KILFINNAN ROAD UPGRADE –COIRE GLAS
EIA SCOPING REQUEST

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REPORT VERSIONS

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1 Introduction & Background

This Environmental Impact Assessment (EIA) Scoping Report has been prepared by Stantec UK on behalf of Coire Glas Hydro Pumped Storage Ltd. ('the Applicant') regarding the proposed series of upgrades to Kilfinnan Road, which is the main access to the lower control works and tunnel portals for the approved Coire Glas Pumped Storage Hydro Scheme ('Coire Glas').

1.1 Site location

The approved Coire Glas scheme is located above the north-west shore of Loch Lochy in Lochaber. The lower works site will be located in the Clunes Forest close to the shore of Loch Lochy, to facilitate these works, additional vehicular traffic including abnormal load movements will travel from the A82 along Kilfinnan Road.

Kilfinnan Road is typically a single-track road, approximately 3.5m wide with passing places at different locations. The road itself is low lying, cut into the slope of the hill, and is undulating with grass verges along most of its route. At various points, the road abuts commercial forestry or other vegetation, property fences, and crosses over a number of watercourses. The character of the surrounding land is rural in nature with a small number of residential dwellings, farm steadings and tourist accommodation located along it.

Kilfinnan Road forms part of the Great Glen Way, a national long-distance route used by walkers, cyclists, and horse riders. It also serves as the Caledonia Way or NCN78 Oban to Inverness route. The extent of the land affected by the development proposal is 4.6km approximately as can be seen from the aerial image below, and comprises the areas of land outlined in red shown on the Construction Boundary Plan in Appendix A.

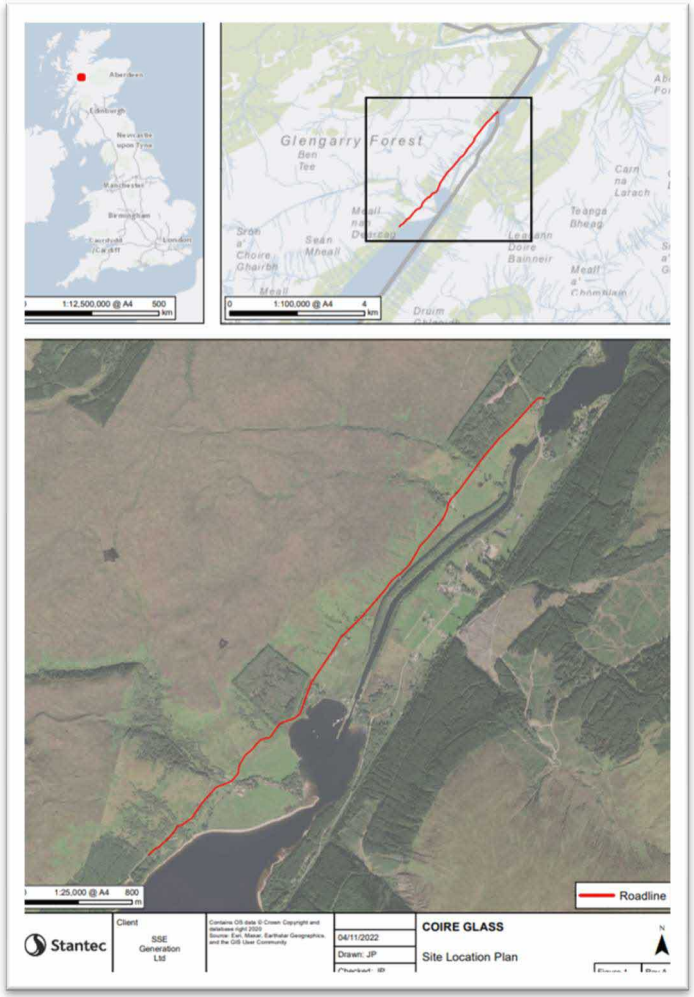

Figure 1.1 - Site Location Plan

1.2 Overview

Consent for Coire Glas was issued in October 2020 (ref. ECU00000577) via Section 36 of the Electricity Act 1989, with a deemed planning permission under Section 57(2) of the Town and Country Planning (Scotland) Act 1997. The permission included access from the A82 east of the Site along Kilfinnan Road and allows for the upgrade of the existing road. However, ongoing design development has identified a preferred layout, which would provide certainty at this stage of being able to accommodate all vehicle movements expected to be required for the delivery of the project. This would require several departures from the current alignment, which although relatively minor, are deemed by The Highland Council (THC) to sit beyond the remit of upgrades allowed by the current consent, and therefore a separate planning application would be required.

1.3 Screening Opinion

On 26th July 2022 the Highland Council issued an EIA Screening opinion (see Appendix D) in accordance with the 2017 EIA Regulations. The Screening Opinion confirmed that EIA would be required:

> *The proposal does fall within the definition of 'Schedule 2 development' (Regulation 2 - Interpretation), in that it meets and/or exceeds the threshold for a change or extensions of development that is already authorised, executed or in the process of being executed (Schedule 2 (13)) and Infrastructure Projects (Schedule 2 (10f)).*

As such, the Applicant now wishes to proceed with an application for planning permission for this purpose along Kilfinnan Road to facilitate the construction of the consented Coire Glas Pumped Storage Hydro (PSH) project. Consequently, the Applicant will undertake an EIA to accompany the planning application in accordance with the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017.

1.4 Scoping

This report serves as a request for a Scoping Opinion from The Highland Council regarding an EIA for the Proposed Development. Accordingly, the remainder of this document sets out the intended scope of an EIA which will be undertaken for the proposal. The EIA will be reported within an Environmental Impact Assessment Report accompanying any planning application or applications for the proposed.

In common with adopted best practice, this report is set out on a topic-by-topic basis and includes the following structure in respect of each environmental aspect considered to be of potential relevance to the Proposed Development.

- Introduction & Background
- Description of Proposed Development
- Policy & Legislative Context
- Approach to EIA
- Ecology & Biodiversity
- Noise & Vibration
- Air Quality
- Hydrogeology, Flood Risk and Drainage
- Landscape & Visual
- Traffic and Transport
- Proposed Mitigation
- Residual Impact
- Cumulative Impact

The assessment methodologies within this Scoping Report are based on recognised good practice and guidelines specific to each environmental aspect.

For the purpose of this Scoping Report, cumulative effects of the Proposed Development relate to the interaction of environmental effects from this proposal with effects from the Coire Glas PSH scheme. As part of the EIA scoping exercise, subsequent consultation and ensuing design it is intended that other projects of relevance will be identified and, where appropriate, the cumulative impacts of development will be assessed in the EIA Report.

1.5 Proposed Consultation

Intended consultees are identified in each chapter and are summarised in Appendix C.

2 Description of Proposed Development

2.1 Site Location, Context and Access

Kilfinnan Road is typically a single-track road, approximately 3.5m wide with passing places at different locations. The road itself is low lying, cut into the slope of the hill, and is undulating with grass verges along most of its route. At various points, the road abuts commercial forestry or other vegetation, property fences, and crosses over a number of watercourses.

The character of the surrounding land is rural in nature with a small number of residential dwellings, farm steadings and tourist accommodation located along it. As mentioned, Kilfinnan Road forms part of the Great Glen Way, a national long-distance route used by walkers, cyclists, and horse riders. It also serves as the Caledonia Way or NCN78 Oban to Inverness route.

The extent of the land affected by the development proposals is approximately 4.6km and for the purpose of this EIA Scoping Report, the area of intended works has been set at a maximum of circa 37.8ha as outlined in red on the enclosed site location plan provided in Appendix A.

2.2 Relevant Site History

Consent for Coire Glas was issued in October 2020 (ref. ECU00000577) via Section 36 of the Electricity Act 1989, with a deemed planning permission under Section 57(2) of the Town and Country Planning (Scotland) Act 1997. The permission included access from the A82 east of the Site along Kilfinnan Road and allows for the upgrade of the existing road. Ongoing design development has identified a preferred route layout, but deemed by THC to sit beyond the remit of the current consent, and therefore a separate planning application would be required.

No further planning applications have been submitted along the proposed Kilfinnan Road route in the preceding two years since the approval of the extant Coire Glas consent.

2.3 Relevant Environmental Characteristics and Designations

The site is situated within an area with notable environmental characteristics, including the Caledonian Canal, a scheduled monument, and wider Lochaber Geopark. The site also falls within the Loch Lochy and Loch Oich Special Landscape Area (SLA). In addition, the Great Glen Way, one of Scotland's Great Trails, follows the western shore of Loch Lochy. The site sits entirely within the Blar Na Lelne Inventory Battlefield designation. Further, there are no ecological assets or designations present within the Site.

Scottish Environment Protection Agency (SEPA) flood mapping confirms flood extents are typically confined to the watercourse and loch corridors. A slightly wider extent of flooding is noted near Ceann Loch.

In relation to planning policy, the Site is covered by the adopted Highland Wide Local Development Plan (2012) and West Highland and Islands Local Development Plan (2019).

Relevant Environmental Characteristics and Designations

Land surrounding the Site is predominantly either agricultural, grassland or rural settlements. The watercourse of Loch Lochy, together with the Caledonian Canal are the most notable features in the immediate area. To the west is elevated hill land and forestry.

In addition to those which cover the Site, environmental assets and designations present within the surrounding area include:

- Multiple recreational routes passing through Gairlochy and along Loch Lochy, including Core Paths and the Great Glen Way National Trail.
- Listed Buildings / Scheduled Monuments / Historic Battlefield

2.4 Proposed Development

Key Elements

The proposal is to improve, modify and widen sections of approximately 4.6km of roadway from the junction with the A82 trunk road to the forestry gate connection with the forest track that serves the lowers works area of Coire Glas. This includes adopted public road as well as a non-adopted road section between Kilfinnan Bridge and the forestry track. The total site area including any working corridor will be 37.8ha. The proposal includes the following works:

- Widening of junction with the A82 will be required to achieve the required swept path for abnormal loads. The embankment immediately north of the junction will require some modification for this to be achieved and to ensure the adjacent residential properties are not affected by any abnormal load movements;
- During construction, an offline temporary diversion road for use by residents and visitors to the area immediately south of Kilfinnan Road is proposed to avoid pinch points along the route due to current road topography and geometry. The road will be reinstated following the completion of the road construction works. This temporary road will also bypass Cruinneachaidh Bridge and Oighre Bridge due to space constraints and need to maintain safe access for road users when replacing the existing structures.;
- Offline construction of new sections of road where the existing road geometry and local physical constraints are unsuited to upgrade works;
- A new bridge across the Kilfinnan Burn will be required. The existing bridge will be strengthened as part of the exploratory works to ensure its structural capacity is not adversely affected by traffic movements required for site enabling activities;
- A working construction corridor will be required along the route for maintaining access to road users, development activity, spoil and materials storage and site compounds; and
- Online verge widening and localised works along the road length, tying up with existing accesses.
- Road upgrades including modifications to the horizontal and vertical alignment, installation of drainage and associated earthworks/engineering as required to construct the road

Embedded Mitigation Measures

As detailed above, the site and surrounding area contain a number of environmental sensitivities which have the potential to interact with the proposal. However, the proposal will be sited and designed to respond to its environmental context and to minimise the potential for adverse effects on sensitive receptors. In accordance with Regulation 8(3) of the 2017 EIA Regulations, a framework of design principles and environmental mitigation measures is being applied to guide the detailed design and construction of the proposal in order to avoid or prevent any likely significant environmental effects.

The implementation of all embedded mitigation measures requires to be confirmed through the content of the planning application and any subsequent planning permission granted for the proposal.

In accordance with Regulation 8(3) of the 2017 EIA Regulations, any measures proposed at this stage to avoid or prevent significant adverse effects on the environment must be taken account of when determining this EIA Scoping Report. Embedded mitigation is described in each of the topics later in this report.

3 Policy and Legislative Context

3.1 Legislative context

The Environmental Impact Assessment Regulations

The preparation of an EIA for development projects such as this in Scotland is governed by the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017.

Where an EIA is required, environmental information must be provided by the developer in an EIA Report. Schedule 4 of the Regulations specifies the information that must or may be provided in such a Statement.

Obtaining a Scoping Opinion

Under Regulation 17, the developer of an EIA development may ask the Planning Authority before submitting an application for planning permission, to state in writing their opinion as to the information to be provided in the EIA Report (i.e. to provide a 'scoping opinion').

The request for a scoping opinion must be in writing and should include basic information on the Proposed Development as set out below:

- a plan sufficient to identify the land;
- a brief description of the nature and purpose of the Proposed Development and its possible effects on the environment; and
- such further information or representations as the person making the request may wish to provide or make.

This information is presented in this Scoping Report.

3.2 The Environmental Impact Assessment Process

The Environmental Impact Assessment (EIA) is a process which identifies the likely significant environmental effects of a development and then seeks to avoid, reduce or offset any adverse effects through 'mitigation measures'. EIA follows a series of stages.

In this case the next stages are:

- Scoping –consultation on the proposed scope and methodology of the EIA;
- Environmental baseline studies –establish what is there;
- Assessment of effects –determine the potential effects;
- Mitigation –modify proposals to incorporate mitigation measures and re-assess residual effects;
- Preparation of Environmental Impact Assessment Report;
- Consideration of application and environmental information by The Highland Council consultees;
- Decision to refuse or grant consent (with or without conditions).

In reality the EIA process is iterative and runs in tandem with project design. As potential adverse effects are identified, the design of the project will be adjusted and mitigation measures proposed. Consultation, a vital component of the EIA process, continues throughout each stage and contributes both to the identification of potential effects and mitigation measures.

The EIA process therefore provides the opportunity to develop projects, for which the environmental effects have effectively been minimised (or removed). In many cases significant effects on, for example, ecology and noise can be prevented through sensitive location and design of infrastructure. Others, for example the effects of construction, can be effectively managed through the adoption of best practice working methods.

At this early scoping stage however it is important to identify all 'potential' effects so that a rigorous assessment process, with input from independent experts, is followed, based on sound objective evidence.

3.3 Policy Context

National Planning Framework 3 (2014)

The NPF3 provides a statutory framework around which to orientate Scotland's long-term spatial development. In relation to renewable energy, Section 3 of the NPF3, "a low carbon place", sets out a commitment to continue to facilitate renewable energy developments and guiding new infrastructure to appropriate locations and sets an ambition for Scotland to be considered a world leader in the low carbon energy generation sector.

Paragraph 3.30 of NPF3 identifies hydroelectric power as a key asset and recognises that increasing the capacity of pumped storage hydroelectricity can complement ambitions for more renewable energy capacity. The Coire Glas PSH project, and by extension this road upgrade proposal, is amongst the most advanced plans for new pumped storage hydropower schemes.

Paragraph 6.5 acknowledges that the strategy for a low carbon place reflects the opportunities for growth arising from natural energy resources and a range of infrastructure is needed to meet the ambition. Three national developments are included to assist delivery of the low carbon place strategy, one of which is pumped hydroelectric storage at existing and new sites.

Draft National Planning Framework 4 (2021)

In November 2021, the Scottish Government published the draft National Planning Framework 4 (NPF4) which sets out the long term national spatial strategy. The Proposed Development is required to facilitate the wider Coire Glas PSH scheme, and in that context, the draft NPF4 designates all PSH as 'National Development' and supports additional capacity at existing sites as well as new sites. This proposal, whilst not National Development in itself, will support the delivery of Coire Glas PSH.

Whilst only available as a consultation draft at the time of writing, the Draft NPF4 provides a greater focus on responding to the climate emergency than previous iterations. Draft Policy 2 notes that significant weight should be given to the Global Climate Emergency when considering development proposals.

