

Contents

Volume 1: Main Report

Glossary
Abbreviations

1	Introduction	
1.1	Overview	1
1.2	Background to the Proposed Scheme	1
1.3	Strategic Environmental Assessment	3
1.4	Site Location Overview	3
1.5	The Proposed Scheme	4
1.6	Statutory Context for EIA	4
1.7	Environmental Impact Assessment Report (EIAR)	5
1.8	The Assessment Team	6
1.9	Reviews and Comments	7
1.10	References	8
2	Need for the Scheme	
2.1	Introduction	1
2.2	A9/A96 Inshes to Smithton Scheme	1
2.3	National Context	1
2.4	Local Context	2
2.5	Objectives of the Proposed Scheme	4
2.6	Traffic Conditions	4
2.7	References	5
3	Consideration of Alternatives	
3.1	Introduction	1
3.2	A9/A96 Options Studies	1
3.3	DMRB Stage 2 Options Appraisal	2
3.4	Post DMRB Stage 2: proposed Scheme Design Option Variants	4
3.5	References	5
4	The Proposed Scheme	
4.1	Introduction	1
4.2	Background	1
4.3	Proposed Scheme Design	2
4.4	Traffic Conditions	2
4.5	Outline of the Proposed Scheme	3
4.6	Proposed Scheme Design Details	7
4.7	Construction Methods and Programme	9
4.8	References	11
5	Overview of Assessment Process	
5.1	Introduction	1
5.2	Scope and Guidance	1
5.3	Consultation	4
5.4	Environmental Reporting	4
5.5	References	9
6	Consultation and Scoping	
6.1	Introduction	1

6.2	Approach and Methods	1
6.3	Responses to EIA Scoping Consultation	4
6.4	References	5
7	Air Quality	
7.1	Introduction	1
7.2	Methodology	5
7.3	Baseline Conditions	13
7.4	Potential Impacts	15
7.5	Mitigation	20
7.6	Residual Impacts	20
7.7	Statement of Significance	20
7.8	References	21
8	Noise and Vibration	
8.1	Introduction	1
8.2	Methodology	4
8.3	Baseline Conditions	13
8.4	Potential Impacts	15
8.5	Mitigation	30
8.6	Residual impacts	34
8.7	Statement of Significance	35
8.8	References	36
9	Landscape	
9.1	Introduction	1
9.2	Methodology	3
9.3	Baseline Description and Evaluation	10
9.4	Potential Impacts	21
9.5	Mitigation	22
9.6	Residual Impacts	29
9.7	Statement of Significance	33
9.8	References	34
10	Visual	
10.1	Introduction	1
10.2	Methodology	3
10.3	Baseline Description and Evaluation	10
10.4	Potential Impacts	24
10.5	Mitigation	26
10.6	Residual Impacts	27
10.7	Statement of Significance	35
10.8	References	37
11	Ecology and Nature Conservation	
11.1	Introduction	1
11.2	Methodology	2
11.3	Baseline Conditions	13
11.4	Potential Impacts	30
11.5	Mitigation	31
11.6	Residual Impacts	35
11.7	Statement of Significance	45
11.8	References	45
12	Geology, Soils, Contaminated Land and Groundwater	
12.1	Introduction	1
12.2	Methodology	2
12.3	Baseline Conditions	10

12.4	Potential Impacts	16
12.5	Mitigation	22
12.6	Residual Impacts	24
12.7	Statement of Significance	24
12.8	References	25
13	Road Drainage and the Water Environment	
13.1	Introduction	2
13.2	Methodology	2
13.3	Baseline Conditions	19
13.4	Potential Impacts	36
13.5	Mitigation	51
13.6	Residual Impacts	63
13.7	Statement of Significance	66
13.8	References	67
14	Cultural Heritage	
14.1	Introduction	2
14.2	Legislative and Policy Background	2
14.3	Methodology	2
14.4	Baseline Conditions	8
14.5	Potential Impacts	19
14.6	Mitigation	25
14.7	Residual impacts	27
14.8	Statement of Significance	28
14.9	References	28
15	People and Communities – Community and private Assets	
15.1	Introduction	1
15.2	Methodology	4
15.3	Baseline Conditions	17
15.4	Potential Impacts	22
15.5	Mitigation	31
15.6	Residual Impacts	34
15.7	Statement of Significance	38
15.8	References	39
16	People and Communities – All Travellers	
16.1	Introduction	1
16.2	Methodology	3
16.3	Baseline Conditions	14
16.4	Potential Impacts	26
16.5	Mitigation	32
16.6	Residual Impacts	34
16.7	Statement of Significance	38
16.8	References	38
17	Materials	
17.1	Introduction	1
17.2	Methodology	3
17.3	Baseline Conditions	9
17.4	Potential Impacts	13
17.5	Carbon Assessment	17
17.6	Impact Summary and Magnitude/Significance Evaluation	18
17.7	Mitigation	21
17.8	Residual Impacts	26
17.9	Statement of Significance	26
17.10	References	26

18	Policies and Plan	
18.1	Introduction	1
18.2	Approach and Methods	2
18.3	Summary of Policies and Plans	3
18.4	Assessment of Compliance	12
18.5	Conclusion	22
18.6	References	23
19	Assessment of Cumulative Effects	
19.1	Introduction	1
19.2	Methodology	2
19.3	Potential Cumulative Impacts	5
19.4	Conclusions	19
19.5	References	20
20	Schedule of Environmental Commitments	
20.1	Introduction	1
21	Summary of Residual Impacts	
21.1	Introduction	1

