Scottish & Southern Electricity Networks

Fanellan Hub 400 kV Substation and Converter Station

Environmental Impact Assessment Report

Volume 4 | Technical Appendices

Appendix 6.3 – Scoping Report

February 2025

Scottish & Southern Electricity Networks
TRANSMISSION

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APPENDICES

GLOSSARY

Term	Definition
Abnormal Load Route Assessment (ALRA)	An assessment of the ability of the Proposed Development access route to accommodate larger components, including transformers, to the site.
Annual Average Daily Flow (AADF)	The average over a full year of the number of vehicles passing a point the road network each day.
Air Insulated Switchgear (AIS)	An AIS substation is constructed with switchgear which relies on open air components, which can require large clearance areas for operation and safety, which takes up a larger area of land than Gas Insulated Switchgear (GIS).
Ambient Noise	The all-encompassing noise level measured in LAeq,T (total equivalent noise level over measurement period). The Ambient Noise Level incorporates background sounds as well as the industrial source noise under consideration.
Amenity	The natural environment, cultural heritage, landscape and visual quality. Also includes the impact of SSEN Transmission's works on communities, such as the effects of noise and disturbance from construction activities.
Ancient Woodland Inventory (AWI)	A database of land that is currently wooded and has been continually wooded, at least since 1750.
Applicant	A person who makes a formal application for something, in this case, SSEN Transmission.
Biodiversity Net Gain (BNG)	A way to contribute to the recovery of nature while developing land. It is making sure the habitat for wildlife is in a better state than it was before development.
Biodiversity Units (BU)	A unit of account. Metrics assign all habitats a unit value according to their relative biodiversity value. The scores assigned to habitats vary between the different metrics.
British Geological Survey (BGS)	UK's main provider of objective and authoritative scientific data, information and knowledge to help society understand the Earth.
Consultation	The dynamic process of dialogue between individuals or groups, based on a genuine exchange of views and, normally, with the objective of influencing decisions, policies or programmes of action.
Converter Transformer	A large transformer with ancillary external cooling fans which steps up or down the voltage before or after conversion from AC to DC or DC to AC.
Drinking Water Protected Area (DWPA)	DWPA's are where water is abstracted to provide water for human consumption and includes surface water (from rivers or reservoirs) and groundwater.
Engagement	The establishment of effective relationships with individuals or groups.
Environmental Impact Assessment (EIA)	A formal process set down in Town & Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 used to systematically identify, predict and assess the likely significant environmental impacts of a proposed project or development.
Flood Risk Assessment (FRA)	Document that reviews the risk of flooding from a development.
Gardens and Designed Landscapes (GDLs)	The Inventory of Gardens and Designed Landscapes lists those gardens or designed landscapes which are considered by a panel of experts to be of national importance.

Term	Definition
Geological Conservation Review (GCR) sites	Sites that contain geological and geomorphological features of national and international importance.
Groundwater Dependent Terrestrial Ecosystem (GWDTE)	Groundwater Dependent Terrestrial Ecosystems (GWDTE) are wetlands which critically depend on groundwater flows or chemistries. They are safeguarded by the Water Framework Directive (WFD) and are sensitive to hydrological and ecological changes caused by developments.
Habitat Suitability Index (HIS)	A scoring model used to evaluate water management options on plant and animal habitats.
High Voltage Direct Current (HVDC)	A direct current source with a voltage greater than 1000 V.
Historic Environment Scotland (HES)	Organisation responsible for investigating, caring for and promoting Scotland's historic environment.
Landscape Character Type (LCT)	A landscape type that is characterised by its distinct, recognisable and consistent pattern of elements that makes one landscape different from another.
Local Development Plan (LDP)	LDP's are usually prepared by the Local Planning Authority and set out the proposals for future development and use of land in their area.
Low Voltage Alternating Current (LVAC)	A direct current source with a voltage between 120 V and 1000 V.
National Planning Framework 4 (NPF4)	The national spatial strategy for Scotland. It sets out the spatial principles, regional priorities, national developments and national planning policy. It replaces NPF3 and Scottish Planning Policy.
Noise Sensitive Receptors (NSR)	Noise sensitive receptors are defined as receptors which are potentially sensitive to noise and vibration. Examples include dwellings, hospitals, schools, community facilities.
Ordnance Survey (OS)	Great Britain's national mapping agency.
Overhead line (OHL)	An electric line installed above ground, usually supported by lattice steel structures or poles.
Preferred Site Option	The site option that is the preferred choice during Stage 2 – Detailed Site Selection based on environmental, engineering and cost perspectives.
Prime agricultural land	Agricultural land identified as being Class 1, 2 or 3.1 in the land capability classification for agriculture developed by Macaulay Land Use Research Institute (now the James Hutton Institute).
Private Water Supplies (PWS)	A supply of water which does not come from a licensed water supplier.
Proposed Development	Refers collectively to all elements required to construct and operate the proposed Fanellan substation.
Ramsar	A wetland site designated to be of international importance under the Ramsar Convention.
Scottish Environment Protection Agency (SEPA)	Scotland's principal environmental regulator, protecting and improving Scotland's environment.
Site of Special Scientific Interest (SSSI)	A statutory designation made by NatureScot under the Nature Conservation (Scotland) Act 2004. Areas of land and water that are considered to best represent natural heritage in terms of their flora (i.e. plants), fauna (i.e. animals), and geology (i.e. rocks) and geomorphology (i.e. landform).
Site Options	Collective term for sites identified for consideration in the site selection process.