3.4 Scottish Planning Policy 2014

Scottish Planning Policy (SPP) sets out national planning policies which reflect Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. The document aims to contribute to the achievement of the Scottish Government's overarching purpose of achieving sustainable economic growth and sets out supportive policies relating to sustainable development and the delivery of renewable energy generation capacity, including energy storage projects at a range of scales.

In terms of transport and roads, SPP highlights that the design of all new development should follow the placemaking approach outlined within SPP and the principles of Designing Streets –ensuring that the place is both safe and easy to move around in particular.

Whilst these proposals do not constitute new development, instead forming part of a series of road improvements, SPP notes that new roads/junctions should be designed in accordance with DMRB and /or Roads Authority guidance and ensure no adverse impact on road safety or operational performance.

A more detailed analysis of the relevance and implications of SPP (2014) will be provided in the EIA Report.

3.5 National Planning Policy Advice and Guidance

Scottish Government Planning Circulars set out detailed advice and information in relation to relevant planning issues, legislation and regulations. Key circulars of particular relevance include:

- Planning Circular 1-2005 –Notification of Planning Applications Development Affecting Trunk Roads and Special Roads.
- Scottish Government Planning Advice Notes (PAN) which set out detailed advice in relation to relevant planning issues are:
- PAN 66: Trunk roads planning applications handling best practice (2003).
- PAN 51: Planning, Environmental Protection and Regulation (2006).
- PAN 60: Planning for Natural Heritage (2000).
- PAN 61: Planning and Sustainable Urban Drainage Systems (2001).
- PAN 75: Planning for Transport (2005).
- PAN 79: Water and Drainage (2006).
- PAN 3/2010: Community Engagement (2010).
- PAN 1/2011: Planning and Noise (2011).
- PAN 1/2017: Environmental Impact Assessment Regulations (2017).
- Flood Risk: Planning Advice (2015).
- Furthermore, relevant guidance developed by the Scottish Government's key agencies include:
- Land Use Planning System Guidance Note 2a: Development Management Guidance on Flood Risk (Version 2) (SEPA, 2018).
- Development and the Trunk Road Network (Transport Scotland, 2016).
- Fitting Landscapes (Transport Scotland, 2014).
- Roads for All –Good Practice Guide for Roads (Transport Scotland, 2013).
- Development Management Guidance (Transport Scotland, 2012).

3.6 Development Plan

Highland-wide Local Development Plan (2012)

The Highland-wide Local Development Plan (LDP) was adopted by the Highland Council in April 2012 and sets out the overarching vision, spatial strategy and general planning policies to guide development across the local planning authority for a 20-year period.

The scope of the EIA will allow for any likely significant effects on environmental and amenity interests to be identified and assessed. Relevant policies within the LDP are listed in Table 3.1 below. This table identifies relevant receptor types and issues which may need to be assessed through an EIA in order to demonstrate the proposal's accordance with these policies.

Table 3-1 –Relevant LDP Policies and Key Issues and Receptors Requiring Assessment

LDP Policy	Key Issues
Policy 28: Sustainable Design	Natural environment Biodiversity, natural and built heritage resources
Policy 29: Design Quality and Place-Making	Landscape and character of the area Setting and character of nearby settlements Location and design

LDP Policy	Key Issues
Policy 30: Physical Constraints	Flooding and ground stability Impacts on land, air and water environment
Policy 51: Trees and Development Policy 55: Peat and Soils	Protecting, conserving and enhancing the following where possible: • Biodiversity • Soils and peat • Woodland • Wild land • Water environment
Policy 55: Peat and Soils	Avoidance or mitigation of impacts on Peat and Soils
Policy 56: Travel	Transport impacts and quantification of Impacts on local road network.
Policy 57: Natural, Built and Cultural Heritage	Established character and local distinctiveness of the landscape
Policy 58: Protected Species Policy 59: Other Important Species Policy 60: Other Important Habitats and Article 10 Features	Avoid significant adverse effects on the integrity or special qualities of international or nationally designated natural and built environment sites
Policy 61: Landscape Policy 62: Geodiversity	LVIA Previous road improvements
Policy 63: Water Environment Policy 64: Flood Risk Policy 66: Surface Water Drainage	Watercourses and sedimentation / pollution Flood risk and Drainage Onsite Watercourses
Policy 67: Renewable Energy Developments	Proposed development is coming forward as part of the approved Coire Glas PSH scheme
Policy 72: Pollution	Construction Environmental Management to mitigate potential for pollution arising from the development.
Policy 73: Air Quality	Dust derived from the construction works and traffic
Policy 77: Public Access	Rights of Way and public access
Policy 78: Long Distance Routes	The Great Glen Way passes along the Proposed Development area.

Supplementary Guidance

The Highland-wide LDP is supported by several sets of statutory Supplementary Guidance. Table 3-2 below lists the relevant Supplementary Guidance and associated issues which will need to be address through the EIA.

Table 3-2 –Relevant LDP Supplementary Guidance

Supplementary Guidance	Key Issues / Considerations
Renewable Energy Strategy (May 2006)	Renewable Energy Generation
Flood Risk and Drainage Impact Assessment Supplementary Guidance (Adopted January 2013)	Fluvial and surface water flood risk
Highland Statutorily Protected Species Supplementary Guidance (Adopted March 2013)	Conservation of biodiversity Protected habitats and species Species listed under Annex I and II of the Birds Directive and Red and Amber status in 'Birds of Conservation Concern'. Wildlife and Countryside Act 1981 (and as amended by the Nature Conservation (Scotland) Act 2004) Species listed on Schedules 1, 5, 7, 8, 9 and 14. Wildlife and Natural Environmental (Scotland) Act 2011. A Code of Practice on Non-Native Species supports this Act.
Trees, Woodlands and Development Supplementary Guidance (Adopted January 2013)	Preservation of woodland/trees Planting and management agreements
Assessment of Highland Special Landscape Areas (Horner & Maclennan and Wood, Mike, 2011)	Loch Lochy and Loch Oich Special Landscape Area.

West Highlands and Islands Local Development Plan 2019

The West Highlands and Islands Local Development Plan ('WestPlan') is a spatial document which focuses on where development should and should not occur across the West Highland and Islands area, comprised of Wester Ross, Skye and Lochalsh and Lochaber, over the next 20 years. WestPlan was adopted in September 2019 and the Site is located within the administrative area covered by this document. Whilst there are no immediate policy implications within WestPlan for development of the nature and extent proposed, paragraph 1.48 acknowledges that:

> *"there are a number of sections of the transport network where improvements are necessary to ease current pressures, support the delivery of future development".*

As the proposals are critical to enabling the consented Coire Glas PSH scheme, they therefore have the sole intention of supporting the delivery of future development within the area.

4 Approach to EIA

4.1 Introduction

This section of the Scoping Report explains the proposed approach to the EIA process and the overall assessment methodology in accordance with the EIA Regulations.

Screening

The Highland Council issued an EIA screening opinion stating that EIA will be required and noting that

> *The proposal does fall within the definition of 'Schedule 2 development' (Regulation 2 - Interpretation), in that it meets and/or exceeds the threshold for a change or extensions of development that is already authorised, executed or in the process of being executed (Schedule 2 (13)) and Infrastructure Projects (Schedule 2 (10f)).*

Scoping

The purpose of EIA Scoping is to identify the nature and extent of the likely significant environmental effects of a development. It also allows for the issues identified to be subject to the appropriate level of assessment. Scoping also gives relevant stakeholders an opportunity to express their views on the scope of the EIA.

4.2 EIA Report

The EIA being undertaken for the Proposed Development will be reported within an EIA Report forming part of the proposed planning application.

Regulation 12(4) of the EIA Regulations prescribes the information which must be included within an EIA Report and requires any of the additional information listed in Schedule 4 of the Regulations to be included in an EIA Report where relevant. The EIA Report for the Proposed Development will be based on the terms of an EIA Scoping Opinion to be adopted by the Planning Authority and will include appropriate and proportionate consideration of all relevant information requirements prescribed within the EIA Regulations. The proposed approach to undertaking the EIA and providing all of the required information is set out below.

4.3 Consultation

The proposals submitted for planning consent have, where possible, incorporate measures in the design to mitigate potential adverse environmental effects, and to enhance environmental benefits.

Consultation with relevant statutory and non-statutory bodies has informed some elements of this scoping report and will continue to inform the iterative design and EIA processes which will be reported in the EIA Report.

Specific consultation relating to those topics proposed to be scoped into the EIA, is set out within discipline specific details in Chapters 5-10. An overview of proposed consultation is provided within Table 4-1 below.

Table 4-1 –Schedule of Consultation

Consultee	Relevant discipline	Purpose of consultation
The Highland Council	EIA Wide	Briefing to the Council on project and discussion of potential impacts

Consultation with statutory and non-statutory consultees, along with the local community, will continue to inform both the EIA and the design of the Proposed Development. Even though the proposals are a local development within the Hierarchy of Developments Regulations, public consultation events will take place prior to submission of the planning application.

4.4 Key issues

Having regard to the characteristics of the Site and findings from preliminary work including the EIA screening exercise, the main environmental issues to be addressed in this project include:

- Ecology and Biodiversity
- Noise and Vibration
- Air Quality
- Hydrogeology, Flood Risk and Drainage
- Landscape and Visual Impact
- Traffic and Transport

The Applicant's approach is focused around using the EIA process to deliver a robust and proportionate EIA.

4.5 Assessment

In general terms, the main stages in the EIA are as follows:

- Data Review –draw together and review available data;
- Scoping –identify significant issues, determine scope of EIA;
- Baseline Surveys –undertake baseline surveys and monitoring;
- Assessment and iteration –assess likely significant effects of development, evaluate alternatives, provide feedback to design team on adverse effects, incorporate any necessary mitigation, assess residual effects of mitigated development; and
- Preparation of the EIA Report.

The proposed scope of the EIA and approach to the assessment of likely significant effects is set out in Chapters 5 to 10. The EIA Report will include an assessment of cumulative effects.

4.6 Mitigation

One of the most important functions of the EIA process is to identify ways to mitigate likely adverse environmental effects and to identify opportunities that the Proposed Development may have for environmental improvements. The EIA Regulations require the EIA Report to contain: *"A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment*".

A hierarchy of methods for mitigating significant adverse effects will be followed; these are, in order of preference:

- **Avoidance** –designing a Proposed Development in such a way that avoids effects on the environment (e.g. imposing a maximum height restriction on new development);
- **Reduction** –design the development or employ construction methodologies such that significant effects identified are reduced (e.g. employment of sustainable drainage to mitigate effects of development in flood prone areas);
- **Compensation** –providing off-site enhancement in order to compensate for where onsite mitigation has not been possible (e.g. financial contributions towards local infrastructure); and
- **Enhancement** - opportunities that the Proposed Development may provide to enhance the local and wider environment (e.g. allow greater appreciation of heritage assets).

It is anticipated that a draft Construction Environmental Management Plan (CEMP) will be submitted in support of the consenting application, which will outline methods to avoid, reduce and mitigate construction effects on the environment. This document will be updated as the Proposed Development progresses to enable the plan to be effective and account for any changes that occur during construction works.

The EIA Report will identify mitigation measures for the construction and operation of the Proposed Development to avoid, minimise and reduce adverse environmental effects. Residual environmental effects remaining after mitigation measures have been incorporated will be fully described in the EIA Report.

A collated schedule of mitigation would be included in the EIA Report, setting out mitigation to be delivered as part of the Proposed Development and how this will be secured.

Embedded Mitigation

There is a distinction between mitigation that is incorporated or 'embedded' into the design of the development (embedded mitigation) and mitigation that is subsequently identified in order to prevent, reduce, or offset any remaining significant adverse effects (secondary mitigation).

Embedded mitigation evolves through the iterative design process and early consideration of the likely significant impacts is essential to incorporating suitable embedded mitigation measures.

Secondary Mitigation

The EIA Report, within each of the topic chapters as appropriate, will also document the secondary mitigation that is required to complement the embedded mitigation. Secondary mitigation includes topic and project specific measures which have been developed to limit particular impacts, e.g. additional noise attenuation on loud items of plant to reduce impacts to nearest sensitive receptors, adoption of methodologies or controls to avoid or reduce effects.

4.7 Monitoring

The EIA Regulations require *"the monitoring of any significant adverse effects on the environment of Proposed Development"*. The EIA Report will therefore ensure that it is clear which, if any, likely effects are both adverse and significant and may therefore require monitoring. In the event that any residual significant adverse effects are predicted to occur, consideration of the potential need for and proportionality of monitoring arrangements in respect of such effects, and how it could be carried out will be set out within each technical assessment chapter of the EIA Report. A consolidated schedule of any proposed monitoring will also be provided within the EIA Report.

4.8 The EIA Report

Regulation 5 of the EIA Regulations prescribes the information which must be included within an EIA Report which accompanies an application for development consent or other authorisations made under the Electricity Act 1989. This Regulation also requires any of the additional information listed in Schedule 4 of the Regulations to be included in an EIA Report where it is *"relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected"*. The EIA Report for the Proposed Development will include appropriate and proportionate consideration of all relevant information requirements. The proposed approach to providing this information is set out within this EIA Scoping Report.

4.9 Consideration of Reasonable Alternatives

Regulation 5(2)(d) of the EIA Regulations requires EIA Reports to include *"a description of the reasonable alternatives studied by the developer, which are relevant to the development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment"*. Whilst a full description of alternatives and an assessment of their likely environmental effects are not required, sufficient detail should be provided to allow for a meaningful comparison between alternatives and development proposal being subject to EIA.

The EIA Regulations do not expressly require an EIA Report to consider alternatives if none have been identified, although it is considered best practice to do so. The EIA Report will fulfil these statutory requirements through identifying the reasonable alternatives considered, including with respect to the implementation of the revised design strategy and the associated iterative design process, and will explain the main reasons for the choices made. It is anticipated that such reasons

for choosing between reasonable alternatives may include policy requirements, viability, engineering constraints, site topography and likely environmental effects.

4.10 Proposed Scope of the EIA

Technical Scope

The technical scope describes the environmental topics that should be addressed by an EIA, in accordance with the requirements of Regulations 4(2) and 18 and Schedule 4 of the EIA Regulations. Schedule 4 sets outs that the EIA Report must include a description of the aspects of the environment, which are likely to be significantly affected by the Proposed Development.

This requirement and the broad categories set out in Schedule 4, along with others which are considered to have the potential to lead to significant environmental effects, have been interpreted and applied in the context of the Proposed Development. Table 4-2 therefore sets out those topics that it is proposed to both scope into and out of the EIA.

Section references are provided to where these categories have been included within the EIA Scope. Chapters 5 to 10 of this report provides a detailed analysis of the proposed technical scope of the EIA, while Chapter 11 identifies those topics which it is proposed to scope out of the EIA as it has been shown that significant environmental effects are unlikely to occur.

