scotland 2012'. Within the TAYplan Strategic Development Plan (SDP) region there are four active non-hazardous landfills including

Binn Farm Landfill, Border Quarry Landfill, Restenneth Landfill site and Lower Melville Wood Landfill. In addition to the information above, SEPA (2013) 'List of waste sites and capacities in Scotland' indicates that there are 25 operational waste sites in Perth & Kinross local authority area which accept a combination of commercial, special and industrial waste. These facilities do not just cover landfills but include incineration, recycling centres, transfer stations, anaerobic digestion and other treatment facilities.

Description of the main environmental impacts of the project and proposed mitigation

This section provides an overview of the likely potential environmental impacts. General mitigation measures are outlined in the DMRB Stage 2 Environmental Assessments (Jacobs, 2016a and Jacobs, 2016b). Additional mitigation measures will be developed during the development of the DMRB Stage 3 design and as part of the DMRB Stage 3 Environmental Impact Assessment (EIA) process.

People & Communities: Community and Private Assets

The proposed dualling of the A9 between Killiecrankie and Glen Garry will affect a number of private and community assets through land-take and/or severance of access. Land-take will predominantly affect agricultural land. Design refinement at Stage 3 will aim, where practicable, to reduce land-take and provide alternative access arrangements.

People & Communities: Effects on All Travellers

Driver stress is likely to be reduced and views from the road are not considered likely to be significantly affected. The DMRB Stage 3 design will embed mitigation to reduce potential impacts on NMU routes and pathways (including core paths and rights of way), with safety being a key consideration. The significance of these impacts will be assessed at DMRB Stage 3.

Geology, Soils, Contaminated Land and Groundwater

Potential geological impacts are generally anticipated to be negligible. The proposed scheme will result in new rock exposures at the Glen Garry SSSI, and this is subject to ongoing consultation with SNH and the British Geological Society to identify potential impacts and enhancement opportunities.

There are likely to be some potential adverse impacts as a result of land-take and earthworks cut/fill. The impacts of soil compaction from construction traffic and site storage areas, and soil erosion from vegetation stripping for stockpiling were assessed to be of minor significance during the DMRB Stage 2 assessment. Through appropriate mitigation measures (e.g. re-vegetation; reuse of material; adherence to soil stockpile management guidelines) effects can be mitigated, reducing impacts on soil and geology. As noted above, the significance of the potential contaminated land sources will be identified at DMRB Stage 3. Potential groundwater impacts include reduced quantity and quality of groundwater; these will be assessed at DMRB Stage 3 to determine appropriate mitigation, likely to include highways drainage measures or treatment.

Road Drainage and the Water Environment

Potential impacts are anticipated in relation to surface water features in terms of flood risk, changes to fluvial geomorphology and water quality prior to mitigation as a result of construction of culverts, outflows and crossings. Mitigation measures will be considered at DMRB Stage 3, including input to the design to inform aspects such as provision of Sustainable Drainage Systems (SuDS). A range of best practice measures will also be required during construction to avoid or reduce potential for impacts on the water environment.

The DMRB Stage 2 Environmental Assessment (Jacobs, 2016a and Jacobs, 2016b) identified that during operation there may be some small areas of land where there is potential for increase to flood risk, and this is subject to detailed modelling and close working with SEPA to resolve as part of DMRB Stage 3.

Ecology and Nature Conservation

The main impacts on ecology and nature conservation are anticipated to be habitat loss, including loss of mature trees, fragmentation and potential pollution to the River Garry, and its tributaries, which form part of the River Tay SAC. A Habitats Regulations Appraisal (HRA) was undertaken at DMRB Stage 2 and it will be necessary to undertake a HRA during the DMRB Stage 3 assessment.

Some areas of land-take are anticipated to affect woodland listed on the AWI as long established woodland of plantation origin. In addition, potential disturbance of associated protected species within these woodlands may occur. Increased risk of mortality as a result of vehicle strike are also possible for otter, birds, bats and other mammal species.

Mitigation measures will be developed at DMRB Stage 3, and are likely to include design refinement, crossing points under the dual carriageway, and habitat replacement.

Landscape

The proposed scheme will result in the loss of areas of existing mixed woodland and pasture, however the extent of the loss is a relatively small percentage of the habitat type in the wider landscape. The effects on, and loss of, landscape elements within the landscape designations are unlikely to result in significant effects on the special qualities for which these designations are recognised. In respect of landscape character, the effects on defining features are unlikely to be significant given the minor extent of changes associated with the proposed scheme and that the existing A9 is an established feature within the landscape.

Visual

For the majority of the receptor locations within the study area, the proposed scheme is unlikely to result in significant visual impacts, due to the primary focus of views on the expansive and attractive landscape within Glen Garry, the prevalence of roadside vegetation and woodland which provides screening of the A9 from many locations, and the context of the existing A9 corridor which already has a strong influence on current views. Mitigation measures will be considered at DMRB Stage 3, and are likely to include landscape planting to provide integration of the new carriageway and visual screening.

Cultural Heritage

The existing A9 bisects Killiecrankie Battlefield site, and the proposed scheme will result in land-take and the potential for direct impacts on non-designated cultural heritage assets. The proposed scheme is unlikely to have any direct impacts on Listed buildings or Scheduled Monuments, however, effects on setting will need to be considered during the DMRB Stage 3 assessment. The study area has been identified as having high archaeological potential due to the numerous known extant remains; accordingly there is potentially a high risk of impacts on undiscovered archaeological assets.

Mitigation measures will be considered at DMRB Stage 3, and will include avoidance where possible of known sites. It is likely that further archaeological works will be required prior to construction in areas of high archaeological potential, with recording and excavation of finds.