Term	Definition
Special Area of Conservation (SAC)	An area designated under the EC Habitats Directive to ensure that rare, endangered or vulnerable habitats or species of community interest are either maintained at or restored to a favourable conservation status.
Special Landscape Areas (SLA)	Regionally valuable landscapes identified to protect and enhance landscape qualities and promote their enjoyment.
Special Protection Area (SPA)	An area designated under the Wild Birds Directive (Directive 79/409/EEC) to protect important bird habitats. Implemented under the Wildlife and Countryside Act 1981.
SSEN Transmission	Scottish and Southern Electricity Networks Transmission.
Stakeholders	Organisations and individuals who can affect or are affected by SSEN Transmission works.
Substation	A node on the network to allow safe control of the electricity network. This could include convergence of multiple circuits, transformation of voltage or other functions to maintain and operate the electricity network.
LVAC Transformer (Station Transformer)	Step down transformers with ancillary cooling providing Low Voltage AC site supply.
Step Down Transformer	A transformer which steps the voltage between different levels on the transmission network.
Sustainable Drainage Systems (SuDS)	Drainage solutions that provide an alternative to the direct channelling of surface water through networks of pipes and sewers to nearby watercourses.
Tree Preservation Order (TPO)	A legal procedure used by the local authority to protect individual trees, groups of trees or woodland areas which are considered to have significant ecological, recreational, historical, shelter or landscape value.
UK Habitat Classification (UKHab)	Unified and comprehensive approach to classifying habitats.
Underground cables (UGC)	An electrical cable installed underground.
Water Framework Directive (WFD)	The main aims of the Water Framework Directive (WFD) are to: prevent deterioration and enhance status of aquatic ecosystems, including groundwater, promote sustainable water use, reduce pollution, and contribute to the mitigation of floods and droughts.
Works	Constructing new transmission infrastructure such as substations, overhead lines, underground cables; major refurbishment of these; the dismantling and removal of any parts of the system; and ancillary works, which may include formation of access tracks, bridge and road improvements, tree cutting, drainage etc.
Zone of Influence (ZoI)	The maximum area in which disturbance from the Proposed Development can be expected.
Zone of Theoretical Visibility (ZTV)	the area from which the Proposed Development is anticipated to be visible, in the absence of mitigation.

1. OVERVIEW

1.1 Introduction

1.1.1 This Scoping Report has been prepared by WSP UK Ltd ("WSP") on behalf of Scottish Hydro Electric (SHE) Transmission plc ("the Applicant") who, operating and known as Scottish and Southern Electricity Networks Transmission ("SSEN Transmission"), own, operate and develop the high voltage electricity transmission system in the north of Scotland and remote islands. In this Scoping Report, the Applicant and SSEN Transmission are used interchangeably unless the context requires otherwise.

1.1.2 This Scoping Report is provided to support a formal request by the Applicant under the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 for a Scoping Opinion to determine the information to be provided within the EIA Report.

1.1.3 The Applicant is proposing to apply for detailed planning permission under the Town and Country Planning (Scotland) Act 1997[1] (as amended) for consent to construct and operate a new 400 kV substation and a new High Voltage Direct Current (HVDC) converter station (the 'Proposed Development') to be located at a single site at Fanellan, near Inverness within The Highland Council local authority area. The location of the Proposed Development is shown on Figure 1.1 Site Location Plan (See Appendix A). For the purposes of this scoping document, the Proposal of Application (PAN) boundary has been used. The area within the PAN boundary includes any temporary site compounds, temporary and permanent drainage, site access and on-site parking, laydown and storage areas for materials and excavated soils, as well as hard and soft landscaping proposals. Many of these will be temporary and as such, the PAN boundary does not represent the final permanent footprint of the Proposed Development once completed but indicates the full development area. An overview of environmental features and designations in relation to the Proposed Development site is shown on Figure 1.2 Environmental Constraints (See Appendix A).