Table 4-2 –Technical Scope

EIA Regulations Topic	Scoped In / Scoped Out	Explanation within this Scoping Report
Human Health	IN	Chapter 6 –Noise and Vibration Chapter 7 –Air Quality
Biodiversity (including, forestry and terrestrial flora & fauna)	IN	Chapter 5 –Ecology and Forestry
Terrestrial Ecology (including Ornithology) and Aquatic Ecology	OUT	Chapter 11 –Topics to be scoped out
Land Use & Recreation	OUT	Chapter 11 –Topics to be scoped out
Socio-economics	OUT	Chapter 11–Topics to be scoped out
Soil Management (for example organic matter, erosion, compaction and sealing)	OUT	Chapter 11 –Topics to be scoped out
Material Assets	IN	Chapter 10 –Traffic and Transport
Water Management	OUT	Chapter 11 –Topics to be scoped out
Hydrogeology (including, flood risk and drainage)	IN	Chapter 8 –Hydrogeology, Flood Risk and Drainage
Climate Change (for example greenhouse	OUT	Chapter 11 –Topics to be scoped out

EIA Regulations Topic	Scoped In / Scoped Out	Explanation within this Scoping Report
gas emissions, impacts relevant to adaptation)		
Landscape and Visual	IN	Chapter 9 –Landscape and Visual
Cultural heritage, including architectural and archaeological aspects	OUT	Chapter 11–Topics to be scoped out
Waste Management	OUT	Chapter 11 –Topics to be scoped out
The Risk of Major Accidents and/or Disasters	OUT	Chapter 11 –Topics to be scoped out
The inter-relationship between the above factors	IN	Chapter 12 –Summary and Next Steps

Further detail and justification for scoping specific items out is provided in Chapter 11 of this Scoping Report.

The following sets out the principles for the temporal and spatial scope, and the approach to the assessment of effects, that will be applied to the EIA of the topics identified in Chapters 5 to 10.

4.11 Temporal Scope

Environmental Baseline

As a general principle, environmental effects will be assessed by comparing the predicted state of the environment without the Proposed Development, and the predicted state of the environment with the Proposed Development for a particular year.

The EIA Regulations require an outline of the likely evolution of the Site environment without implementation of the Proposed Development as far as changes from the baseline scenario can be predicted. This baseline evolution will include future trends such as air quality and traffic growth.

The EIA will take into account existing, proposed (in planning) and approved developments that are likely to come forward during the works associated with the Proposed Development and, where appropriate, these will be factored into the definition of the baseline or identified as receptors at a relevant point in time.

Duration of Effects

Environmental effects will be classified as either permanent or temporary, as appropriate. Permanent changes are those which are irreversible or will last for the foreseeable future.

The duration of temporary environmental effects will be defined as short, medium or long term based on the likely duration of the works associated with the Proposed Development. These definitions will be considered within the assessment of the likely significant effects and will be set out in the EIA Report.

Where environmental effects will be infrequent or intermittent (such as effects related to activities that will not be continuous during demolition and construction) this will be noted in the EIA Report; and the frequency of these activities will be considered in the assessment.

Phases of the Scheme

There are two discrete phases of the Proposed Development which will be considered in relation to the likely significant effects: the construction phase; and the operation phase. The Proposed Development is considered to be permanent.

Construction

Certain environmental effects will only occur during construction of the Proposed Development and will cease once construction activities have ceased. These will typically be the temporary effects of the scheme and will be described as “short-term” or “medium-term”, as appropriate, using the definitions set out in the EIA Report. Examples include but are not limited to:

- Creation of dust;
- Risk of pollution; and
- Changes to the landscape and people’s views from e.g. construction plant, compounds

Operation

Environmental effects that occur during the operation of the Proposed Development will typically be permanent or “long-term”. Examples of permanent effects which might occur during the operation of the scheme include but are not limited to:

- Changes to traffic flows along Kilfinnan Road.
- Changes to the landscape character or views within the local area.

Spatial Scope

The spatial extent of each of the technical assessments will vary from one to another in accordance with the relevant policy and guidance for the assessment of that topic; in some instances, the environmental effects will extend no further than the boundary of the Site and in other cases the assessment will extend to a buffer beyond the Site boundary. The study area for each technical assessment will be identified and described as appropriate in each of the topic chapters of the EIA Report.

4.12 Assessment of Effects

Types of Effects

In assessing the significance of effects identified during the EIA, account will be taken as appropriate as to whether effects are:

- **Direct Effects** –effects that are caused by activities which are an integral part of The Proposed Development;
- **Indirect Effects** –effects arising indirectly from the demolition and construction or use of a development;
- **Secondary Effects** –are 'knock-on'/one-removed effects arising in consequence of indirect effects;
- **Cumulative Effects** –effects of The Proposed Development and other developments of the same type on the same receptor;
- **Short-Term and Medium-Term** –Environmental effects that occur during the demolition and construction of a project will typically be Short or Medium Term;
- **Long-Term** –Environmental effects that occur during the operation of a project will typically be Long Term;
- **Temporary Effects** –Environmental effects that occur during the construction of a project will typically be temporary;
- **Permanent Effects** –Environmental effects that occur during the operation of a project will typically be permanent;
- **Positive Effects** –effects that have a positive influence on the environment; and

- **Negative Effects** –effects that have a negative influence on the environment.

For clarity within the assessment, 'impact' will be used in relation to the outcome of the project (e.g. the generation of emissions to air), while the 'effect' will be the consequent implication in environmental terms (continuing the above example, e.g. the reduction in local air quality).

4.13 Residual Effects

The incorporation of mitigation measures will be reported where appropriate and likely significant residual effects that remain will be described and assessed according to the significance criteria set out in Table 4-3 below.

The significance of an effect is typically the product of two factors, the sensitivity of the environmental resource affected and the magnitude of the impact. Consideration may also need to be given to the likelihood of an effect occurring.

This approach to assessing and assigning significance to an environmental effect will be based upon legislative requirements, guidelines, standards and codes of practice, the advice and views of statutory consultees and other interested parties and expert judgement. The following questions are relevant in evaluating the significance of likely environmental effects:

- Which risk groups are affected and in what way?
- Is the effect reversible or irreversible?
- Does the effect occur over the short, medium, or long term?
- Is the effect permanent or temporary?
- Does the effect increase or decrease with time?
- Is the effect of local, regional, national, or international importance?
- Is it a positive, neutral, or adverse effect?
- Are health standards or environmental objectives threatened?
- Are mitigating measures available and is it reasonable to require these?

Specific significance criteria will be prepared for each specialist topic as appropriate, based on the above and the generic criteria set out in Table 4-3 below and adapted to accord with topic-specific guidance.

Table 4-3 –Significance Criteria

Significance Level	Criteria
Substantial	Only adverse effects are assigned this level of significance as they represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites and features of national or regional importance. A change at a local scale site or feature may also enter this category.
Major	These effects are likely to be important considerations at a local scale but, if adverse, are potential concerns to the project and may become key factors in the decision-making process.
Moderate	These effects, if adverse, while important at a local scale, are not likely to be key decision-making issues. Nevertheless, the cumulative effect of such issues may lead to an increase in the overall effects on a particular area or on a particular resource.

Significance Level	Criteria
Minor	These effects may be raised as local issues but are unlikely to be of importance in the decision-making process. Nevertheless, they are of relevance in enhancing the subsequent design of the project and consideration of mitigation or compensation measures.
Negligible	Either no effect or effect which is beneath the level of perception, within normal bounds of variation or within the margin of forecasting error. Such effects should not be considered by the decision-maker.

Effects that are described as 'substantial', 'major' or 'moderate' are determined to be significant; and effects that are described as 'minor' or 'negligible' are determined to be not significant in the context of the EIA Regulations.

4.14 Cumulative Effects

The EIA Regulations require the consideration of the potential impact of inter-relationships and cumulative effects of "existing and/or approved development" with the Proposed Development.

The EIA will consider as appropriate:

- The likely significant cumulative effects of the Proposed Development and other major/local existing and/or approved developments; and
- The potential for impact interactions leading to an aggregated environmental effect on a receptor being greater than each of the individual effects that have been identified (e.g. local people being affected by noise, dust and increased traffic levels during the construction of the development, where those impacts are greater combined than individually).

A review of approved developments and undetermined applications within the locality of the Proposed Development has been undertaken. Through the EIA process, consideration of which approved developments have the potential to lead to significant cumulative effects with the Proposed Development will be made.

At this stage given the remote location of the Site, no other schemes under the Town and Country Planning (Scotland) Act 1997 or S.36 of the Electricity Act have been identified of significant size or scale that are likely to lead to potential cumulative effects in combination with the Proposed Development. This review will be updated prior to the production of the EIA Report and associated assessments to confirm this remains the case.

Committed developments will be allowed for in the assessment, including any interventions and road network improvements, during the construction phase period.

4.15 Impact Interactions

A dedicated chapter of the EIA Report will assess the potential impact interactions, i.e. receptors being affected by more than one environmental effect and therefore potentially being subject to a more significant combined effect than the individual effects reported in each of the topic chapters. This chapter will draw together the outcomes of individual discipline assessments in order to identify the overall effect of the Proposed Development.

4.16 Uncertainty and Difficulties Undertaking the Assessment

The prediction of future effects inevitably involves a degree of uncertainty. Where necessary, the EIA Report will describe the principal factors giving rise to uncertainty in the prediction of environmental effects and the degree of the uncertainty.

Confidence in predictions will be engendered by employing accepted assessment methodologies, e.g. Guidance for Ecological Impact Assessment by the Chartered Institute of Ecology and Environmental Management. Uncertainty inherent within the prediction will be described.

Uncertainty also applies to the success or otherwise of measures to mitigate negative environmental effects. Where the success of a mitigation measure is uncertain, the extent of the uncertainty will be identified in the EIA Report.

The EIA Report will identify, in accordance with Schedule 4 of the EIA Regulations, any difficulties that have been encountered in undertaking the assessment.

5 Ecology and Biodiversity

5.1 Introduction

The ecology and biodiversity EIA Report chapter will be prepared by EnviroCentre Limited and aims to identify and describe any likely significant effects to be anticipated upon the Site's ecology and that of the wider area, including designated sites.

5.2 Baseline Conditions

No field survey work has been undertaken for this Sites specific location, however previous survey work carried out by EnviroCentre in 2021, including Preliminary Ecological Appraisal (PEA), Targeted Protected Species surveys and Bat Activity Surveys have been undertaken for a similar location. Therefore, the baseline ecology information provided has been derived from previous survey works of relevant locations.

Designated Sites

No designated sites are present within the Site. South Laggan Fen Special Site of Scientific Interest (SSSI) is located 70m east of the Site. West Inverness-shire Lochs Special Protected Area (SPA) are located 4.39km and 4.71km north of the Site. There are no non-statutory designated sites within the Site boundary or within a 2km radius of the Site.

Habitats

Referring to previous projects in a similar location to the Site, the following habitats and boundary features may likely occur within the Site boundary:

- A1.1.1 Broadleaved Semi-natural Woodland;
- A1.2.2 Coniferous Plantation Woodland;
- A1.3.1 Mixed Semi-natural Woodland;
- A2.1 Dense Scrub;
- A2.2 Scattered Scrub;
- B2.2 Neutral Grassland Semi-improved;
- B4 Improved Grassland;
- B5 Marshy Grassland;
- C1.1 Bracken Continuous;
- D1.1 Dry Dwarf Shrub Acid Heath;
- D2 Wet Dwarf Shrub Heath;
- E2.1 Acid/neutral Flush;
- E2.2 Basic Flush;
- F1 Swamp;
- G1 Standing Water;
- G2 Running Water;
- J3.6 Buildings; and
- J4 Bare Ground

From previous survey results and a review of aerial imagery, the Site likely consists of semi-natural and plantation woodland (broadleaved, coniferous, and mixed) throughout the Site, being more concentrated in the south and scattered in the central and northern regions of the Site.

Dense scrub, scattered scrub, wet dwarf shrub heath, acid/neutral flush, basic flush and swamp are likely present in the central region of the Site, whilst grassland (neutral, improved and marshy), bracken, dry dwarf shrub acid heath are considered likely to be in the central and northern regions of the Site. Standing water is likely present in the central and northern regions of the Site, whilst running water is likely present in the northern and southern reaches of the Site. Buildings are considered to be present in the central and northern reaches of the Site and bare ground spans the length of the Site via Kilfinnan Road.

Of the habitats identified as present during previous surveys, these included Annex I and Scottish Biodiversity List (SBL) Priority Habitats. Annex 1 habitats include 4030 European Dry Heaths, 4010 Northern Atlantic Wet Heaths with Erica Tetralix and 7230 Alkaline Fens. SBL Priority Habitats include Upland Birchwoods, Wet Woodland, Rush Pasture, Upland Flushes, Fens and Swamps, Lowland Fens, Rivers and Juniper.

An ash tree found on the south side of the Great Glen Way presented symptoms of Ash Dieback disease. Rhododendron was also identified [redacted]

Ground Water Dependent Terrestrial Ecosystems (GWDTEs)

From previous surveys, several wetland habitats representing GWDTE habitats have been identified as present within the location of the Site:

- Acid/neutral flus matches the NVC community habitat M6c *Carex chinate – Sphagnum fallax/denticulatum* mire *Juncus effusus* subcommunity. This community is a soligenous mire, receiving water from the inflow of surface water or uprising of ground water. It is listed within SEPA guidance as being highly ground water dependant and was also previously assessed as highly dependent.
- Basic flush matches NVC community habitat M10a *Carex dioica – Pinguicula vulgaris* mire *Carex viridula subsp. Oedocarpa – Juncus bulbosus* sub-community. This community is a soligenous mire community and contains many species indicative of base rich ground water. It is listed within SEPA guidance as being highly ground water dependant and was also previously assessed as highly dependent.
- Wet heath matches NVC community habitat M15a *Tricophorum germanicum – Erica tetralix* mire *Carex panicea* sub-community. Whilst the M15 community can arise in rain fed peaty soils, this particular community is more closely associated with ground water and contains number of species indicative of base enrichment. It is listed within SEPA guidance as being moderately ground water dependant but was previously assessed as highly dependent.
- Marshy grassland matches the NVC community habitat M23 *Juncus effusus/acutiflorus – Galium palustre* rush pasture. Where this community occurs within the improved grassland field, the water appears to arise from the outflow of a drainage channel which runs alongside Kilfinnan Road, capturing surface and ground water run-off from the slopes above. Where it occurs in the inundation area the water table appears to be permanently high due to the low topography, surface water is also received from drainage ditches to the north. It is listed within SEPA guidance as being highly ground water dependant and was also previously assessed as highly and moderately dependent.
- Marshy grassland matches the NVC community habitat M25 *Molinea caerula – Potentilla erecta* mire. This community is in an area of low topography and likely receives some surface water run-off from the surrounding slopes but given the proximity to the loch will also have a naturally high water table. It is listed within SEPA guidance as being moderately ground water dependant and also previously assessed as moderately dependent.
- Neutral grassland semi-improved matches the NVC community habitat MG10 *Holcus lanatus – Juncus effusus* rush pasture. This community is present with grazed fields and is typically found in soils which are permanently wet. Within the context of this site, the community is found in areas of low, gently sloped ground which receives surface and ground water run-off from the slopes above via drainage ditches and culverts under the Kilfinnan Road. Some areas are likely to have permanently high water tables given their low point in the topography. It is listed within SEPA guidance as being moderately ground water dependant.

Faunal Species

The following faunal evidence was identified during previous surveys relevant to the Site:

- [redacted] with low to high suitability for roosting bats have been identified within the Site and surrounding area.
- Areas of mature broadleaved trees with features including knot holes, branch tears and fluted trunks, identified within the Site and surrounding area are considered to have low –moderate suitability for roosting bats.
- Pine marten scat was identified within [redacted]
- One artificial nest box with nesting material [redacted]

Biological records of bats, otter, water vole, red squirrel, pine marten and a range of bird species were returned during the desk study. The habitats on site offer commuting and foraging habitat for bats, otter, red squirrel, pine marten, badger, reptiles and a range of bird species.