Volume 2: Technical Appendices

1 Introduction

- A1.1 Record of Determination
- A1.2 Statement of Competency

4 The Proposed Scheme

- A4.1 Construction Information

6 Consultation and Scoping

- A6.1 Summary of Consultation Responses

7 Air Quality

- A7.1 Air Quality Dispersion Model Setup
- A7.2 Air Quality Verification and Adjustment
- A7.3 Construction Dust Assessment
- A7.4 Air Quality Receptor Results

8 Noise and Vibration

- A8.1 Noise and Vibration Terminology
- A8.2 Detailed Baseline Noise Survey Results
- A8.3 Predicted Noise Levels
- A8.4 Wider Road Network Assessment
- A8.5 Noise Impacts on Committed Developments
- A8.6 Noise Impacts on Amenity Areas
- A8.7 Noise Sensitive Receptors Nearest to Construction Works

9 Landscape

- A9.1 Landscape Character Areas
- A9.2 Landscape Design Objectives
- A9.3 SuDS Design Principles

10 Visual

- A10.1 Built Receptor Assessment
- A10.2 Outdoor Receptor Assessment

11 Ecology and Nature Conservation

- A11.1 Scientific Names
- A11.2 Baseline Data and Detailed Survey Methods
- A11.3 Confidential Ecology Features

13 Road Drainage and the Water Environment

- A13.1 Flood Risk Assessment
- A13.2 Surface Water Hydrology
- A13.3 Sustainable Drainage Systems (SuDS) and Water Quality
- A13.4 Fluvial Geomorphology
- A13.5 Watercourse Crossings
- A13.6 Water framework Directive and River Basin Management Planning
- A13.7 Hydraulic Modelling

14 Cultural Heritage

- A14.1 Cultural Heritage Baseline Report
- A14.2 Results of Archaeological Geophysical Surveys
- A14.3 Aerial Imagery Analysis
- A14.4 Cultural Heritage Impact, Mitigation and Residual Impact tables

- 15 People and Communities – Community and Private Assets**
 - A15.1 Land Capability Assessment Descriptors
 - A15.2 Farm Business Survey
 - A15.3 Arboricultural Impact Assessment
 - A15.4 Agriculture and Sporting Land: Pre- and Post-Mitigation Impacts
 - A15.5 Planning Application and Development Land Assessment

- 16 People and Communities – All Travellers**
 - A16.1 Impact Assessment for NMU Routes and Access to Outdoor Areas

- 17 Materials**
 - A17.1 Key Materials and Waste Legislation
 - A17.2 Carbon Assessment

- 18 Policies and Plans**
 - A18.1 Planning Policy Context
 - A18.2 Assessment of Compliance

Volume 3: Figures

- 1 Introduction**
 - 1.1 Site Location Overview
 - 1.2 Main Land Use and Environmental Constraints

- 2 Need for the Scheme**
 - 2.1 Traffic Flows Location Plan - Base Year/Do Minimum
 - 2.2 Traffic Flows Location Plan – Base Year/Do Something

- 3 Consideration of Alternatives**
 - 3.1 Consideration of Alternatives – DMRB Stage 2

- 4 The Proposed Scheme**
 - 4.1 The Proposed Scheme

- 5 Overview of Environmental Assessment**
 - 5.1 Stratton: Phases of Development

- 7 Air Quality**
 - 7.1 Air Quality Assessment: Constraints Plan
 - 7.2 Air Quality Assessment: Baseline Nitrogen Dioxide Annual Concentrations (2017)
 - 7.3 Air Quality Assessment: Do-Minimum Nitrogen Dioxide Concentrations (2022)
 - 7.4 Air Quality Assessment: Do-Something Nitrogen Dioxide Concentrations (2022)
 - 7.5 Air Quality Assessment: Change in Nitrogen Dioxide Concentrations

- 8 Noise and Vibration**
 - 8.1 Noise and Vibration Study Area and Calculation Area
 - 8.2 Baseline Noise Monitoring Locations and Sample Receptors
 - 8.3 Noise Level Difference Contour Map (Ground Floor) Do-Minimum Baseline Year Vs Do-Minimum Future Assessment Year
 - 8.4 Noise Level Difference Contour Map (First Floor) Do-Minimum Baseline Year Vs Do-Minimum Future Assessment Year
 - 8.5 Noise Level Difference Contour Map (Ground Floor) Do-Minimum Baseline Year Vs Do-Something Baseline Assessment Year
 - 8.6 Noise Level Difference Contour Map (First Floor) Do-Minimum Baseline Year Vs Do-Something Baseline Assessment Year
 - 8.7 Noise Level Difference Contour Map (Ground Floor) Do-Minimum Baseline Year Vs Do-Something Future Assessment Year
 - 8.8 Noise Level Difference Contour Map (First Floor) Do-Minimum Baseline Year Vs Do-Something Future Assessment Year