1.1.4 The Proposed Development is key to supporting the Western Isles connection project, the proposed Beauly to Peterhead 400kV overhead line and the proposed Spittal to Beauly 400kV overhead line, and all are part of SSEN Transmission's Pathway to 2030 projects. These projects are part of a proposed major upgrade of the electricity transmission network across Great Britain to help deliver United Kingdom (UK) and Scottish Government climate change and energy security targets. They would connect UK based low carbon renewable electricity generation to areas of demand across the country, with the aim of building a cleaner, more secure, and affordable energy system for homes and businesses across Great Britain. Further details on the Pathway to 2030 projects is provided in Appendix B.

1.2 Overview of the Proposed Development

1.2.1 The key elements of the Proposed Development which will be subject to an application for consent under the Town and Country Planning (Scotland) Act 1997 (as amended) would comprise the following:

- The creation of a platform approximately 875 x 305 metres (m);
- A new 400 kV Air Insulated Switchgear (AIS) Substation;
- An AIS control building- indicatively 4 x 25 x 8 m;
- Power supply transformers;
- 525 kV 1.8 GW High Voltage Direct Current (HVDC) Converter Station comprising Valve Hall, Direct Current Hall, Reactor Hall, Transformer Hall with adjacent Service and Control Rooms (approx.200 m x 170 m, max height 29 m);
- AC Filter Buildings (Approx 80 m x 100 m x 26 m);
- Smaller ancillary and HVDC support buildings;
- Creation of a new permanent access track and junction to public road;

[1] Town and Country Planning (Scotland Act) 1997. Available at: https://www.legislation.gov.uk/ukpga/1997/8/contents [Accessed: August 2023].

- Creation of additional access tracks for construction and operation;
- Creation of a Sustainable Drainage System (SuDS) including maintenance access;
- Security fencing around the platform area at 4 m in height;
- Site clearance activities including some tree felling;
- Creation of temporary construction compound and lay down areas; and
- Earthworks, Landscaping mitigation and biodiversity enhancement.

1.3 Associated Works

1.3.1 Other associated works are required to facilitate construction of the Proposed Development or would occur as a consequence of its construction and operation. These works, listed below, do not form part of the description of the Proposed Development and are therefore not included in the application for planning consents. On that basis they are therefore not assessed in detail in this EIA Scoping Report. However, further detail on some of these elements is provided where available as noted within this report:

- Installation of HVDC underground cables (UGC) from Dundonnell to Fanellan converter station to connect to the Western Isles (this will be constructed under Class 40 of the Town and Country Planning (General Permitted Development) (Scotland) Order 1992 as amended;

- Diversion of the existing Beauly-Denny 400 kV infrastructure (OHL) to tie in and connect the Proposed Development with the existing Beauly Substation. The Overhead Line works are subject to its own EIA Regime under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (for which EIA Screening has been submitted to the ECU and it has been confirmed 'non-EIA'). These works, therefore, do not form part of the consent sought for the Proposed Development and are therefore not discussed in detail in this Scoping Report, although consideration of the potential for cumulative effects with the Proposed Development is considered when determining the scope of the EIA Report, where relevant. The associated works, together with the Proposed Development, form what is referred to as 'The Fanellan 400kV Hub project'.

- Works to the Black Bridge crossing of the River Beauly. The extent of works which may be required to the Black Bridge are currently under consideration and there is not yet a finalised design solution. Any works which required planning consent would be dealt with by way of a separate application under the Town and Country Planning Act (Scotland) 1997 (as amended) and would be subject to its own separate EIA screening in due course if the identified proposal fell with the scope of the relevant EIA regulations and therefore is not considered in this scoping document.

1.3.2 These associated developments are potentially subject to separate consent applications where required and are not considered in this scoping document.

1.4 The EIA Regulations

1.4.1 The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017[2], hereafter referred to as the "EIA Regulations", contain two schedules. Schedule 1 lists projects where Environmental Impact Assessment (EIA) is mandatory. Schedule 2 lists projects where EIA may be required 'where proposed development is considered likely to give rise to significant effects on the environment by virtue of factors such as its nature, size or location'.

1.4.2 The Proposed Development is not of a type listed within Schedule 1 of the EIA Regulations. The Proposed Development is also not directly identified within Schedule 2 of the relevant EIA Regulations; however, the Applicant has decided to undertake an EIA for the Proposed Development given its size and nature, and its close association with other SSEN

[2] Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. Available at: https://www.legislation.gov.uk/ssi/2017/102/contents/made [Accessed: August 2023].

Transmission 400kV network projects, including the Spittal to Beauly Overhead Line and Beauly to Peterhead Overhead Line.