5.3 Relevant Guidance and Assessment Methodology

An ecological assessment of the Proposed Development will be undertaken according to guidance produced by the Chartered Institute of Ecology and Environmental Management (CIEEM) CIEEM Guidelines for Ecological Impact Assessment (EcIA) (2018). The British Standard for Biodiversity: Code of Practice for Planning and Development (BS 42020:2013) cites the CIEEM EcIA Guidelines as the acknowledged reference on ecological impact assessment. The guidelines are consistent with the British Standard, which provides recommendations on topics such as professional practice, proportionality, pre-application discussions, ecological surveys, adequacy of ecological information, reporting and monitoring.

The EcIA will scope in relevant ecological receptors, habitat or sites identified in preliminary studies and from consultation responses from appropriate regulators. The assessment will aim to include all direct and indirect, lethal and non-lethal impacts on ecology that could reasonably occur during construction work and in operation of the development.

Further survey work required to gain information on the Important Ecological Features (IEFs) and to undertake an impact assessment on them include:

- Update Phase 1 Habitat survey to determine habitats present within the Site and identify any Annex 1 or priority habitats and to determine locations of GWDTE.
- Update Protected Species Survey of the Site to identify any ecological constraints to the development.
- If the proposed road upgrade involves removal of or works to any of the structures highlighted as having suitability for bats, or if activities producing significant levels of noise are planned for prolonged periods within 30m of structures highlighted as having suitability, then these should be subject to summer emergence/re-entry surveys and winter hibernation surveys as appropriate, to determine the presence of roosting bats.
- If the proposed road upgrade involves removal of, or works to either of the bridges, or if activities producing significant levels of noise are planned for prolonged periods within 30m, then these should be subject to winter hibernation surveys as appropriate, to determine the presence of winter hibernation roosting bats.
- If works involve the removal of trees, a ground based potential roost features (PRF) assessment should be conducted to confirm the suitability of trees to host roosting bats and determine further survey requirements.
- The nest box identified under [redacted] contained nest material and suitable habitat exists on and adjacent to the Site for a range of bird species for nesting. Any works in relation to these areas should be undertaken outside the nesting bird season (March-September

inclusive), where possible. If works require undertaking during the nesting bird season, pre-works checks should be undertaken.

- Should the development require the alteration or removal of any burns or watercourses within the Site, further survey work in relation to otter, fish and freshwater pearl mussels may be required, via detailed desk study, electrofishing and targeted surveys.

5.4 Statutory and Planning Context

The compilation of the EcIA will take cognisance of the legislation, planning policies, conservation initiatives and general guidance presented in Table 5-1.

Table 5-1: Legislation, Policies, Conservation Initiatives and General Guidance related to Ecology

Scope	Document
European Legislation	Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (The Habitats Directive) Environmental Impact Assessment (EIA) Directive (2014/52/EU) on assessing the potential effects of projects on the environment Water Framework Directive 2000/60/EC of the European Parliament
National (UK)	The Wildlife and Countryside Act 1981 (as amended) (WCA) The Protection of Badgers Act (1992)
Scottish Legislation	The Conservation (Natural Habitats, &c.) Amendments (Scotland) Regulations 2007 (The Habitats Regulations) The Nature Conservation (Scotland) Act 2004 (NCA) The Wildlife and Natural Environment (Scotland) Act 2011 (WANE)
Policy & Advice Documents	The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 Scottish Planning Policy (SPP) 2014 BS 42020:2013: Biodiversity. Code of practice for planning and development 2013 The Highland-wide Local Development Plan (HwLDP) (April 2012) The West Highlands and Islands Local Development Plan, as continued in force (September 2019) The Highland Nature Biodiversity Action Plan (HNBAP) 2021-2026 The Highland biodiversity action plan (HBAP) The Scottish Biodiversity Strategy

Scope	Document
	CIEEM (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester Collins, J. (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines. (London The Bat Conservation Trust, Ed.) (3rd ed.).

5.5 Consultation

Scoping opinions and consultation from the following bodies will be requested and reviewed to inform the EcIA:

- NatureScot
- SEPA
- Lochaber District Salmon Fisheries Board (LDSFB)
- The Highland Council Biodiversity Partnership Officer
- Lochaber and District Fisheries Trust (LDFT)

5.6 Potential Effects

The following potential negative effects on ecology could occur during the construction phase of the proposed road upgrade works:

- Permanent loss of habitat of international, national (Scotland) and/or site importance if removal is required for road widening or diversion.
- Temporary loss of habitat of international, national (Scotland) and/or site importance as a result of temporary access tracks or laydown areas.
- Loss of species of national (Scotland) importance if juniper is removed during ground clearance.
- Pollution of watercourses and/or wetland habitats via silted surface water run-off or a fuel or oil spill.
- Degradation or loss of wetland habitats if existing hydrological flows of water are disrupted.
- Spread of Rhododendron if biosecurity protocols are not implemented.
- Spread of Ash Dieback if biosecurity protocols are not implemented.
- Loss of bat roosting, nesting bird and pine marten den and red squirrel drey (trees only) habitat if any buildings or trees require removal to facilitate the works.
- Death, injury or disturbance of bats, nesting birds, pine marten or red squirrel if utilised buildings or trees are removed without appropriate survey and mitigation. Death, injury or disturbance to nesting birds may also be caused during ground clearance.
- Disturbance to bats, nesting birds, pine marten, red squirrel or otter if activities producing significant levels of noise such as pile driving or rotary drilling are undertaken for prolonged periods within proximity of rest sites.
- Disturbance of foraging and commuting nocturnal and crepuscular species such as bats, otter and pine marten if artificial lighting is used during the construction period or installed permanently on the completed road upgrade.

- Death or injury of reptiles if refugia such as rock piles or dense bracken are removed during the hibernation period.
- Death or injury of otter, red squirrel, pine marten, birds and reptiles due to increased traffic during construction and operation of the upgraded road.

5.7 Assessment of Cumulative Effects

A cumulative effect is considered to occur where the magnitude of the combined effect of two or more developments is greater than that of the developments considered separately. Cumulative effects arising from the Coire Glas Pumped Storage Scheme will be considered although, given the physical separation between the Site of the pumped storage scheme and the Site, at this stage it is not thought that there will be any significant cumulative effects arising from this development and the Proposed Development.

5.8 Ecological Impact Assessment Methodology

The Ecological Impact Assessment will be carried out in accordance with best practice and guidance contained in the following:

- Environmental Impact Assessment (EIA) Directive (2014/52/EU) on assessing the potential effects of projects on the environment;
- Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (The Habitats Directive);
- The Conservation (Natural Habitats, &c.) Regulations 2017 (The Habitats Regulations) (as amended);
- The Water Framework Directive (2000/60/EC);
- The Wildlife and Countryside Act 1981 (as amended) (WCA);
- The Nature Conservation (Scotland) Act 2004;
- The Wildlife and Natural Environment (Scotland) Act 2011 (WANE);
- The Protection of Badgers Act 1992 (as amended by the WANE Act 2011);
- The British Standard for Biodiversity;
- BS 42020:2013: Biodiversity Code of Practice for Planning and Development 2013;
- Scottish Biodiversity List (SBL) (2020);
- CIEEM (2017) Guidelines for Preliminary Ecological Appraisal; and
- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine, Version 1.1.

5.9 Mitigation and Enhancement

The following good practice mitigation is recommended for the proposals:

- Temporary and permanent removal of international and national (Scotland) habitat should be minimised as far as possible.
- Where temporary access tracks are required to cross wetland habitats, low pressure vehicles, floating roads or bog mats should be utilised to minimise harm.
- Works should avoid the removal of juniper where possible. Where removal cannot be avoided compensatory juniper should be planted in an appropriate habitat.
- Works within 10m of water courses should be avoided as far as practicable and SEPAs Pollution Prevention Guidelines should be implemented throughout the works.
- Ideally excavations up to 1m should be avoided within 100m, and over 1m within 250m of GWDTES, however, given the proximity of several GWDTES to the road, this is likely unachievable. Therefore, if any new areas of road dissect GWDTEs then the hydrological flow

of water should be retained either by raising the road above ground water levels or utilising drainage to allow water to flow beneath the road.

- The location of Rhododendron should be clearly demarcated with appropriate signage ahead of works commencing. Works within 10m of Rhododendron should be avoided where possible. If works are required within the exclusion zone, biosecurity measures such as wheel and boot washes should be implemented to avoid the spread of soils contaminated with rhododendron seeds.
- Tree felling should be limited where possible. Where felling cannot be avoided, compensatory tree planting should replace lost species.
- A pre-works survey of trees should be made ahead of felling to ensure no red squirrel drey or pine marten dens are present.
- All site personnel should be made aware of the presence of protected species within the area via a toolbox talk given during the site induction.
- The location of the Ash tree infected with Ash Dieback should be clearly demarcated with appropriate signage ahead of works commencing. Forestry and Land Scotland advice on biosecurity protocols should be followed.
- The location of the PRF tree should be clearly demarcated with appropriate signage ahead of works commencing. Works generating high levels of noise such as rotary drilling should be avoided within 30m of the tree.
- Vegetation removal should be avoided within the nesting bird season (April –August inclusive). If vegetation removal cannot be done outside this period then a nesting bird check should be undertaken by a suitably qualified and experienced ecologist to confirm absence within 48hours prior to works.
- The use of temporary or permanent artificial lights should be avoided as far as possible. Where use of artificial lights cannot be avoided, the lights should be fitted with shades and directed away from woodland, watercourses and wetland likely to be used by nocturnal and crepuscular species. It should be avoided outside of daylight hours where possible or the lights should be fitted with shades and positioned so that they do should not illuminated Kilfinnan and Allt Glas Dhoire bridges which offer habitat favoured by bats present in the locale for commuting and foraging resources.
- Noise and vibration caused through the use of machinery, or by the movement of construction traffic, should be kept to a minimum at times when bats are active (i.e. between sunset and sunrise during the bat activity season which falls from April to September).
- Should green infrastructure be altered on site (i.e. removal/replanting), the landscape design should aim to provide continued ecological connectivity.
- In the event that a bat roost is unexpectedly discovered within the Site, all work in that area must stop immediately and an appropriately qualified ecologist contacted for advice.
- Removal or disturbance of potential reptile refugia should be avoided within the hibernation period (November to March).
- An Ecological Clerk of Works (ECoW) should be employed to advise on and audit adherence to mitigation. It is anticipated that ECoW presence would not be required full time for the duration of the project but at key points to undertake tasks including but not limited to:
  - Pre-works checks and mitigation plan updates ahead of works commencing;
  - Watching briefs for works near sensitive receptors (e.g. water courses);
  - Nesting bird checks if vegetation clearance or similar works are conducted from April to August, inclusive; and
  - Regular audits of surface water management.
- A 15-mph speed limit should be implemented during road upgrade works and for all traffic associated with the development. Wildlife warning signs should also be utilised to raise awareness.

6 Noise & Vibration

6.1 Introduction

The noise and vibration EIA Report chapter will be prepared by TNEI Limited. Environmental, or community noise is a broad term that encompasses noise emitted from many sources, including road, rail, air traffic, industry, construction, public work and neighbourhood noise. All of these sources potentially contribute adversely to the overall noise environment. It is therefore reasonable to expect communities to be sensitive to any deterioration in their acoustic environment as a result of a Proposed Development.

The proposed Kilfinnan Road upgrade will introduce temporary new noise and vibration sources into the local area in the form of construction plant and activities. This section, therefore, considers the potential for adverse noise and vibration impacts to occur from the construction of the development.

Once complete, operational use of the road will introduce new noise sources into the local area in the form of road traffic, however, this has already been addressed within the 2018 EIA Report for the Revised Coire Glas Pumped Storage Scheme in Chapter 17: Noise and Vibration, so is not addressed here.

For environmental assessments, 'noise' typically refers to airborne noise, whilst vibration can be thought of as ground-borne noise. Please note that for the remainder of Section 6, unless specified, the term 'noise' refers to both airborne noise and vibration.

6.2 Baseline Conditions

Existing airborne noise levels in the area of the development have already been quantified as part of the noise study for the Coire Glas Pumped Storage Scheme EIA. Specifically, a baseline survey was undertaken in 2017 at five monitoring locations, four of which are suitable for use in the assessment of the Kilfinnan Road upgrade. Figure 6.1 details the location of the monitoring locations that will be used in the assessment.

No additional monitoring is proposed as the levels measured in 2017 are still considered appropriate for use in 2022, as no significant changes in the local noise environment are expected.

6.3 Relevant Guidance

BS 5228:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites (BSI, 2014) provides useful guidance on practical control of airborne noise (Part 1) and vibration (Part 2). The Standard provides recommendations for basic methods of noise control including sections on community relations, training, occupational effects, neighbourhood nuisance and project supervision. Guideline threshold levels are provided and these would be adopted in the assessment. For airborne noise, the thresholds are set based on the existing ambient noise levels in the area. For vibration, thresholds are set with due regard to guideline levels detailed in related British Standards; namely *BS 6472-1:2008 Guide to evaluation of human exposure to vibration in buildings* (BSI 2008) and *BS 7385-2:1993 Evaluation and measurement for vibration in buildings. Guide to damage levels from ground borne vibration* (BSI 1993).

Document *LA 111 Noise and Vibration* of Design Manual for Roads and Bridges (DMRB) *"sets out the requirements for assessing and reporting the effects of highways noise and vibration from construction, operation and maintenance projects."* A significant proportion of the DMRB assessment methods and criteria (in respect of construction impacts) refer back to *BS 5228* as the appropriate method of assessment, however, there are some elements that are particular to DMRB, such as how to relate road construction noise to Lowest Observed Adverse Effects Levels (LOAEL) and similar. Accordingly, the assessments included in the ES will refer to both *BS 5228* and DMRB throughout.

6.4 Statutory and Planning Context

The overarching European legislation in relation to terrestrial environmental noise is the 'Environmental Noise Directive' (The European Parliament and the Council of the European Union, 2002) (END). The END aims to limit people's exposure to environmental noise but does not prescribe noise limits. Instead, it requires each member state to provide data on noise exposure, and to develop action plans to prevent or reduce noise exposure and to preserve existing quiet areas. Although the UK has now left the EU this requirement is still in place as the END is transposed and implemented within 'The Environmental Noise (Scotland) Regulations' (Scottish Statutory Instruments, 2006).

At a national level, the relevant policy documents are Planning Advice Note (PAN) 1/2011 – 'Planning and Noise' (The Scottish Government, 2011) and the associated Technical Advice Note (TAN) –'Assessment of Noise' (The Scottish Government, 2011).

PAN 1/2011 provides little guidance in respect of construction noise, other than recommending that the use of planning conditions is not the preferred method for controlling temporary construction noise. Specifically, the document states:

> "*32. While planning conditions can be used to limit noise from temporary construction sites, it is most effectively controlled through the Control of Pollution Act 1974 (COPA74) and the Pollution and Prevention Control Act 1999 for relevant installations. Notice can be served in advance of works and site conditions set to control activities.*"

BS 5228:1997 'Noise and vibration control on construction and open sites. Code of practice for basic information and procedures for noise and vibration control' parts 1 to 5 (BSI, 1997) is the approved Code of Practice under COPA74, however, it is the 2009 version of the Standard that should be used for planning applications. In this regards the TAN states:

> "*However, under Environmental Impact Assessments and for planning purposes i.e. not in regard to the Control of Pollution Act 1974, the 2009 version of BS 5228 is applicable. The 2009 version of the standard consists of Parts 1 and 2 for noise and vibration respectively.*"

6.5 Consultation

No formal consultation has been undertaken with regards to noise and vibration (beyond the submission of a Screening Report), however, prior to undertaking the assessment, consultation will be undertaken by TNEI with the Environmental Health service of Highland Council to confirm the use of existing baseline data and the noise level and vibration limits to be adopted. A list of specific construction activities and receptors to include within the vibration assessment will also be submitted to the Environmental Health Officer for comment.