- 9 Landscape**
 - 9.1 Local Landscape Character and Landscape Designation Plan
 - 9.2 Proposed Scheme on Aerial Photography
 - 9.3 Landscape Features in the Vicinity of the Proposed Scheme
 - 9.4 Visibility Analysis (Local Landscape Character Areas with Zone of Theoretical Visibility)
 - 9.5 Landscape and Ecological Mitigation
 - 9.6 Cross Sections

- 10 Visual**
 - 10.1 Zone of Theoretical Visibility – Proposed Scheme
 - 10.2 Visual Impact on Built Receptors
 - 10.2 Visual Impact on Outdoor Receptors
 - 10.4 Viewpoint Locations
 - 10.5 -
10.11 Visualisations

- 11 Ecology and Nature Conservation**
 - 11.1 Ecological Designations
 - 11.2 Phase 1 Habitat Survey
 - 11.3 Badger Survey Results (Confidential)
 - 11.4 Bat Roost Survey Results
 - 11.5 Bat Crossing Point Survey Results
 - 11.6 Bat Static Detector Survey Results
 - 11.7 Bird Survey Methods
 - 11.8 Key Farmland Breeding Birds
 - 11.9 Schedule 1 Species (Confidential)
 - 11.10 Wintering Birds
 - 11.11 Otter Survey Results (Confidential)
 - 11.12 Great Crested Newt Survey Results
 - 11.13 Aquatic Survey Results

- 12 Geology, Soils, Contaminated Land and Groundwater**
 - 12.1 Potentially Contaminated Land, Geological and Hydrological Receptors

- 13 Road Drainage and the Water Environment**
 - 13.1 Surface Water Features
 - 13.2 Baseline Flood Risk
 - 13.3 Residual Flood Risk (with Mitigation)
 - 13.4 Drainage Catchments

- 14 Cultural Heritage**
 - 14.1 Locations of Archaeological Remains and Historic Buildings
 - 14.2 Location of Historic Landscape Types
 - 14.3 Potential for Unknown Archaeological Remains

- 15 People and Communities – Community and Private Assets**
 - 15.1 Community Facilities and Land and Commercial/Industrial Properties
 - 15.2 Proposed Scheme Land-take: Agricultural and Sporting Land
 - 15.3 Tree Constraints Plan
 - 15.4 Planning Applications and Development Land
 - 15.5 Change in Vehicle Access

- 16 People and Communities – All Travellers**
 - 16.1 Baseline Conditions
 - 16.2 Potential Impacts on NMU Routes and Proposed Mitigation

- 17 Materials**
 - 17.1 Operational Waste Management Sites

Glossary

'A' weighting dB(A)	The human ear does not respond uniformly to different frequencies. A-weighting is commonly used to simulate the frequency response of the ear.
Abutment	The structure that supports the end of the bridge or supports and retains the bridge approach.
Aggregate	Materials used in construction, including sand, gravel, crushed stone, slag, or recycled crushed concrete.
Air Quality Management Area (AQMA)	A non-permanent designation created if monitoring reveals that statutory air quality thresholds are being exceeded or will be exceeded in the near future.
Alluvial	Loose, unconsolidated soil or sediments, which has been eroded, reshaped by water in some form, and redeposited in a non-marine setting.
Amber list species	Species with unfavourable conservation status in Europe or showing moderate declines or rare or localised in their distribution.
Ambient Noise	The all-encompassing sound at any point in time.
Amenity grassland	Intensively managed and regularly mown grasslands that are typical of golf courses, sports pitches, playing fields and lawns. These grasslands are typically of low diversity and limited wildlife and landscape value.
Amenity value	Defined as the relative pleasantness of a journey and relates in particular to the exposure of pedestrians and others to traffic.
Ammocoete	Larval stage in the life cycle of lamprey.
Amphibian	Any cold blooded animal of the class Amphibia which includes frogs, toads and newts.
Ancient Woodland	Areas of land that appear as wooded on maps dated pre-1750 (in Scotland) and are considered likely to have been continuously wooded from this date.
Ancient Woodland Inventory	Aims to list all probable ancient semi-natural woodlands on a county basis together with those woodlands in other ancient categories of lesser woodland nature conservation interest.
Appropriate Assessment	Determination by an identified competent authority (Scottish Government, informed by SNH) of likely significant effects associated with a development on a European Protected Site. Required by law under Regulation 48 of the Habitats Regulations (1994), implementing Article 6(3) of Habitats Directive (92/43/EEC).
Aquifer	A body of rock through which appreciable amounts of water can flow.
Arable land	Land that is or can be used for growing crops.
Assessment	An umbrella term for description, analysis and evaluation.
At-grade	At the same level.
Attenuation	Increase in duration of flow hydrograph with a consequent reduction in peak flow.