Air Quality

No significant local or global air quality impacts are predicted. The proposed scheme is not expected to significantly increase vehicle movements, however small localised changes in air quality may occur for some properties due to changes in separation distance. During construction, mitigation measures are likely to be required, following best practice for aspects such as dust control.

Noise and Vibration

It is likely that there will be a perceptible increase in noise levels as a result of the proposed scheme particularly for residential properties in proximity to the A9 due to increased traffic speeds as a consequence of the dualling. It is also likely that there will be a decrease in noise levels as a result of the proposed scheme for certain residential properties. The requirement for mitigation will be considered at DMRB Stage 3 based on the noise modelling outputs. During construction, mitigation measures are likely to be required, such as guidance on working hours and avoidance of night-time working where practicable near to residential areas.

Materials

It is anticipated that the proposed scheme will result in the construction of 14 new bridges and two new underpasses and the possible demolition of two existing bridges and three buildings, depending on bridge options selected. The proposed scheme is expected to interact with 16 potentially contaminated sites. These are not expected to be significant impacts.

There is anticipated to be a net requirement to dispose of unsuitable material from the site, and also to import new materials – this will be considered at DMRB Stage 3 during development of aspects such as earthworks. During construction, potential mitigation measures are likely to be required through the implementation of the Site Waste Management Plan and Construction Environmental Management Plan that would detail materials management methods. The plans would be implemented for ongoing environmental management and site waste management during operation.

Policies and Plans

Compliance with individual policies and plans will be considered at DMRB Stage 3, however, due to the potentially

significant impacts noted above, there is potential for some non-compliance with individual policies.

Extent of EIA work undertaken and details of consultation

An EIA will be undertaken for the DMRB Stage 3 Design. To date, the proposed scheme has been designed following a DMRB Stage 2 assessment. DMRB Stage 3 design and full EIA have now commenced, including consideration of potentially significant environmental impacts in the context of the Roads Scotland Act 1984 as amended by the Environmental Impact Assessment (Scotland) Regulations 1999 (as amended)*. Environmental scoping has been undertaken in discussion with all statutory consultees, via the A9 Environmental Steering Group (ESG), and is reported in a Scoping Report (Transport Scotland (2016), A9 Dualling – Perth to Inverness – EIA Scoping Report).

Public and statutory consultations were undertaken during the DMRB Stage 2 assessment, as reported in the DMRB Stage 2 reports (Jacobs, 2016a and Jacobs, 2016b). A number of Stakeholder Forums have been set up to bring together groups of similar interest and to facilitate two-way flow of information. Of particular relevance to the production of the DMRB Stage 2 assessment were the ESG and the Environmental Forum, allowing environmental issues associated with the dualling programme to be fully considered and agreed through the design process. Regular meetings with the ESG and Environmental Forum along with specific consultations with statutory and non-statutory consultees, landowners and the public will continue through DMRB Stage 3 to inform the development of appropriate mitigation for the proposed scheme.

A series of public exhibitions were held in May and June 2015 to present initial DMRB Stage 2 design work, including the proposed route options and junction variants under consideration and provided an opportunity for members of the public to provide comment and feedback on these. Further public exhibitions were held in March 2016 to give local communities and road users the opportunity to view the preferred mainline route between Killiecrankie and Glen Garry. In addition drop in sessions took place in March and September 2015 providing an opportunity for the public to attend informally and either provide information or seek an update on the proposed scheme. Further drop in sessions to provide updates on the DMRB Stage 3 design development have taken place in November 2016 and April 2017 while exhibitions will also be held at the conclusion of the DMRB Stage 3 assessment, concurrent with the publication of draft Orders and Environmental Statement.

* Although the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011 consolidated, updated and replaced Part II of the Environmental Impact Assessment (Scotland) Regulations 1999, Parts III and IV of the 1999 Regulations (as amended) concerning Roads, Bridges and Land Drainage, remain extant.

Statement of case in support of a Determination that a formal EIA and Environmental Statement is required:

Screening Determination:

The proposed scheme falls within the Annex 1 description referred to in the Roads Scotland Act 1984 as amended by the Environmental Impact Assessment (Scotland) Regulations 1999 (as amended):

'...realignment and/or widening of an existing road of two lanes or less so as to provide four or more lanes, where such new road, or realigned and/or widened section of road, would be 10 kilometres or more in a continuous length.'

EIA is mandatory for all Annex 1 developments.

Key elements of the works:

Upgrade of the A9 from single carriageway to dual carriageway, upgrade to road drainage, revisions to local access and provision of two grade separated junctions.

Location of the scheme: Approximately 21.6km of the A9 between Killiecrankie and Glen Garry.

References of supporting documentation:

Jacobs (2016a). A9 Dualling Programme: Killiecrankie to Pitagowan DMRB Stage 2 Scheme Assessment Report Volume 1 – Main Report and Appendices Part 3: Environmental Assessment

Jacobs (2016b). A9 Dualling Programme: Pitagowan to Glen Garry DMRB Stage 2 Scheme Assessment Report Volume 1 – Main Report and Appendices Part 3: Environmental Assessment

Perth & Kinross Council (2012), Core Paths Plan.

Cairngorms National Park Authority (2015). LDP supplementary guidance and core paths plan (Version: 2013).

Transport Scotland (2016). A9 Dualling – Perth to Inverness EIA Scoping Report.

SIGNATURE Transport Scotland Environmental Advisor:

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Date 09 May 2017

Authorisation to publish Notice of Determination

SIGNATURE: Director, MTRIPs:

Date 15/05/17