6.6 Assessment Methodology

Noise Sensitive Receptors (NSRs) are properties, people or fauna that are sensitive to noise and, therefore, may require protection from nearby noise sources. Figure 6.1 identifies potential NSRs along the route of the road, which have been identified through a desktop exercise. Prior to undertaking any assessment, a site visit will be undertaken to accurately determine the location and status of NSRs.

An airborne noise propagation model will be produced that will predict noise levels for a series of construction scenarios, which will be determined with reference to the proposed construction timeline. Each modelled scenario will consider the noise level output of typical construction plant working in activity areas closest to sensitive receptors. The predicted levels will be compared to the threshold levels detailed in *BS 5228:2009+A1:2014 - Part 1 Noise*.

Annex E of *BS 5228-2* provides methods of predicting vibration levels from a variety of construction activities. The empirical formulae include a scaling factor to determine the probability of the predicted value being exceeded by either 50%, 33% or 5%.

Vibration calculations will be undertaken for a similar set of scenarios as those selected for the airborne noise assessment, however, the study area for the vibration assessment will be limited to the closest receptors to the construction activity areas, on the assumption that if vibration is within

acceptable levels at the closest receptors then it should also be within acceptable levels at more distant receptors. Figure 6-1 details the receptors likely to be included within the vibration assessment, though this will be finalised through consultation with the Environmental Health Officer and after a review of the construction timetable and proposed construction methods. Predicted vibration levels will be reported for both a 66% and 95% confidence level and compared to the threshold levels presented in *BS 5228:2009+A1:2014 – Part 2 Vibration*.

In addition to a comparison of the predicted noise levels against the *BS 5228* thresholds, predictions will also be compared with the assessment criteria detailed within DMRB to determine the Significance of Effects with respect to Observable Adverse Effects Levels.

6.7 Potential Effects

There is a potential for adverse effects to occur during the road construction period with regards to both noise and vibration. Accordingly, **an assessment of construction and noise and construction vibration is Scoped In**. Noise effects attributable to the construction phases would be both short term and temporary.

Noise from road traffic using Kilfinnan Road has already been considered within the 2018 EIA for the Revised Coire Glas Pumped Storage Scheme. No significant increase in road traffic beyond that which has already been considered is anticipated, therefore, **an assessment of operational noise and vibration is Scoped Out**.

6.8 Assessment of Cumulative Effects

Due regard will be given to potential effects that could occur from concurrent construction activities related to other elements of the Coire Glas Pumped Storage Scheme. This will include consideration of the overall noise level as well as duration of exposure.

6.9 Mitigation and Enhancement

BS 5228 provides details of best practice mitigation measures that can be incorporated within construction sites to reduce noise and vibration effects and details of these will be presented within the EIA Report Chapter.

There is limited scope for enhancement of the environment, however, there may be a small reduction in road traffic noise during the operational phase due to an improvement of the road surface.

7 Air Quality

7.1 Introduction

The air quality EIA Report chapter will be prepared by SLR Limited. The focus of the assessment relates to the construction phase of the Project. This principally includes the generation of dust and road traffic emissions as a result of temporary construction works.

The scope of the assessment proposed in consistent with the methodology undertaken as part of the Revised Coire Glas Pumped Storage Scheme EIA, where relevant.

7.2 Baseline Conditions

The Site is located wholly within The Highland Council's (THC) jurisdiction. The character of the surrounding land is rural in nature with a small number of residential dwellings within close proximity to the Proposed Development.

Regarding Local Air Quality Management (LAQM), THC has designated one Air Quality Management Area (AQMA) for exceedances of the annual mean nitrogen dioxide (NO_2) Air Quality Objective (AQO) within their administrative boundary, known as the "Inverness City Centre AQMA". The AQMA is located approximately 65km north-east of the Site and as such, the AQMA does not represent a constraint to the Proposed Development.

The closest statutory ecological designation is the South Laggan Fen Site of Special Scientific Interest (SSSI), located to the southeast of the A82 Site access.

7.3 Relevant Guidance

The principles prescribed within the following guidance documents will be utilised, where necessary:

- IAQM 'Guidance on the assessment of dust from demolition and construction';
- IAQM 'A guide to the assessment of air quality on designated nature conservation sites';
- EPUK & IAQM 'Land-use planning and development control –planning for air quality'; and
- Scottish Executive Technical Guidance on Air Quality (LAQM.TG (22), 2022).

7.4 Statutory and Planning Context

Air Quality Strategy

The latest Air Quality Strategy (AQS) for England, Scotland, Wales and Northern Ireland was published in 2007 which contains national air quality standards and objectives established by the UK Government and Devolved Administrations for the protection of public health and the environment. The Objectives considered within the Air Quality chapter are presented in the table below.

Table 7-1: Relevant Air Quality Strategy Objectives

Pollutant	Standard (µg/m3)	Measured As	Allowable Exceedance
Particulate matter within an aerodynamic diameter of less than 10µm (PM10) (gravimetric)	18	Annual Mean	-
	50	24-hour Mean	7 exceedances per year
Particulate matter within an aerodynamic diameter of	10	Annual Mean	-

less than 2.5µm (PM2.5) (gravimetric)			
Nitrogen dioxide (NO2)	40	Annual Mean	-
	200	1-hour Mean	18 exceedances per year

Planning Policy

Scottish Planning Policy (SPP), adopted in June 2014, sets out national planning policies to aid the operation of planning and development throughout Scotland. The SPP sits alongside a number of additional documents to help the design, implementation and spatial development. One of these documents is Scotland's Third National Planning Framework (NPF3).

The SPP states that development should contribute to a sustainable development:

> *"The planning system should support economically, environmentally and socially sustainable places by enabling development that balances the costs and benefits of a proposal over the longer term. The aim is to achieve the right development in the right place; it is not to allow development at any cost.*
>
> *This means that policies and decisions should be guided by the following principles:*
>
> *[..] avoiding over development, protecting amenity of new and existing development and considering the implications of development for water, air and soil quality."*

The policies within the SPP and accompanying NPF3 in relation to air pollution would be considered within this Air Quality Chapter.

The Highland-wide Local Development Plan (HwLDP), adopted on 5th April 2012, identifies the overarching objectives for spatial planning and provides a framework for development within THC's area of administration up until 2030. THC are currently undergoing the process of replacing the HwLDP with a new Proposed Plan. As such, the HwLDP currently provides the context for planning decisions within THC's area of administration.

Policies that would be taken into account within the Air Quality Chapter include:

• Policy 72: Pollution; and

• Policy 73: Air Quality.

7.5 Consultation

Consultation with relevant statutory consultees (including THC Environmental Health Officer) will be attempted to provide further opportunity for stakeholders to review the extent and scope of the proposed assessment methodology.

7.6 Potential Effects

Potential effects associated with the Project that will be considered within the Air Quality Chapter include:

- Effects associated with dust/particulate matter generated from temporary onshore construction activities upon sensitive human and ecological receptors; and
- Public health and ecological effects associated with a temporary change in pollutants arising from construction generated traffic flows.

An assessment of emissions generated from Non-Road Mobile Machinery (NRMM) used during the construction phase is proposed to be scoped out from assessment given the duration of time machinery will be operated within the immediacy of sensitive receptors and likelihood of a significant effect arising. Notwithstanding this, in accordance with the Scottish Executive Technical Guidance on Air Quality (LAQM.TG (22)), providing suitable controls are applied, emissions generated from NRMM are unlikely to contribute to a significant impact upon local air quality. Details

of these controls, as recommended within LAQM.TG (22), will be included within the Air Quality Chapter.

The A82 (following completion of the works) would principally be used to access the Coire Glas pump storage site. Construction traffic associated with the Coire Glas pump storage site has been assessed separately within the Coire Glas EIA. Furthermore, operation traffic associated with the Coire Glas pump storage site was scoped out of the Coire Glas EIA. Therefore, the assessment will be limited to the generation of vehicles associated with the construction element of the A82 upgrade works. No further assessment with respect to road traffic is therefore required.

7.7 Assessment Methodology

Baseline Data

The characterisation of the existing environment will be undertaken with use of the latest publicly available data sources. At present, this will include the following sources (however will be reviewed throughout the EIA lifecycle):

- Scottish Government's Background Mapped Concentration Estimates (2018 reference year);
- Department for Environment, Food and Rural Affairs (Defra) Background Mapped Concentration Estimates (2018 reference year);
- Monitors associated with the Automatic Urban and Rural Network (AURN); and
- THC LAQM Air Quality Annual Progress Reports.

No project specific air quality surveys are proposed presently as the above sources are considered will be sufficient for the purposes of characterising the receiving environment, following an initial review. This is also considered proportionate, given the nature of the proposed screening assessment.

Assessment of Construction Phase Dust Impacts

A qualitative assessment of the potential dust impacts arising from construction activities will be undertaken in accordance with IAQM guidance. The outcomes of this assessment will determine the unmitigated level of risk on both human and ecological receptors (if applicable) and inform proportionate mitigation and controls to render residual effects as 'not significant'.

The assessment involves the consideration of:

- Human receptors within 350m of any proposed onshore construction works, and within 50m of routes used by construction vehicles on the public highway, up to 500m from site exits; and
- Ecological receptors within 50m of any proposed onshore construction works, and within 50m of routes used by construction vehicles on the public highway, up to 500m from site exits.

Assessment of Construction Phase Road Traffic Emissions Impacts – Human Receptors

Potential road traffic impacts associated with sensitive human receptors will be screened using the criteria set out in the IAQM/EPUK guidance, as follows (specific to a development located outside of an AQMA):

- A change of light duty vehicle (LDV) flows of more than 500 annual average daily traffic (AADT); and/or
- A change of heavy duty vehicle (HDV) flows of more than 100 AADT.

Assessment of Construction Phase Road Traffic Emissions Impacts – Ecological Receptors

Potential road traffic impacts on sensitive ecological habitats will be screened in accordance with IAQM guidance.

This initially comprises a numerical screening assessment to indicate whether the Proposed Development is likely to generate either >1,000 (and/ or >200 HDV) AADT movements on a road link within 200m of a sensitive qualifying ecological feature.

For the purposes of assessing impacts on sensitive qualifying internationally designated ecological sites (e.g. Special Area of Conservation, Special Protection Area and Ramsar), screening will be undertaken in-combination with other projects and plans following the judicial outcomes of the Wealden Judgement, where located within 200m of an affected road link. However, when assessing impacts on national and/or local ecological designations, developmental trips will be assessed in isolation (i.e. project alone). This is reflective of the level of protection afforded to these sites.

The outcomes of the above will determine whether impacts could result in a likely significant effect on the assessed ecological feature (either alone, or in-combination in the context of international sites) and indicate where further assessment is required.

Given the nature of the National/Local designations surrounding the Site (i.e. South Laggan Fen SSSI), developmental trips will be assessed in isolation (i.e. project alone). This is reflective of the level of protection afforded to these sites.

7.8 Assessment of Cumulative Effects

Construction Phase Dust Assessment

Cumulative construction dust effects could arise where impacts from more than one scheme overlap (concurrently or consecutively, and both spatially and temporally) at an affected receptor location.

Consideration will be given to cumulative impacts arising from the generation of dust from other construction activities occurring locally and concurrently. However, all schemes which are considered to pose a risk of cumulative effects will have had to undertake a construction dust assessment separately relating to their own site activities and associated risks, with the recommendation of best practice mitigation to remedy residual effects not significant.

IAQM guidance states that, with the implementation of the recommended mitigation, effects will be not significant. As such, it is not anticipated at this stage that there would be significant cumulative effects associated with construction phase dust emissions.

Construction Phase Road Traffic Screening Assessment

Consideration will be given to cumulative impacts for the purposes of the road traffic screening assessment, where necessary and required by guidance.

At present, this will be limited to the assessment of international ecological designations for the purposes of facilitating an in-combination assessment prior to screening out effects in isolation, as required by IAQM guidance, if required. This will involve the consideration of committed development trips along the extent of the affected road network for screening. Datasets used to fulfil this in-combination screening assessment will be consistent with analysis undertaken as part of the Traffic and Transport assessment.

Following a review of surrounding ecological designations, no international sites exist –therefore screening of road traffic flows will be undertaken in isolation.

7.9 Mitigation and Enhancement

The above assessments will identify the nature and significance of potential air quality effects that may arise as a result of the Proposed Development. If necessary, mitigation measures will be proposed in in accordance with relevant guidance to ameliorate any adverse effects.

8 Hydrogeology, Flood Risk & Drainage

8.1 Introduction

The hydrogeology, flood risk and drainage EIA Report chapter will be prepared by SLR Limited. This chapter of the scoping report provides an overview of the soils, geology, and the water environment (hydrology and hydrogeology), flood risk and drainage. It also presents a summary of the potential effects associated with construction and operation of the proposed development and a summary of the proposed assessment methodology.

8.2 Baseline Conditions

Baseline conditions relevant to the water environment are described below.

As a consequence of previous assessments, the baseline conditions are well understood. These assessments, as well as published information sources, have been used to describe the baseline conditions.

Soils, Geology and Hydrogeology

The proposed development is shown by mapping published by the British Geological Survey (BGS) to be underlain by rocks of the Great Glen fault zone comprising cataclasites. The bedrock is shown to be overlain by hummocky glacial, alluvial fan and glaciofluvial deposits.

No peat deposits are recorded by the BGS. Priority peatland mapping published by NatureScot indicates that the proposed development is not located in an area designated with priority peatland habitat and no carbon rich soils, deep peat or peatland vegetation is present.

Soil mapping shows that soils beneath the proposed development comprise of brown soils.

The bedrock beneath the proposed development is unlikely to contain much groundwater. The bedrock has been classified by BGS as a low productivity aquifer where small amounts of groundwater may be present within the near surface weathered zone or secondary fractures. There is potential for shallow groundwater to be present in the glaciofluvial and alluvium fan deposits.

Hydrogeology and Designated Sites

The proposed development is located within the Loch Lochy and Loch Oich surface water catchments. The proposed development will cross several tributaries of the lochs including the Kilfinnan Burn.

It is known that the surface water and groundwater locally support private water supplies.

Review of the NatureScot Sitelink website confirms South Laggan Fen Site of Special Scientific Interest (SSSI) is located approximately 200 m southeast from the proposed development. The SSSI has been designated for transition open fen wetland habitats. No other water or geological dependent designated sites are recorded within 500 m of the proposed development.

Flood Risk

Scottish Environment Protection Agency (SEPA) flood mapping confirms flood extents are typically confined to the watercourse and loch corridors. A slightly wider extent of flooding is noted near Ceann Loch.

8.3 Relevant Guidance

The hydrogeology, flood risk and drainage assessment will be prepared with reference to best practice guidance, including (but not limited to):

- Land Use Planning System –SEPA Guidance Note 31 (Guidance on Assessing Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems), Version 3, (SEPA, 2017).

- Land Use Planning System –SEPA Guidance Note 2a (Development Plan Guidance on Flood Risk), Version 4, (SEPA 2018).
- Control of Water Pollution from Linear Construction Projects –Technical Guidance, C648 (CIRIA, 2006).
- The SuDS Manual C753 (CIRIA, 2015).
- Environmental Good Practice on Site C741 (CIRIA, 2015).
- Flood Risk & Drainage Impact Supplementary Guidance. The Highland Council, date not given.