Attribute	Characteristics of an environmental receptor.
Authority area	The area administered by a local authority for example, District Council, City Council or Unitary Authority.
Average Score Per Taxon (ASPT)	Calculated by dividing the Biological Monitoring Working Party (BMWP) score of a sample by the number of scoring families that contributed to the BMWP score of that sample.
Barrier effects	Features such as roads which may impact ecological communities through restriction of movement and habitat alteration, sub-dividing populations with demographic and possibly genetic consequences.
Baseline	The existing conditions which form the basis or start point of the environmental assessment.
Basic Payment Scheme (BPS)	The largest of the European Union's rural grants and payments to help the farming industry.
Bedrock	Hard rock that lies beneath a superficial cover of soils and sediments.
Biodiversity	Biological diversity, or richness of living organisms present in representative communities and populations.
Biodiversity Action Plan (BAP)	Sets objectives, along with measurable targets for the conservation of biodiversity.
Biological Monitoring Working Party (BMWP)	A scoring system for measuring water quality using species of macroinvertebrates as biological indicators, based on the variability in sensitivity of invertebrate groups to different pollutants/pollutant types. Pollution-sensitive taxa are assigned a higher score than pollutant tolerant taxa. The higher the sum of individual taxon scores, the better quality invertebrate communities and the better the water quality.
Broadleaved woodland	An area of woodland with predominantly deciduous tree species (less than 10% coniferous trees in the canopy).
Bryophyte	Phylum of non-flowering plants, with little or no vascular tissue; includes plants such as true mosses and liverworts.
Buffer	A natural, undisturbed strip surrounding a development or land disturbance activity or bordering a stream or permanent water body.
Bund	An embankment, wall or dam that can be used to minimise noise or alternatively built around an oil tank to contain the contents in the event of spillage.
Burn	A small stream.
Catchment	The area contributing flow to a point on a drainage system.
Channel morphology	Physical characteristics of stream channels, such as width/depth ratio and sinuosity, and types of pattern e.g. braided, meandering, straight.
Community	Assemblage of interacting populations that occupy a given area.
Community Conservation Index (CCI)	A conservation indexing protocol for summarising aquatic macroinvertebrate data obtained from inland flowing and still water sites.
Community Severance	Community severance is defined here 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.

Compulsory Purchase Order (CPO)	A legal document giving the government (Scottish Ministers) power to compulsorily purchase the areas of land necessary for construction of the scheme.
Coniferous woodland	An area of woodland with predominantly coniferous tree species (less than 10% deciduous trees in the canopy).
Conservation	Preservation or restoration of the natural environment and wildlife.
Contaminated land	Land in such condition by reason of substances on or under the land that significant harm is being caused, there is a significant possibility of such harm being caused or pollution of controlled water is being, or likely to be caused'.
Core Path	A right of way designated by a Local Authority as being of importance to maintain access and leisure provision.
Couch	Above-ground otter shelter.
Culvert	A metal, wooden, plastic, or concrete conduit through which surface water can flow under or across roads.
Decibel (dB)	The range of audible sound pressures is approximately 0.00002 Pa to 00 Pa. Using decibel notation presents this range in a more manageable form, 0 dB to 140 dB.
Deciduous	Trees and shrubs that shed their leaves annually.
Detention basin	A dry area for temporarily storing water which delays its flow downstream. Includes some water quality benefits. Usually part of SuDS (drainage design).
Displacement	To move something from its natural environment.
Do-Minimum (DM)	The base scenario for assessment purposes, where there are no modifications to the existing road network. May also refer to the minimum modifications, which will necessarily take place in the absence of a proposed scheme.
Do-Something (DS)	The 'with proposed scheme' scenario for assessment purposes,
Drey	The most common squirrel nest type. Comprises a round ball of twigs, leaves and bark. Frequently built close to tree trunk or in branch forks to provide shelter.
Driven shooting	Involves birds being driven over guns by beaters. The guns are stationed in pre-determined positions.
Earthworks	Works created through the moving of quantities of soil or unformed rock.
Ecological Clerk of Works (ECoW)	A qualified ecologist who supervises construction sites, ensuring that ecological impacts are minimised and that the law relating to protected species etc. is complied with.
Ecology	The branch of biology concerned with the relations of organisms to one another and to their physical surroundings.
Ecosystem	A biological community of organisms interacting with one another and their physical environment.
Effect	The result of change or changes on specific environmental resources or receptors.
Environmental Impact Assessment (EIA)	The process by which information about the environmental effects of a project is evaluated and mitigation measures are identified.

Environmental Impact Assessment Report (EIAR)	Document provided by the Developer to the Competent Authority, containing environmental information required under Article 5 of Directive 85/337/EEC, as amended by Directive 97/11/EC and Directive 2014/52/EU.
Fill	Material deposited by man in ground depression or excavated area.
Floodplain	Land adjacent to a river, which is subject to regular flooding.
Flow regime	Combinations of river discharge and corresponding water levels and their respective (yearly or seasonally) averaged values and characteristic fluctuations around these values.
Fluvial geomorphology	The study of landforms associated with river channels and the sediment processes which form them.
Footprint	The geographical extent of an ecological impact.
Foraging	Searching for food or provisions.
Fragmentation	Breaking up of an organisms habitat into smaller fragments that may vary in size.
Freshwater	Bodies of water such as ponds, lakes, rivers and streams containing low concentrations of dissolved salts and other total dissolved solids.
Geomorphology	The branch of geology concerned with the structure, origin and development of topographical features of the earth's crust.
Geophysical survey	Geophysical survey is a non-intrusive pre-construction archaeological evaluation technique that exploits a variety of physical or chemical characteristics of rocks and soils etc, in an attempt to locate underground features of archaeological interest. Types of geophysical survey include magnetometer survey, magnetic susceptibility survey and resistivity survey.
Glacial Till	Glacial till is that part of glacial drift which was deposited directly by the glacier. It may vary from clays to mixtures of clay, sand, gravel and boulders.
Glaciofluvial	Pertaining to streams fed by melting glaciers, or to the deposits and landforms produced by such streams.
Green list species	Bird species with no identified threat to their population status.
Ground Investigation	Exploratory investigation to determine the structure and characteristics of the ground. The collected information is used to establish or predict ground and groundwater behaviour during, and subsequent to, construction.
Groundwater	Water below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
Habitat	Term most accurately meaning the place in which a species lives, but also used to describe plant communities or agglomerations of plant communities, as used, for example in a Phase 1 Habitat Survey.
Habitat fragmentation	Describes the breaking up of an organisms preferred environment/habitat. Occurs naturally through geological processes that alter the layout of the physical environment over long periods of time, or through human activities, such as land conversion.
Habitat Regulations Appraisal (HRA)	The process by which certain plans or projects are assessed which could affect the integrity of European sites. The report is used to inform an Appropriate Assessment (AA) under the requirements of the Habitats Directive.
Habitats Directive	EC Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora.