8.4 Statutory and Planning Context

The hydrogeology, flood risk and drainage chapter will be prepared with reference to the following legislation and planning policies:

- EC Water Framework Directive (2000/60/EC).
- Water Environment and Water Services (Scotland) Act 2003.
- Water Environment (Controlled Activities) Regulations 2011.
- The Water Intended for Human Consumption (Private Supplies) (Scotland) Regulations 2017.
- Scottish Planning Policy (SPP) (Scottish Executive, 2020).
- The Highland Council (THC) Local Development Plan (THC, 2012)

8.5 Consultation

Consultation and data requests will be undertaken with the following bodies:

- THC;
- SEPA;
- NatureScot;
- Scottish Water;
- Ness District Salmon Fisheries Board;
- Ness and Beauly Fisheries Trust;
- Lochaber District Salmon Fisheries Board; and
- Lochaber Fisheries Trust.

8.6 Assessment Methodology

The potential effects associated the proposed development on the water environment will be assessed by completing a desk study and field investigation followed by an impact assessment, the processes of which are detailed below.

Baseline Assessment

An initial desk study will be undertaken to determine and confirm the baseline characteristics by reviewing available information relating to soils, geology, hydrology, and hydrogeology such as groundwater resources, licensed and unlicensed groundwater and surface water abstractions, public and private water supplies, surface water flows, flooding, rainfall data, and water quality. This will include review of published geological maps, Ordnance Survey maps, aerial photographs and site-specific data such as the previous EIA prepared in support of the consented PSH and recent site investigation data, digital terrain models (slope plans) and geological literature.

The desk study will identify sensitive features which may potentially be affected by the proposed development and will confirm the existing hydrogeological and hydrological environment, flood risk and drainage paths.

The hydrological assessment specialists will liaise closely with the project ecology specialists and engineers to ensure that appropriate information is gathered to allow a comprehensive impact assessment to be completed.

A detailed site visit and walkover survey will be undertaken, to:

- Verify the information collected during the desk and baseline study;
- Undertake a visual assessment of the main surface waters;
- Identify drainage patterns, areas vulnerable to erosion or sediment deposition, and any pollution risks;
- Visit any identified Groundwater Dependent Terrestrial Ecosystems (GWDTEs) in consultation with the project ecologists;
- Visit private water supply sources that might be affected by the proposed development to confirm details of the location of the abstraction, its type and use, as required; and
- Prepare a schedule of potential permanent watercourse crossings.

Once the desk study is completed and sensitive water features are confirmed an impact assessment will be undertaken to assess the potential effects on the water environment as a result of the construction and operation of the proposed development.

Assessment Methodology

Having regard to the nature of the proposed development and key baseline characteristics, at this early stage it is considered that the assessment would include:

- Potential effects on the hydrological regime, including water quality, flow and drainage;
- Assessment of potential effects on identified licenced and private water supply sources;
- Assessment of potential effects on designated sites dependent on water and which may be in hydraulic continuity with the proposed development, including areas of GWDTE;
- Assessment of potential flood risk and drainage during construction and operation; and
- Assessment of potential cumulative or in-combination effects.

A qualitative risk assessment methodology will be used to assess the significance of the potential effects. Two factors will be considered: the sensitivity of the receiving environment and the potential magnitude should that potential impact occur.

This approach provides a mechanism for identifying the areas where mitigation measures are required, and for identifying mitigation measures appropriate to the risk presented by the proposed development. This approach also allows effort to be focused on reducing risk where the greatest benefit may result.

The sensitivity of the receiving environment (i.e. the baseline quality of the receiving environment as well as its ability to absorb the effect without perceptible change) and the magnitude of impacts will each be considered through a set of pre-defined criteria.

The sensitivity of the receiving environment together with the magnitude of the effect defines the significance of the effect, which will be categorised into level of significance.

At this stage it is expected the assessment will be supported by the following Technical Appendices:

- Flood risk assessment and outline drainage design which details the principles for the control, treatment and attenuation of runoff from the proposed development (the detailed drainage design would be prepared by the Principal Contractor prior to construction and agreed with consultees at that time);
- If required, and confirmed through scoping and consultation, outline design and hydraulic analysis of proposed bridge crossings (e.g. Cruinneachaidh bridge, Oighre bridge, and the Kilfinnan Burn bridge crossings), showing potential effects on watercourse flood levels and extents. Again detailed design would be undertaken by the Principal Contractor prior to construction;

- A schedule of watercourse crossings (show locations of proposed permanent crossings, and photographs and dimension of the existing watercourses to be crossed); and
- Private water supply risk assessment.

Issues to be Scoped Out

At this stage, it is considered the following can be scoped out of further assessment:

- Effects on geology and peat as no sensitive geological features or peat deposits have been identified in previous assessments or are shown on published mapping;
- Peat landslide hazard risk assessment and peat management plan as no deposits of peat are present;
- Water quality monitoring as water quality data is published by SEPA and can be used to characterise baseline water quality. However, if the assessment concludes that water quality monitoring is required prior to, during and post construction, this would be specified in the EIA Report.
- A Geomorphological Assessment as part of the proposed baseline surveys a schedule of watercourse crossing (showing photographs and dimensions of watercourse channels at proposed new watercourse crossings) would be presented as a Technical Appendix to the EIA Report.

8.7 Potential Effects

The construction and operation of the proposed development has the potential to result in the following effects without appropriate controls or mitigation:

Construction

- Increased flood risk to areas downstream of the proposed development during construction through increased surface water runoff and the construction of new watercourse crossings;
- Potential adverse change of surface and groundwater flow paths and contribution to areas of GWDTEs, water dependent habitat and water supplies;
- An adverse effect on surface water or groundwater quality from pollution, fuel, oil, concrete or other hazardous substances; and
- Potential pollution impacts and adverse effect to private water supplies.

Operation

- Adverse changes to surface water flow paths, watercourse discharge rates and volumes, and alteration of watercourse geomorphology;
- As a result of an alteration of groundwater and surface water flow paths, an adverse effect on water abstractions and water dependent habitat;
- An adverse effect on surface water or groundwater quality from pollution, fuel, oil, concrete or other hazardous substances from site traffic associated with maintenance activities; and
- Increased flood risk through increased surface water runoff from new impermeable areas and watercourse crossings.

8.8 Assessment of Cumulative Effects

A review of other existing and proposed developments near the proposed development will be undertaken and potential impacts on the water environment, flood risk and drainage will be assessed to identify cumulative impacts. With regard to the proposed development, it is likely that mitigation measures will be proposed that will have a neutral effect or provide betterment compared to baseline conditions. It is considered unlikely that there will be any significant residual or cumulative impact to report.

8.9 Mitigation and Enhancement

Analysis and interpretation of data gathered during the EIA process will ensure that the proposed development and associated works are carefully sited to ensure potential effects on the water environment, flood risk and drainage are minimised where practicable through design.

In addition, the Applicant has established best practice construction techniques and procedures that have been agreed with statutory consultees, including SEPA and NatureScot. These are set out within the Applicant's General Environmental Management Plans (GEMPs). The proposed development would be constructed in accordance with these plans.

A contractual management requirement of the successful Principal Contractor would be the development and implementation of a comprehensive and site-specific Construction Environmental Management Plan (CEMP). This document would detail how the Principal Contractor would manage the works in accordance with all commitments and mitigation detailed in the EIA Report, SSE's GEMPs, statutory consents and authorisations, and industry best practise and guidance, including pollution prevention guidance.

The CEMP will also outline measures to ensure that the works minimise the risk to the water environment, private water supplies and licensed water uses.

9 Landscape & Visual Impact

9.1 Introduction

This part of the Scoping Report discusses the scope of the Landscape and Visual Impact Assessment (LVIA) which would be undertaken for the Proposed Development. The LVIA would be carried out by Chartered Landscape Professionals from ASH design + assessment Ltd (ASH), a registered practice with the Landscape Institute (LI).

The LVIA would include the consideration of potential effects to the fabric and character of the landscape resource and the visual amenity of residents, travellers and visitors present within the study area.

9.2 Baseline Conditions

Landscape and Visual Context

The Proposed Development would comprise the upgrade of a narrow single-track road, along the western edge of the Great Glen, between Loch Oich and Loch Lochy. This comprises an area of flat, or slightly undulating valley floor, characterised by a small-scale patchwork mosaic of small agricultural fields, woodland and scrub which forms an interruption and contrast to the typical large scale pattern of expansive linear waterbodies which occupy the floor of the glen. The glen-floor is contained by long and continuous, steep valley-sides clothed by a covering of rough grassland and moorland, with forest plantation and occasional native woodland occupying some of the lower slopes. Above the glen lies a plateau area of rounded moorland slopes with the more distinctive mountain summits of Ben Tee, Sron a Coire-Ghairbh, Meall Dubh and Meall na Teanga to the south-west.

The Great Glen in this area forms a focus for residential and tourism development and an important communications corridor, accommodating the A82 trunk road, Caledonian Canal, Great Glen way walking and cycling routes and steel lattice and wood pole overhead transmission lines.

Designated and Protected Landscapes

National Context

The Proposed Development would not be located within any national, statutory designated landscapes. However, within the wider area, areas of the upper plateau fall within the following Wild Land Areas. Although not designated, these WLAs are identified as being of national importance and are protected through the planning system (Figure 2 –Landscape and Visual Constraints, shown in Appendix A):

- Wild Land Area (WLA) 18: Kinlochhourn –Knoydart –Morar lies approximately 5.6 km to the south-west of the Proposed Development; and
- WLA 19: Braeroy –Glenshirra –Creag Meagaidh lies approximately 2.5 km to the south-east of the Proposed Development.

Regional Context

As shown on Figure 2, the Proposed Development would be located entirely within the Loch Lochy and Loch Oich Special Landscape Area, a non-statutory designation identified by THC and protected through the Local Development Plan. The SLA covers the area of the Great Glen from around 1.5 km to the south of Loch Lochy to the head of Loch Oich, and the mountainous area to the west of Loch Lochy. Special Qualities of potential relevance to the Proposed Development comprise:

- **The Great Glen** –scale, striking linearity, long narrow lochs including, the imposing topography of the glen, the chain of lochs and the experience of the Great Glen Way, walking and cycling routes;
- **Classic Highland Scenery**, Distinctive Mountain-top Views including, views from low lying locations over agricultural grazings and lochs to steep wooded slopes and rolling summits,

and outstanding views from high elevations, most notably from Meall Dubh and Meall na Teanga; and

- **Intimate Drama** including, the intimate scale of features at close proximity to the lochs' shores, including rolling pastures and human settlement which contrast with the sense of drama and grandeur of the wider glen.

Landscape Character Types

NatureScot has undertaken detailed review and classification of the various landscape areas and types of Scotland (SNH, 2019 [online]). Within this context, the Proposed Development would be located within Landscape Character Type (LCT) 235: Broad Forested Strath. The Proposed Development would also be intervisible with, and would therefore potentially indirectly affect, LCT 236: Smooth Moorland Ridges, and LCT 239: Interlocking Sweeping Peaks –Lochaber.

Visual Amenity

Potential visual receptors who may gain views of the Proposed Development include residents, travellers and recreational users present in and around nearby buildings, and using roads and recreational resources as indicated on Figure 2.

Residents and visitors in and around buildings accessed along the Kilfinnan road, including those at Laggan Swing Bridge, North Laggan, Balam Glaster, and Laggan Locks, comprise the most notable groups of visual receptors likely to be affected by the Proposed Development. There may also be views from some other parts of the valley floor, such as Laggan and South Laggan. There would also be potential views from some tourist locations such as the canal basin at Laggan Locks and holiday park at the southern end of Loch Oich.

Potential route based receptors include travellers on the A82 and the users of the existing Kilfinnan road, as well as boat users of the Caledonian Canal.

Recreational route based receptors include users of the Great Glen Canoe Trail (broadly following the route of the Caledonian Canal) and Great Glen Way, part of which follows the route of the Proposed Development. Both these routes are included on a list of Scotland's Great Trails. Views of the Proposed Development may also be obtained from other paths and tracks within the local area, including Core Paths and Scottish Hill Tracks, as shown on Figure 2.

9.3 Relevant Guidance

The LVIA will be undertaken in accordance with the 3rd Edition of the Guidelines for Landscape and Visual Impact Assessment (LI and IEMA, 2013). Consideration will also be given to the following further guidance publications where relevant:

- Landscape Character Assessment Guidance for England and Scotland (Scottish Natural Heritage / The Countryside Agency, 2002); and
- Assessing impacts on Wild Land Areas (NatureScot, 2020).

Where relevant the LVIA would also take account of the principles laid out within the DMRB (Section LA 107: Landscape and Visual Effects).

9.4 Statutory and Planning Context

The assessment would take account of national, regional and local policy and guidance as detailed in Chapter 2.

As the Proposed Development site falls within the THC Planning Authority area, the Highland-wide Local Development Plan forms the key element of spatial planning policy for the Proposed Development. Policy 61: Landscape concerns the protection of landscape qualities. This states that:

> *"New developments should be designed to reflect the landscape characteristics and special qualities identified in the Landscape Character Assessment of the area in which they are proposed. This will include consideration of the appropriate scale, form, pattern and construction materials, as well as the potential cumulative effect of developments where this may be an issue. The Council would wish to encourage those undertaking*

development to include measures to enhance the landscape characteristics of the area. This will apply particularly where the condition of the landscape characteristics has deteriorated to such an extent that there has been a loss of landscape quality or distinctive sense of place. In the assessment of new developments, the Council will take account of Landscape Character Assessments, Landscape Capacity Studies and its supplementary guidance on Siting and Design and Sustainable Design, together with any other relevant design guidance."

Policy 57: Natural, Built and Cultural Heritage is also of relevance in relation to the protection of designated areas. With respect to areas of local / regional importance (such as the Loch Lochy and Loch Oich SLA), Part 1 of the policy states:

"..we will allow developments if it can be satisfactorily demonstrated that they will not have an unacceptable impact on the natural environment, amenity and heritage resource."

9.5 Consultation

Further consultation will be made with THC and NatureScot to agree the LVIA scope where necessary.

9.6 Assessment Methodology

The LVIA will cover the subject areas of landscape and visual effects within separate sections. The assessments will be informed by a Zone of Theoretical Visibility (ZTV) diagram which will be produced based on the assumed height of standard vehicles anticipated to be using the route. The study area for the LVIA would be informed by the ZTV. However, it is anticipated that a study area of 2 km is likely to be sufficient to accommodate all potential significant effects.

The LVIA will evaluate the sensitivity to change, magnitude and significance of effect for all landscape and visual receptors during construction and operational phases. The assessment of operational effects will assume the implementation of mitigation measures proposed with planting assumed to have been established for around 10 years. However, the potential for operational effects to vary over time will also be considered.

Potential effects will be presented as ratings of Negligible, Minor, Moderate and Major, taking into account sensitivity and magnitude ratings and on the basis of professional judgement. Where appropriate, interim ratings will be allocated (e.g. Minor to Moderate or Moderate to Major). Effects identified as being at a level of Moderate or greater are considered significant in accordance with the EIA Regulations.

Proposed Scope of Assessment

The LVIA will be presented in two parts discussing the anticipated effects on the separate aspects of landscape character and visual amenity during both the construction and operational phases of the Proposed Development. The assessment of operational effects will assume the implementation of any mitigation measures proposed with planting assumed to have been established for around 10 years. However, the potential for operational effects to vary over time will also be taken into account.

The assessment would be supported by various figures as required. The key aspects of the LVIA are set out below:

Zone of Theoretical Visibility (ZTV)

The LVIA will be informed by a ZTV. The ZTV is a computer generated diagram which uses a terrain model to indicate areas from which elements of the Proposed Development would theoretically be visible. It is proposed that ZTVs would be produced to represent the heights of key pieces of construction infrastructure and permanent landform features to gain an understanding of the likely visual extent of the Proposed Development during the construction phase and longer term.

Study Area

The potential visibility of the Proposed Development is anticipated to be largely limited to the local area by the surrounding topography of the Great Glen and nearby woodland. The study area for the LVIA would be informed by the ZTV. However, it is anticipated that a study area of 2 km is likely to be sufficient to accommodate all potential significant effects.

The extent of the study area will continue to be reviewed as the project design develops and will be informed by the ZTV and further site visits. The preliminary study area is shown on Figure 2.

Landscape Assessment

The Landscape Character Assessment will include assessment of the Proposed Development in relation to all the LCTs within the study area considering potential for effects on the fabric and character of the landscape. This will include the direct effect of potential physical change to landscape elements, experiential effects on the character of the Proposed Development site and surrounding areas, and potential indirect effects to the broader landscape resource.

Due to the scale of the proposed study area in relation to the LCTs identified by NatureScot, it is anticipated that LCTs may be broken down into a more fine-grained classification of the landscape in order to better reflect the diversity of the landscape character within the local area.

The landscape character assessment will also consider the potential for effects to the Special Qualities of the Loch Lochy and Loch Oich SLA.

Visual Assessment

The visual assessment will comprise a receptor-based assessment, considering the potential for effects on visual amenity within the study area. This will take into consideration all visual receptors located at residential properties and workplaces, recreational sites and those using roads, Core Paths and other recreational routes throughout the study area. Consideration will also be given to potential visual effects on boat users using the Caledonian Canal / Great Glen Canoe Trail.

Proposed Items to be Scoped out of the LVIA

Due to the distance of the Proposed Development from WLA 18 or WLA 19 and likely lack of intervisibility with these areas, it is proposed to scope out a WLA assessment.

9.7 Potential Effects

Potential effects on landscape and visual amenity could include:

- Temporary and longer term physical effects to landscape fabric, including potential tree removal, new cuttings or embankments, changes to vegetation cover, introduction of new features and activities or removal of existing features;
- Temporary and longer term effects to landscape character, where changes to the landscape fabric may lead to changes in the landscape patterns and intrinsic experiential qualities of the landscape;
- Temporary and longer term effects to views obtained by residents, travellers and recreational users of the landscape; and
- Potential cumulative effects with other aspects of the Coire Glas Pumped Storage Scheme.

9.8 Assessment of Cumulative Effects

As the Proposed Development would form part of the wider works for the Coire Glas Pumped Storage Scheme, the consideration of cumulative landscape and visual effects with other parts of Coire Glas would also be considered within the LVIA.

9.9 Mitigation and Enhancement

Landscape and visual considerations will be central to the design of the Proposed Development in order to achieve a design which best fits the landscape whilst achieving the practical and technical

standards required, taking account of the advice contained within the Transport Scotland policy document '*Fitting Landscapes*' (Transport Scotland, 2014). Care will be taken in the design of the Proposed Development to limit the effects on visual receptors, and particularly residential receptors where possible, and to avoid and protect existing features which contribute to the landscape character.

Where it is not possible to protect such features or views, additional mitigation will be proposed to offset the landscape and visual effects as far as possible. This may include the replacement / relocation of existing features, such as walls, or new planting and earthworks. These measures will be integral to the design of the Proposed Development.

The aim of landscape mitigation measures will be to screen and filter views towards the Proposed Development by visual receptors, and ensure that, where possible, new landscape features form a positive contribution to the existing landscape and reflect existing landscape characteristics. Landscape mitigation will also be designed with the additional aim of supporting the biodiversity of the Site in the longer term.

10 Traffic & Transport

10.1 Introduction

The traffic and transport EIA Report chapter will be prepared by Tetra Tech Limited. It will assess the level of impact resulting from the proposals. By calculating the number of trips associated with the construction phases, the potential impact on the roads within the study area will be determined in terms of percentage traffic increase, by Heavy Goods Vehicles (HGVs) and non-HGVs.

10.2 Baseline Conditions

The traffic and transport study area is defined as the lengths of public road that would be used to access the Proposed Development and be most impacted during the construction phase. The study area has been identified through a review of the likely routes connecting the suppliers of equipment and materials to the Site, and it is considered that it should include:

- Kilfinnan Road itself;
- A82 between Kilfinnan Road and Fort William; and
- A82 between Kilfinnan Road and Inverness

To determine the existing road usage, it is proposed that a combination of traffic surveys and Annual Average Daily Traffic Flow data from permanent counter sites will be used. It is proposed that a traffic survey exercise is undertaken to include:

- 2no 7-day Automatic Traffic Counts (ATC) on the A82
- Locations to be confirmed but assumed to be between the A82's Kilfinnan Road junction and its junction with the A87 at Invergarry (north), and between the A82's Kilfinnan Road junction and the access to Laggan Locks (south)
- 2no 7-day ATCS on Kilfinnan Road at its northern end, towards its junction with the A82, and at its southern end, south of Glengarry Lodges
- 1no 12hr classified junction turning count at the Kilfinnan Road / A82 junction;

It is proposed that Annual Average Daily Traffic is extracted from the online resource used by Transport Scotland at the following count sites:

- A82 north of Invergarry (Site ID 0000ATC01037);
- A82 south of Invermoriston (Site ID 0000ATC01038);
- A82 south of Drumnadrochit (Site ID 0000JTC00145);
- A82 north of Spean Bridge (Site ID 0000ATC01036); and
- A82 north of Loch Bridge (Site ID 000000001035).

Base year daily traffic flows for the year construction is anticipated to peak will be estimated by applying the National Road Traffic Forecast (NRTF) high growth factors to existing traffic flows. Applying high growth factors provides a robust assessment as they represent higher than average growth, particularly in the study area which is unlikely to have seen any significant growth in recent years.

Road traffic accident data will be obtained from the online resource CrashMap.co.uk for the study area roads covering the most recent five-year period.

The presence, or otherwise, of walking and cycling routes within the study area and the Site, that may be impacted by the Proposed Development, will be established through desktop review.

10.3 Relevant Guidance

The assessment will be undertaken in line with the guidance set out in Transport Assessment Guidance (Transport Scotland, 2012) and Guidelines for the Environmental Assessment of Road Traffic, (IEMA, 1993).

The severity of impact on the affected communities / receptors will be assessed using the Institute of Environmental Assessment guidelines and will propose mitigation works where necessary.

The Chapter will also review appropriate legislation, policy and guidance in the context of EIAs, and review the baseline in respect of existing traffic movements, accident data and footway, path and cycle networks.

10.4 Statutory and Planning Context

Assessment of effects in relation to Traffic and Transport will be undertaken in line with current guidance and best practice. The following legislation, guidance and published data sources will be used to inform the assessment including:

- The Scottish National Planning Framework 3 (NPF3) (Scottish Government, 2014);
  - Scotland 2045 - Fourth National Planning Framework Draft (Scottish Government, 2021);
- Scottish Planning Policy (SPP) (Scottish Government, 2014);
- Planning Advice Note 75: 'Planning for Transport' (Scottish Government, 2005); and
- National Roads Development Guide (SCOTS 2017).

10.5 Consultation

Transport Scotland, as the Trunk Road Authority, will be fully consulted along with The Highland Council. A record of the correspondence will be summarised in the reporting.

10.6 Assessment Methodology

The assessment will consider the potential for likely significant effects on receptors using transport routes resulting from increased vehicle movements associated with the construction and operational phase of the Proposals.

The construction phase will generate the greatest volume of traffic. The numerical assessments will therefore focus on this phase of development though consideration will be given to the operational phase.

Receptors are considered to be the users of the roads within the transport and traffic study area and the locations through which those roads pass.

The assessment will involve desk study, site visits, consultation, data processing and professional judgement. It will involve the following key stages:

- identify study area;
- determine baselines;
- review the Proposed Development to identify potential effects;
- evaluate significance;
- identify mitigation; and
- assess residual effects.

The IEMA Guidelines document includes guidance on how the sensitivity of receptors should be assessed. Using that as a base, professional judgement will be used to develop a classification of sensitivity for users based on the characteristics of roads and locations.

The following rules, taken from the IEMA Guidelines, will be used to determine which links within the transport and traffic study area should be fully assessed:

- Rule 1 - include road links where traffic flows are predicted to increase by more than 30% (or where the number of heavy goods vehicles (HGVs) is predicted to increase by more than 30 %).
- Rule 2 - include any other specifically sensitive areas where traffic flows are predicted to increase by 10 % or more.

IEMA Guidelines identify the key effects that are most important when assessing the magnitude of traffic impacts from an individual development and the levels of magnitude, these being severance, driver delay, pedestrian delay, pedestrian amenity, fear and intimidation, and accidents and safety.

To determine the overall significance of the transport and traffic effects, the results from the receptor sensitivity and effects magnitude assessment will be correlated and classified based on a scale set out in Table 2.4 of Volume 11, Section 2, Part 5 of the Design Manual for Roads and Bridges (DMRB).

In terms of the EIA Regulations, effects would be considered significant where they are assessed to be major, major/moderate or moderate.

10.7 Potential Effects

During the construction period, the following traffic will require access along Kilfinnan Road:

- Staff transport, either cars or staff minibuses;
- Construction equipment and materials, deliveries of machinery and supplies such as cement; and
- Abnormal loads if required.

Estimates will be made of the total traffic movements associated with each element of the construction programme and these will be split into average monthly movements and deliveries according to the construction phasing plan. Estimates will be based on information provided by the Applicant.

It is anticipated that stone and sand required to construct any new access tracks and hardstanding's are likely to be obtained from borrow pits within the proposed site and the main Coire Glas site. However, at this moment in time, ground investigation data is required to fully understand the volume and quality of material available. The assessment will assume that all material will be from suitable borrow pits identified on-site or in the main Coire Glas site.

To enable comparison of the estimated base traffic flows with total volumes including predicted construction traffic, the monthly construction flows will be converted to average daily flows for each month of the construction period. The peak daily construction traffic flows will be added to the daily base flows and the percentage uplift in this total traffic against base traffic calculated.

An assessment of percentage uplift on each road link within the study area will be made with reference to Rule 1 and 2 of the IEMA Guidelines. Where required, links will be taken forward to an assessment of the predicted magnitude of the impact from the increase in traffic movements with no mitigation in place. The significance of the effect will then be assessed.

For any effects that are found to be significant with no mitigation in place, an evaluation will be undertaken to consider the residual effects after the implementation of the proposed mitigation.

10.8 Assessment of Cumulative Effects

The chapter will also assess the potential for significant cumulative effects arising from the addition of the Proposed Development to other cumulative developments, which are the subject of a valid planning application. Operational, under construction and consented developments will be considered as part of the baseline. Traffic flows associated with developments close to the end of their operational life will be captured in existing traffic movement data and therefore form part of the baseline.

The cumulative effects will include the interaction of effects from this proposal with any effects from the Coire Glas PSH scheme, as may be relevant.

10.9 Mitigation and Enhancement

Proposed mitigation against the impacts of general construction traffic, and to enable the movements of any Abnormal Indivisible Loads (AILs) that are required, will be identified and discussed. This will include methods of working that would be introduced through a Construction Traffic Management Plan (CTMP) relating to the movement of general construction traffic and a Traffic Management Plan (TMP) relating to the movement of AILs, as well as physical measures such as road widening. Frameworks for both plans will be included in the Transport and Access Chapter Appendix.

The CTMP will promote best practice in many areas such as requiring sheeting of delivery vehicles to reduce dust and stop spillage on public roads, installing wheel wash facilities at the Site entrance and installing appropriate traffic management to minimise conflict with general traffic. Measures specific to the Site will also be included.

The TMP for the movement of any AILs as required will consider items such as advance warning signage, operation and management of convoys and communication procedures.

11 Topics to be Scoped out of the EIA

11.1 Climate Change

This project facilitates the Coire Glas PSH development, which has the potential to make a significant impact on climate change mitigation. Taken on its own, this proposal is unlikely to have significant effects either way on/from Climate Change. The movement of vehicles and related construction activity to upgrade Kilfinnan Road may impact on climate change through the use of fossil fuels, however additional vehicle movements are minimal in a regional/national context and will last for a limited period of time during the construction phase.

Proposals do not include built elements/structures or the removal of carbon sequestrating peat or other vegetation. Furthermore, no impact from climate change is anticipated (e.g. proposals will be protected from increased rainfall as part of measures set out in a CEMP such as preventing runoff).

11.2 Waste Management

The proposal itself will not generate significant waste material. Any waste material requiring disposal will be carried out under the appropriate licences.

11.3 Risk Management

The inclusion of risk and vulnerability as assessment topics within the EIA Regulations represents a relatively new aspect of EIA practice, which to date has largely been concerned with assessing likely significant effects rather than also the risks and vulnerabilities which may give rise to such effects.

The EIA Regulations, under Schedule 4, part 8 require an EIA Report to provide:

> "*A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned*".

Although only the resulting expected significant adverse environmental effects (together with any required prevention, preparedness, mitigation and response measures) need to be addressed, it is first necessary to identify a project's vulnerability (i.e. identification of relevant risks). The second stage is then to determine whether this would result in likely significant environmental effects.

The terms risk, vulnerabilities, major accidents and disasters are all undefined within the 2017 EIA Regulations. To remain proportionate, consideration of this topic should focus on the risks of major accidents and/or disasters which have the potential to result in serious damage, which for this EIA is defined as:

> "*The loss of life or permanent injury and/or permanent or long-lasting damage to an environmental receptor which cannot be restored through minor clean up and restoration efforts.*"

Potential Effects

Taking account of the location and characteristics of the Proposed Development, and the likelihood of significant environmental effects outlined in this scoping report, the major risks in EIA terms identified relate to:

- Potential accidents during the construction phase resulting in disturbance, injuries and/or fatalities to construction workers or members of the public; and
- Pollution incidents to ground and watercourses during the construction phase, resulting in potential pollution migration and adverse effects on specific receptors including soils, habitats, and species.

Justification for scoping topic out of the EIA

Key environmental risks will be described within the EIA Report and will provide sufficient information upon which the assessment of such issues can take place. This will also describe the key legislation and safety procedures under which construction and operation of the Proposed Development will take place.

The IEMA document 'Risk of Major Accidents and Disasters in EIA: A Primer (September 2020) offers an assessment methodology based on known current practice within the UK to date and identifies key terminology that can be used in assessments. It offers a proportionate method for considering major accidents and/or disasters through screening, scoping and assessment.

The IEMA Primer recognises that mitigation of a development's vulnerability to major accidents and/or disasters, is covered by a wide range of other safety and non-safety-related legislation. This mitigation is generally sufficient to manage vulnerabilities to major accidents and/or disasters without the need for secondary mitigation in most circumstances.

Health and safety are a key consideration in the construction sector and will be managed in accordance with legal requirements and best practice.

In terms of the potential effects identified above, these will be mitigated as follows:

- Potential accidents during the construction phase will be mitigated through Construction and Design Management (CDM) Regulations, construction health and safety practices (e.g. health and safety at work act) and standard best practice construction working methos which would be common to any construction project in the UK.
- Pollution incidents will be mitigated through standard best practice construction methods outlines in a CEMP.

11.4 Terrestrial Ecology (including Ornithology and Aquatic Ecology)

A detailed Ecology Impact Assessment (EcIA) was provided within the 2018 EIA Report for Coire Glas, including survey work and an impact assessment along the Kilfinnan Road/forestry track. An Ecological Assessment of the proposed upgrade works will be undertaken to provide a detailed understanding of any ecological issues occurring along and in close proximity to the proposed works. This is detailed in Chapter 5 of this EIA Scoping Report.