Highways Agency Water Risk Assessment Tool (HAWRAT)	A Microsoft Excel application which assesses the effects of routine road runoff and accidental spillage risk to receiving water features.
Heavy Goods Vehicle (HGV)	Vehicles with 3 axles (articulated) or 4 or more axles (rigid and articulated).
Hibernation	Extended period of torpor undertaken during winter.
Holt	Deep underground otter shelter.
Hydraulic	Of, relating to, or operated by the force of liquid in motion.
Hydrocarbon	A chemical compound of hydrogen and carbon.
Hydrogeology	Branch of geology dealing with occurrence, distribution, and effect of groundwater.
Hydrological	The exchange of water between the atmosphere, the land and the oceans.
Impact	Any changes attributable to the proposed scheme that have the potential to have environmental effects (i.e. the causes of the effects).
Impermeable	Material that does not allow fluids to pass through it.
Improved grassland	Grasslands that have been so modified by fertilisers, drainage or grazing that they have lost most of the species expected in unimproved grassland.
Incidental sighting	Casual observation of a plant or animal of one or more species recorded by whilst performing a non-relevant ecological survey.
Infrastructure Investment Plan (IIP)	Scottish Government document which sets out why we need to invest, how we invest and what strategic, large scale investments we intent to take forwards within each sector over the next 10 to 20 years.
Interim Advice Note (IAN)	Guidance notes issued by Highways England which should only be used in connection with works on motorways and trunk roads.
Invertebrate	An animal without a backbone.
LAeq	Equivalent Continuous Sound Level. A notional steady sound level which would cause the same A-weighted sound energy to be received as that due to the actual, possibly fluctuating, sound level over a given period of time.
Landform	Combination of slope and elevation producing the shape and form of the land surface.
Landscape	Human perception of the land, conditioned by knowledge and identity with a place.
Land-take	Acquired land which is necessary to construct the proposed scheme and associated infrastructure and to undertake the essential environmental mitigation measures.
Land allocation	A proposal for land for housing, industry or other uses within a Local Plan that identifies a specific area of land to be developed within the time period of the plan.
Lateral connectivity	Hydrologic connectivity is defined as the condition by which disparate regions on the hillslope are linked via subsurface water flow. Lateral refers to the spatial dimensions of riverine/riparian/floodplain habitats.

Latrine	Dung pit left by a badger.
Lichen	A group of complex organisms, which are formed from the symbiotic association of a fungus and an alga.
Listed Building	Building included on the list of buildings of special architectural or historic interest and afforded statutory protection under the 'Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997' and other planning legislation. Classified categories A-C.
Lithology	The study of rocks, with particular emphasis on their colour, texture, and composition.
Local Landscape Character Area (LLCA)	An area outlined as having distinct characteristics based on landscape features. Derived from regional landscape studies available from SNH.
Macroinvertebrate	An animal without a backbone that can be seen with the naked eye, for example, snails, waterfleas, shrimps or insects.
Made ground	Ground comprised of material deposited by man i.e. not natural.
Magnitude	Size, extent, scale and duration of an impact.
Migration	The movement (of an animal) from one habitat to another according to the seasons.
Mineral extraction	The removal of a naturally occurring solid formed through geological process that has a characteristic chemical composition, a highly ordered atomic structure and specific physical properties.
Mitigation	Measure to avoid, reduce or offset potential adverse impacts.
National Vegetation Classification (NVC)	A system to describe British vegetation types, whereby each vegetation type has a different 'code'.
Native	A species occurring in its normal geographic range (not introduced).
Non-motorised users	Pedestrians, cyclists and equestrians.
Non-prime land	Agricultural land of Land Capability for Agriculture (LCA) classes 3.2 to 7.
Notable species	Species which are below Red Data Book species in terms of threat status.
Offsetting	The process of compensating for something with something else.
Open space	Any land laid out as public parks or used for the purpose of public recreation, or land which is a disused burial ground.
Outfall	The place of discharge e.g. where a sewage pipe discharges into a river.
Pasture	An area of grassland (or other suitable plants) used to feed grazing animals.
Peatland	Land where plant decomposes only partially and accumulates to form brown to black organic material called peat; the two main types are bogs and fens.