The Proposed Development has been designed taking cognisance of survey findings to ensure that any significant ecological effects are mitigated. Best practice measures, in relation to construction, will be adopted to ensure adequate protection of all retained habitats during construction. This will be demonstrated in a report to accompany the planning application.

Where necessary, appropriate mitigation measures will be adopted to ensure the protection of any terrestrial ecological assets which would otherwise be affected by the proposals. No potentially significant environmental effects are anticipated.

11.5 Land Use & Recreation

The effects on land use and recreation will be temporary and minimised by providing access for all residents and recreational users of the Great Glen Way as an embedded principle of design and mitigation measure. It is not considered that an assessment is required, although the effects of the proposed construction works will be highlighted in the Planning Statement accompanying the planning application. As such, no potentially significant effects are anticipated.

11.6 Socio-economics, Tourism and Recreation

The socio-economic effects will be temporary and minimised by providing access for all residents and recreational users including wild campers as an embedded principle of design and mitigation. It is not considered that an assessment is required, although the effects of the proposed construction works will be highlighted in the Planning Statement accompanying the planning application. As such, no potentially significant effects are anticipated.

11.7 Water Management

The design of the proposals will follow the existing Kilfinnan Road and forestry track alignment as closely as possible. Deviations such as the offline temporary access road are only proposed as necessary to ensure that access can be maintained to residents and road users and provide appropriate space for safe construction along the road and at bridge crossings.

Private Water Supplies (PWS) are a known presence along the length of the Kilfinnan Road and the Applicant has commissioned a recent report on this aspect as a means of establishing the locations of the PWS assets along the road. An updated report will be submitted as a stand-alone document and not within the EIA Report.

A section of the contractor's CEMP will specifically address this aspect and identify mitigation measures to combat any disruption of supply or water quality. It is anticipated that the same planning condition that has been imposed on the consented scheme could be attached to any planning permission for the upgrade works being proposed here, to control this aspect. As such, no potentially significant environmental effects are anticipated

11.8 Spoil Management

There will be spoil associated with the proposed construction works, most of which will be reused in the construction works itself. Any residual spoil can be used in the main Coire Glas works that is already covered under Condition 11 (Spoil Management Plan) of the consented scheme.

11.9 Ground Conditions

Recent ground investigations along the route of the Kilfinnan road and the forestry track have informed the proposed design of the upgrade works. No issues of sensitivity have been identified and no potentially significant environmental effects are anticipated.

11.10 Cultural Heritage & Archaeology

Chapter 15 of the 2018 EIA Report addressed cultural heritage and archaeology. The proposed site is located within the boundary of a designated Historic Battlefield site. The 2018 Report at Section 15.8.7 confirmedthat there are negligible cultural heritage sensitivities along and in the vicinity of Kilfinnan Road. No potentially significant environmental effects are anticipated. The 2018 EIA Report is provided as Appendix E in this Scoping Report.

12 Summary and Next Steps

12.1 Overview

This EIA Scoping Report has:

- Explained the key development parameters selected for the Proposed Development;
- Provided information to facilitate input from key consultees;
- Identified the nature and extent of likely effects on the environment from the Proposed Development, which at this stage have the potential to be 'significant' and therefore require detailed assessment through the EIA process; and
- Outlined the proposed methodology to identify, assess and address likely significant environmental effects from the Proposed Development through the EIA process.

12.2 The Environmental Impact Assessment Report

An EIA Report will be prepared in compliance with the EIA Regulations achieving the following:

- Describes the Proposed Development;
- Outlines the reasonable alternatives considered;
- Describe the baseline environment;
- Describes the likely significant effects of the Proposed Development and the methods used to identify such likely significant effects;
- Describes the measures proposed to avoid, minimise, mitigate or offset likely adverse effects;
- Describes any proposed monitoring arrangements; and
- Includes a non-technical summary.

12.3 Next Steps

The next steps in the EIA process for the Proposed Developments as described in this Scoping Report are as follows:

- Submission of the Kilfinnan Road EIA Scoping Report to Highland Council;
- Continued consultation with key stakeholders;
- Further environmental surveys;
- Receipt of formal EIA Scoping Opinion from the Highland Council;
- Public consultation exercises and community engagement
- Submission of planning application to the Highland Council.

12.4 Contact Details

Whilst all EIA Scoping consultation responses should be provided to the Highland Council for inclusion within their Scoping Opinion, any pre-application advice, or queries regarding the contents of this EIA Scoping Report should be directed to the consultant acting for the Applicant:

Steve Callan MRTPI, Associate Planner
Stantec
5th Floor
9 George Square
Glasgow
G2 1DY

Info.glasgow@stantec.com

Appendix A Figures

Appendix B Project Team Experience

B.1 EIA Co-ordination

Steve Callan BA (Hons) MSc (Hons) MRTPI is an Associate Planner with Stantec and an experienced major applications planner with over 18 years' of working on complex development proposals across the public and private sector. He is based in Glasgow and has expertise in the Scottish planning process, environmental legislation and project planning.

Aaron Doidge BSc (Hons) FRSA is a Planner with Stantec and has experience working on a variety of public and private sector projects across the UK including coordinating the consenting of major and strategic development; leading stakeholder & community engagement activities; and writing socio-economic, tourism and recreation EIA Chapters.

B.2 Ecology & Biodiversity

EnviroCentre is a solutions oriented consultancy with a proven track record in providing innovative, effective and valuable advice. Collectively, the EnviroCentre team have experience of conducting ecological surveys and reports and carrying out ecology consultation. Moreover, the team have managed and worked in the field on many ecological consultancy projects across Scotland, with a focus on upland wind farm and hydro scheme sites, including Coire Glas since 2009.

B.3 Noise and Vibration

TNEI is an independent, specialist energy consultancy providing technical, strategic, environmental and consenting advice to organisations operating within the conventional and renewable energy sectors. The noise specialists within our Environment and Engineering Team (E&E Team) are competent across a range of acoustic disciplines with specialist knowledge of renewable energy developments, having assessed operational and construction noise from schemes ranging in size from 500 kW run-of river hydro through to large scale Section 36 developments of several hundred MW.

Jim Singleton has significant experience in the modelling, assessment and compliance monitoring of construction noise, having worked on all of the projects above. In addition, Jim has worked on approximately 15 hydro schemes (operational noise assessments) and has undertaken construction noise work for a number of significant developments including Bardon Hill Quarry (58-hectare site with 3 million tonnes rock output per year), designing a noise monitoring scheme for the construction of two 55 MW coal power plants in Mauritius and the blast monitoring for several quarries and wind farm borrow pits.

B.4 Air Quality

SLR Consulting is a global leader in environmental and advisory solutions, helping clients achieve their sustainability goals. The air quality team brings experience with the assessment of impacts associated across all business sectors including oil and gas, mining and minerals, industry, power and infrastructure. The team have extensive experience of air permitting, air quality programme management, compliance management and providing expert witness.

B.5 Hydrogeology, Flood Risk and Drainage

SLR Consulting is a global leader in environmental and advisory solutions, helping clients achieve their sustainability goals. The Hydrogeology team are widely recognised for providing high quality technical expertise on a broad range of groundwater-related projects, to both the private and public sectors. SLR's expertise in this area includes carrying-out baseline assessments and investigations and providing input and support to EIA specialist studies.

B.6 Landscape and Visual

ASH design + assessment Ltd (ASH) is a Registered Practice with the Landscape Institute and a member of the IEMA Quality Mark scheme for quality in EIA. ASH's team of Landscape Professionals and other support staff have considerable experience in undertaking landscape and visual impact assessment (LVIA), cumulative landscape and visual assessment (CLVIA) and wild land assessment for hydroelectric and pumped storage schemes, wind farms and other large development types, as well as the development and monitoring of appropriate mitigation measures. ASH undertook the LVIA for the Coire Glas Pumped Storage Scheme. ASH's specialist landscape team is built of experienced, professionally qualified, Chartered Members of the Landscape Institute (CMLI) and Associate Members of the Landscape Institute (AMLI).

B.7 Traffic & Transport

Tetra Tech is a leading provider of consulting and engineering services worldwide. Tetra Tech's team of transport planners have vast experience of carrying-out transport assessments, as well as supporting planning applications and Environmental Impact Assessments.

Appendix C List of Proposed Consultees

The following list of consultees are proposed.

C.1 Ecology

- NatureScot
- SEPA
- Highland Council
- Highland Council Biodiversity Officer
- Lochaber District Salmon Fisheries Board (LDSFB)
- Lochaber and District Fisheries Trust (LDFT)

C.2 Noise & Vibration

- Highland Council Environmental Health Officer

C.3 Air Quality

- Highland Council Environmental Health Officer

C.4 Hydrogeology, Flood Risk and Drainage

- NatureScot
- SEPA
- Scottish Water
- Highland Council Flood Prevention Team
- Ness District Salmon Fisheries Board
- Ness & Beauly Fisheries Trust
- Lochaber District Salmon Fisheries Board (LDSFB)
- Lochaber Fisheries Trust

C.5 Landscape & Visual Impact

- Highland Council Planning Authority
- NatureScot
- Historic Environment Scotland (HES)

C.6 Traffic and Transport

- Transport Scotland
- Highland Council Transport
- Highland Council Outdoor Access
- Scottish Canals
- SUSTRANS

Appendix D EIA Screening Opinion

Appendix E 2018 Cultural Heritage EIA Chapter 15

Appendix F Glossary

ACRONYM	FULL NAME	DESCRIPTION
The Applicant	The Applicant	SSE Renewables
baseline	baseline	Environmental conditions at specific periods of time, present on, or near a site, against which future changes may be measured or predicted
CEMP	Construction Environmental Management Plan	Strategic document setting out best practice methods to minimise environmental impacts during construction
CIEEM	Chartered Institute of Ecological and Environmental Management	A professional body for ecological and environmental practitioners
CSM	Conceptual Site Model	The objective of constructing a Conceptual Site Model is to record all the potential pollutant linkages between the source of contamination and the receptors, i.e. the reasonably possible ways in which the receptors may experience exposure and consequent adverse effects
Cumulative effects	Cumulative effects	The summation of effects that result from changes caused by a development in conjunction with other reasonably foreseeable development that is either consented but not yet constructed or is in the process of seeking consent
dB(A)	A-weighting sound level measured in decibels	The A-weighting is applied to measured or calculated sound pressure levels so that these levels correspond more closely to the response of the human ear. A-weighted sound levels are often denoted as dB(A)
DBA	Desk Based Assessment	Research based primarily on database and internet data gathering methods
DMRB	Design Manual for Roads and Bridges	A widely used methodology for Environmental Impact Assessment which is used to assess some impacts of the Proposed Development (in particular traffic and transport) with appropriate modifications
EcIA	Ecological Impact Assessment	A recommended procedure for the ecological component of Environmental Impact Assessment, as formally required by EIA regulation
ECU	Energy Consents Unit	Consenting unit of the Scottish Government that will be responsible for consenting the Proposed Development
Effect	Effect	The consequent implication in environment terms (e.g. the loss of a potential species)
EIA	Environmental Impact Assessment	The assessment of the likely significant environmental effects of the Proposed

ACRONYM	FULL NAME	DESCRIPTION
		Development. Undertaken in accordance with the relevant EIA Regulations
EIA Regulations	EIA Regulations	Environmental Impact Assessment (Scotland) Regulations 2017' –The regulations under which this Scoping Report has been undertaken
EIA Report	EIA Report	The report which will be produced setting out the results of the EIA
FMS	Fisheries Management Scotland	FMS is the representative body for Scotland's District Salmon Fishery Boards, Rivers and Fisheries Trusts
FRA	Flood Risk Assessment	A study which considers the contributing factors and predicts / quantifies the risk of flooding to and from a Proposed Development, identifies a water level in the event of flooding and sets out the details of any proposed mitigation measures
GDL	Gardens and Designed Landscapes	Sites included on the Inventory of Gardens and Designed Landscapes maintained by Historic Environment Scotland
GHG	Greenhouse Gas	Gasses (e.g. CO2) which can cause the earth to warm if they are released into the atmosphere in large quantities
GWDTE	Groundwater Dependent Terrestrial Ecosystem	GWDTEs are wetlands which critically depend on groundwater flows and/or chemistries rather than rainfall
HES	Historic Environment Scotland	Historic Environment Scotland
IEF	Important Ecological Features	Features (e.g. habitats or species) which are afforded ecological protection, are particularly sensitive, or are considered to add value to the Site
LCRM	Land Contamination Risk Management	Sets out a process based on a tiered risk assessment with increasing level of detail required to progress through the tiers
LCT	Landscape Character Type	Areas identified and mapped by NatureScot through the Landscape Character Assessment of Scotland, considered to display an identifiable consistency of landscape characteristics
LDSFB	Lochaber District Salmon Fishery Board	This is a statutory body with particular responsibility for salmon and sea-trout fishery protection and enhancement in the Lochaber region
LFT	Lochaber Fisheries Trust	The Lochaber Fisheries Trust is a charity dedicated to improving and raising awareness of the fish populations and freshwater habitats of Lochaber

ACRONYM	FULL NAME	DESCRIPTION
LPA	Local Planning Authority	The local authority or council that is empowered by law to exercise statutory town planning functions for a particular area of the UK
LVIA	Landscape and Visual Impact Assessment	A tool used to identify and assess the likely significant effects of change resulting from development both on the landscape as an environmental resource in its own right and on people's views and visual amenity
MW	Megawatt	Unit of electricity generation
NPF	National Planning Framework	Provides a statutory framework around which to orientate Scotland's long-term spatial development
NSR	Noise Sensitive Receptor	Property, feature or person which is potentially sensitive to impacts from construction and operational noise
PAN	Planning Advice Note	Set out detailed advice in relation to relevant planning issues
PEA	Preliminary Ecological Appraisal	PEA is the term used to describe a rapid assessment of the ecological features present, or potentially present, within a site and its surrounding area in relation to a specific development
the Proposed Development	The Proposed Development	the development for which an EIA Scoping Opinion and deemed planning permission is sought
SAC	Special Area of Conservation	Areas of protected habitats and species as defined in the European Union's Habitats Directive (92/43/EEC).
Section 36	S36	The consenting route for the wider Coire Glas development, via the ECU
SEPA	Scottish Environmental Protection Agency	Scottish Environmental Protection Agency
the Site	The Site	The area within the consenting application boundary as shown in Appendix A
SLA	Special Landscape Area	A non-statutory designation applied through the Local Development Plan to landscape areas considered to be of regional or local importance
SPA	Special Protection Area	Classified for rare and vulnerable birds, and for regularly occurring migratory species, as defined in the EC Birds Directive (2009/147/EC)
SPP	Scottish Planning Policy	Sets out national planning policies which reflect Scottish Ministers' Priorities for operation of the planning system and for the development and use of land

ACRONYM	FULL NAME	DESCRIPTION
SSSI	Site of Special Scientific Interest	A site statutorily notified under the Wildlife and Countryside Act 1981 (as amended) as being of special nature conservation or geological interest. SSSIs include wildlife habitats, geological features and landforms
TA	Transport Assessment	A quantitative assessment of the transport effects of construction and operational phases of the Proposed Development
WLA	Wild Land Area	Areas identified by NatureScot as representing the most extensive areas of wildness of national significance
ZTV	Zone of Theoretical Visibility	A computer generated diagram indicating areas from which a specified element of a development may be theoretically visible. Hence, the development would not visible beyond the ZTV