Phase 1 Habitat Survey	This identifies the different habitats that are contained within or make up a site, and the key plant species for each of those habitat types.
Pile/Piling	A heavy stake or post made out of timber, steel, reinforced concrete or pre-tensioned concrete, driven into the ground to support foundations.
Planning Advice Note (PAN)	Supporting document to National Planning Policy Guidelines, which disseminates good practice and provides more specific design advice of a practical nature.
Plantation woodland	Woodland of any age that obviously originated from planting.
Potential Impact	The impact on an aspect of the environment that may occur in the absence of mitigation.
Prime agricultural land	Agricultural land of Land Capability for Agriculture (LCA) classes 1, 2 and 3.1.
Priority species	Those which have been identified as being most threatened and requiring actions under the UK Biodiversity Action Plan.
Proposed Scheme	The scheme design as reported in Chapter 4 of the EIAR, and used as the basis for environmental assessment and reporting.
Qualitative	Concerned only with the nature of the organism/substance being investigated.
Quantitative	Concerned with the number, as well as nature of the organism/substance being investigated.
Ramsar sites	Internationally important wetland identified for conservation under the RAMSAR Convention 1971.
Receptor	In this context, an element that is susceptible to being affected (either directly or indirectly) by the proposed scheme. Examples include habitats, species, people, properties, landscape, archaeological remains etc.
Red Data List	The IUCN Red List of Threatened Species™ provides taxonomic, conservation status and distribution information on plants and animals that have been globally evaluated using the IUCN Red List Categories and Criteria. Designed to determine the relative risk of extinction, and to catalogue and highlight those plants and animals that are facing a higher risk of global extinction (i.e. those listed as Critically Endangered, Endangered and Vulnerable).
Red list species	Bird species in severe population decline. Or globally threatened.
Regionally Important Geological Sites (RIGS)	Sites designated by regional geological groups on locally developed criteria, currently the most important places for geology and geomorphology outside statutorily protected land such as SSSIs.
Residual impact	Residual impact means the environmental impact after the provision of mitigation measures, if any.
Retention Pond	A wet area for temporarily storing water which delays its flow downstream. Includes some water quality benefits. Usually part of SuDS (drainage design).
Riffle	A shallow section of a river/stream where the water is fast-flowing over a gravel/cobble substrate.
Right of way	A public right of way is a defined route which has been used by the general public for at least 20 years and which links two public places (usually public roads).
Riparian habitat	Natural home for plants and animals occurring in a thin strip of land bordering a stream or river.

River Basin District	The area of land and sea, made up of one or more river basins, together with the associated groundwater and coastal waters, identified by the Water Framework Directive as the main unit for the management of river basins.
River Basin Management Plan (RBMP)	A plan setting out actions required within a river basin to achieve set environmental quality objectives, reviewed on a six yearly basis.
Roost	Any resting site used by bats including maternity roosts which are used by females and their young, hibernacula which are used during winter hibernation and transitional roosts which may be used at any time.
Runoff	Water that flows over the ground surface to the drainage system. This occurs if the ground is impermeable or if permeable ground is saturated.
Salinity	The saltiness or dissolved salt content of a body of water.
Salmonid	Pertaining or belonging to the family Salmonidae (salmon, trout and charr).
Scheduled Monument (SM)	A monument which has been scheduled by the Scottish Ministers as being of national importance under the terms of the 'Ancient Monuments and Archaeological Areas Act 1979'.
Scottish Planning Policy (SPP)	A statement of Scottish Government policy on nationally important land use.
Scour	A depression or hole left when sediment is washed away from the bottom of a river.
Scrub	Vegetation dominated by locally native shrubs, usually less than 5m tall.
Sediment	Material carried in particles by water or wind and deposited on the land surface or seabed.
Sedimentation	The deposition or accumulation of sediment.
Semi-natural woodland	Woodland that does not obviously originate from planting. The distribution of species will generally reflect the variations in the site and the soil. Planted trees must account for less than 30% of the canopy composition.
Sett	The burrow system of badgers comprising a series of underground tunnels and chambers. There are several categories of sett including a main sett, annexe sett, subsidiary sett and outlier sett.
Severance	The separation of communities from facilities and services used within their community. Alternatively, in relation to agricultural land, the division of land into separate areas, potentially affecting access or availability for agricultural use.
Site compound	A secure area close to the construction site which provides full site services including storage for equipment, materials and fuel, offices and amenity areas.
Sites of Special Scientific Interest (SSSI)	Designated areas of national importance. The aim of the SSSI network is to maintain an adequate representation of all natural and semi-natural habitats and native species in the UK. The site network is protected under the provisions of Sections 28 and 19 of the Wildlife and Countryside Act 1981 as well as the Amendment Act 1985 and the Environmental Protection Act 1990.
Spawning	The process of egg release into the water by aquatic animals.
Special Area of Conservation (SAC)	An area designated under the EC Habitats Directive to ensure that rare, endangered or vulnerable habitats or species of community interest are either maintained at or restored to a favourable conservation status.

Special Protection Area (SPA)	An area designated under the Wild Birds Directive (Directive 2009/147/EC) to protect important bird habitats.
Specific impact	A forceful consequence or strong effect to something particular or unique.
Spraint	Otter faeces.
Stakeholder	A person or group that has an investment, share or interest in something.
Strategic Environmental Assessment (SEA)	The process by which information about the environmental effects of proposed plans, policies and programmes are evaluated.
Strategic Transport Project Review (STPR)	A two year review of the Scottish transport network being undertaken by Transport Scotland. It aims to identify and prioritise road, rail and other interventions of national significance, which will be taken forward to improve the network. Through selecting which transport projects of national significance should be progressed, the STPR would also affect regional and local transport networks.
Substrate	An underlying substance or layer.
Sustainable Drainage Systems (SuDS)	A sequence of management practices and control structures designed to drain surface water in a more sustainable fashion than some conventional techniques.
Taxa	Plural of taxon.
Taxon	A taxonomic group of any rank.
Terrestrial	The environment above the mean high water spring
Threshold	The minimum intensity or value of a signal etc that will produce a response or specified effect.
Turbid	High concentrations of suspended sediment and particulates in the water column.
Vascular plants	Higher plants, including flowering plants, conifers and ferns. They are characterised by the possession of specialized tissues (vascular tissue) for the translocation of substances around the plant.
Velocity	A measure of the speed and direction of an object.
Vulnerable groups	In environmental assessment, generally children, elderly and disabled.
Water Framework Directive (WFD)	European environmental legislation (2000/60/EC) relating to inland surface waters, estuarine and coastal waters and groundwater. Fundamental objective to maintain "high status" of waters where it exists, preventing any deterioration in the existing status of waters and achieving at least "good status" in relation to all waters by 2015.
Water quality	The chemical and biological status of various parameters within the water column and their interactions, for example dissolved oxygen, indicator metals such as dissolved copper, or suspended solids (the movement of which is determined by hydrological process and forms geomorphological landforms).
Zone of Theoretical Visibility (ZTV)	The process of determining the visibility of an object in the surrounding landscape. The process is objective in which areas of visibility or non-visibility are determined by computer software using a digital elevation dataset.

Abbreviations

AA	Appropriate Assessment
AADT	Annual Average Daily Traffic
AAWT	Average Annual Weekday Traffic
ACOP	Approved Code of Practice
ADS	Advance Directional Signs
ADMS	Air Dispersion Model Software
AEP	Annual Exceedance Probability
AIA	Arboricultural Impact Assessment
AOD	Above Ordnance Datum
APR	Air Quality Progress Report
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQO	Air Quality Objectives
AQS	Air Quality Strategy
ARN	Affected Road Network
ASPT	Average Score Per Taxon
AURN	Automatic Urban and Rural Network
AWI	Ancient Woodland Inventory
BAP	Biodiversity Action Plan
BCR	Benefit to Cost Ratio
BGS	British Geological Survey
BMTD	Base Model Traffic Data
BMWP	Biological Monitoring Working Party
BPS	Basic Payment Scheme

BRE	Building Research Establishment
BSBI	Botanical Society of Britain and Ireland
BTO	British Trust for Ornithology
CAR	Water Environment (Controlled Activities) (Scotland) Regulations 2005
CC	Climate Change
CCI	Community Conservation Index
CD&E	Construction, Demolition and Excavation
CEH	Centre for Ecology and Hydrology
CEMP	Construction Environmental Management Plan
ch	Chainage
CIA	Cumulative Impact Assessment
CIEEM	Chartered Institute for Ecology and Environmental Management
CIEH	Chartered Institute of Environmental Health
CIRIA	Construction Industry Research and Information Association
CMS	Carbon Management System
CMS	Continuous Monitoring Station
CO₂	Carbon Dioxide
CO_{2e}	Carbon Dioxide Equivalent
CP	Crossing Point
CPO	Compulsory Purchase Order
CROW	Catalogue of Rights of Way
CRTN	Calculation of Road Traffic Noise
CSM	Conceptual Site Model
CTC	Cycle Touring Club
C4SL	Category 4 Screening Levels
dB	Decibel

DEFRA	Department of the Environment, Food and Rural Affairs
DFT	Department for Transport
DM	Do-Minimum
DMP	Dust Management Plan
DMRB	Design Manual for Roads and Bridges
DMU	Dry Mammal Underpass
DPEA	The Planning and Environment Appeals Division
DS	Do-Something
DTM	Digital Terrain Model
EC	European Commission
EcIA	Ecological Impact Assessment
ECoW	Ecological Clerk of Works
eDNA	Environmental DNA
EHO	Environmental Health Officer
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMP	Environmental Management Plan
EnvCoW	Environmental Clerk of Works
EPS	European Protected Species
EQS	Environmental Quality Standards
ES	Environmental Statement
EU	European Union
FRA	Flood Risk Assessment
FRM	Flood Risk Management (Scotland) Act 2009
FWPM	Freshwater Pearl Mussel
GAC	Generic Assessment Criteria

GCN	Great Crested Newt
GCR	Geological Conservation Review
GDL	Gardens and Designed Landscape
GEP	Good Ecological Potential
GES	Good Ecological Status
GI	Ground Investigations
GIS	Geographic Information System
GLVIA3	Guidelines for Landscape and Visual Impact Assessment 3rd Edition (2013)
GPP	Guidance for Pollution Prevention
GWDETE	Groundwater Dependent Terrestrial Ecosystems
ha	Hectare
HAWRAT	Highways Agency's Water Risk Assessment Tool
HDV	Heavy Duty Vehicle
HEPS	Historic Environment Policy for Scotland
HES	Historic Environment Scotland
HER	Historic Environment Record
HET	Historic Environment Team
HGV	Heavy Goods Vehicle
HIE	Highland and Islands Enterprise
HITRANS	The Highlands and islands Transport Partnership
HLT	Historic Landscape Type
HRA	Habitat Regulations Appraisal (or Assessment)
HSE	Health and Safety Executive
HSI	Habitat Suitability Index
HwLDP	Highland-wide Local Development Plan
IAN	Interim Advice Note

IAP	Inverness Access Panel
IAQM	Institute of Air Quality Management
ICE	Institution of Civil Engineers
IEDP	Inverness East Development Brief
IEEM	Institute of Ecology and Environmental Management
IEMA	Institute of Environmental Management and Assessment
IIP	Infrastructure Investment Plan
IMFLDP	Inner Moray Firth Local Development Plan
INNS	Invasive Non-Native Species
IRDB	Inshes and Raigmore Development Brief
JLA	Journey Length Assessment
JMT	John Muir Trust
JNCC	Joint Nature Conservation Council
JTC	Junction Turning Count
km/h	Vehicle speed, kilometres per hour
KPI	Key Performance Indicators
LAQM	Local Air Quality Management
LBAP	Local Biodiversity Action Plan
LCA	Land Capability for Agriculture
LCT	Landscape Character Type
LDP	Local Development Plan
LED	Light Emitting Diodes
LEL	Lower Explosive Limit
LGS	Local Geodiversity Sites
LIDAR	Light Detection and Ranging
LIFE	Lotic Invertebrate Index for Flow Evaluation

LLCA	Local Landscape Character Area
LMA	Land Made Available
LNRS	Low noise Road Surfacing
LTT	Long Term Trends
MACS	Mobility and Access Committee Scotland
mBGL	Metres Below Ground Level
MFTM	Moray Firth Transport Model
MLURI	Macauley Land Use Research Institute
MMC	Modern Methods of Construction
NAEI	National Atmospheric Emissions Inventory
NBFT	Ness and Beaully Fisheries Trust
NBN	National Biodiversity Network
NCR	National Cycle Route
NFUS	National Farmers Union of Scotland
NHBC	National House Building Council
NISR	The Noise Insulation (Scotland) Regulations
NMU	Non-Motorised User
NNG	Night Noise Guidelines
NO	Nitrous Oxide
NO₂	Nitrogen Dioxide
NO_x	Oxides of Nitrogen
NPF3	National Planning Framework 3
NSR	Noise Sensitive Receptor
NTAXA	Number of Scoring Taxa
NTS	National Transport Strategy
NTS	National Trust for Scotland

NTS	Non-Technical Summary
NVC	National Vegetation Classification
NWSS	Native Woodland Survey of Scotland
OS	Ordnance Survey
PAN	Planning Advice Note
PCM	Pollution Climate Mapping
PLI	Public Local Inquiry
PM	Particulate Matter
PPC	Pollution, Prevention and Control
PPE	Personal Protective Equipment
PPG	Pollution Prevention Guidelines
PPP	Planning Permission in Principle
PSI	Proportion of Sediment-Sensitive Invertebrates
pSPA	Proposed Special protection Area
PWS	Private Water Supply
RBMP	River Basin Management Plan
RICT	River Invertebrate Classification Tool
RIGS	Regionally Important Geological Sites
RoD	Record of Determination
ROW	Right of Way
RPA	Root Protection Area
RPV	Root Protection Value
RSPB	Royal Society for the Protection of Birds
RTS	Regional Transport Strategy
SAC	Special Area of Conservation
SBL	Scottish Biodiversity List

SBS	Scottish Biodiversity Strategy
ScARF	Scottish Archaeological Research Framework
SCFAS	Smithton and Culloden Flood Alleviation Scheme
SEA	Strategic Environmental Assessment
SEPA	Scottish Environment Protection Agency
SLDT	Short Limited Duration Tenancy
SNH	Scottish Natural Heritage
SM	Scheduled Monument
SOAN	Scottish Outdoor Access Network
SPA	Special Protection Area
SPP	Scottish Planning Policy
SSSI	Site of Special Scientific Interest
STAG	Scottish Transport Appraisal Guidance
STPR	Strategic Transport Project Review
SuDS	Sustainable Drainage Systems
SWF	Surface Water Feature
SWMP	Site Waste Management Plan
SWT	Scottish Wildlife Trust
SY15	Summer 15 Years
S4UL	Suitable for Use Limits
TAN	Technical Advice Note
tCO₂e	Total Embodied Carbon
TPO	Tree Preservation Order
TRL	Transport Research Laboratory
TS	Transport Scotland
UEL	Upper Explosive Limit

UHI	University of the Highlands and Islands
VfM	Value for Money
VP	Vantage Point
WANE	Wildlife and National Environment (Scotland) Act 2011
WCA	Wildlife and Countryside Act 1981
WEL	Workplace Explosive Limit
WEWS	Water Environment and Water Services (Scotland) Act 2003
WFD	Water Framework Directive
WHO	World Health Organisation
WHPT	Whalley, Hawkes, Paisley and Trigg
WML	The Waste Management Licensing (Scotland) Regulations 2011
WRAP	Waste and Resources Action programme
WVI	Wildlife Vehicle Incident
WYO	Winter Year of opening
ZTV	Zone of Theoretical Visibility