1.4.3 The Proposed Development would be National Development under the Town and Country Planning (Hierarchy of Developments) Regulations 2009 (as amended)[3] as the proposed site is greater than 2 ha and the development is of a type that would fall within National Development 3 – Strategic Renewable Electricity Generation and Transmission Infrastructure, in National Planning Framework 4 (NPF4)[4].

1.5 Purpose of the EIA Scoping Report

1.5.1 The purpose of this EIA Scoping Report is to ensure that the subsequent EIA is focused on the key impacts likely to give rise to significant adverse environmental effects. As well as identifying aspects to be considered in the EIA, this document also identifies those aspects that are not considered necessary to assess further.

1.5.2 In accordance with the EIA Regulations, this EIA Scoping Report contains:

- A plan sufficient to identify the location of the Proposed Development;
- A brief description of the nature and purpose of the Proposed Development and its possible effects on the environment; and
- Information and representations from the Applicant on the aspects of the Proposed Development or environment including those that are not considered necessary to assess further in the EIA Report.

1.5.3 The Applicant invites consultees to provide responses on the following:

- Please provide any environmental information that you hold or are aware of that will assist in the EIA described here;
- Do you agree with the proposed approach for baseline collection, prediction and significance assessment, and that the range of surveys across particular topics is sufficient and appropriate to inform the assessment of environmental effects?
- What other relevant existing baseline data do you expect to be taken into account?
- What key issues or possible effects which have been omitted?
- Do you agree with the list of issues to be scoped out, and the rationale behind the decision? Of those issues identified for assessment, which do you consider the most important/material and which the least?

1.6 Scoping Report Methodology

1.6.1 This report provides information on the individual factors that require consideration under Regulation 4(3) of the EIA Regulations. This EIA Scoping Report presents the findings of an initial appraisal of the likely significant environmental effects of the Proposed Development on the receiving environment. It provides an overview of the baseline conditions as understood at the time of writing and the likely potential effects as a result of the Proposed Development. Where site survey and further assessment are deemed necessary, the approach and methodologies are outlined. Environmental topics considered with an initial assessment in this EIA Scoping Report are:

- Landscape and Visual Impact;
- Ecology and Ornithology;
- Cultural Heritage;
- Traffic and Transport;
- Hydrology, Hydrogeology, Geology and Soils;
- Noise and Vibration; and
- Forestry.

[3] Town and Country Planning (Hierarchy of Developments) Regulations 2009. Available at: https://www.legislation.gov.uk/sdsi/2009/9780111001714/contents [Accessed: September 2023].

[4] The Scottish Government (2023). National Planning Framework 4. Available at: https://www.gov.scot/publications/national-planning-framework-4/ [Accessed: August 2023].

1.6.2 For each topic, an overall description of the baseline environment is provided relevant to that topic, broken down on a section by section basis where relevant. This is followed by a summary of the potential effects associated with each environmental topic listed above, and the proposed scope of survey and assessment work relevant to that topic to determine effects and identify appropriate mitigation measures. Issues to be scoped out of the assessment are also provided.

1.6.3 The environmental topics and issues scoped out of the EIA are listed below and the justification for scoping out is summarised in Chapter 13:

- Population and Human Health[5];
- Major Accidents and Disasters;
- Air Quality and Climate;
- Material Assets and Waste;
- Land Use and Agriculture;
- Electric and Magnetic Fields (EMF); and
- Socio-Economic Assessment

1.7 Site Selection

1.7.1 Initial consultation on potential site options was undertaken during March 2023 at Stage 1 (Initial Site Screening). Feedback was gathered on 16 potential site options from a variety of stakeholders including the public and statutory stakeholders. The feedback received was considered as part of the site selection process and where appropriate will be carried through to consideration in the EIA.

1.7.2 Following the completion of Stage 1 a short list of four site options was taken forward to Stage 2 (Detailed Site Selection) where they were assessed to identify the most technically feasible, economically viable and environmentally acceptable option within the defined area. During March and April 2023, consultation was undertaken to seek comments from stakeholders and members of the public on the site option studies undertaken, and the rationale for, and approach to, the selection of the preferred site.

1.7.3 A summary of the consultation undertaken to date and planned are provided below:

- A statutory consultee meeting (March 2023) to discuss the Substation Site Selection process;
- The publication of the Report on Consultation (November 2023) to document the site selection process, consultation and feedback for the Proposed 400 kV Substation and HVDC Converter Station;
- The publication of the Site Selection Consultation Document (September 2023), which describes the site selection process followed, site options identified, the appraisal undertaken, the alternatives considered during the selection options and the suggestion for a Preferred Site;
- A Stage 1 and Stage 2 Digital Consultation Document presented the key information alongside interactive maps and images, which was presented to statutory consultees in March 2023;
- One public consultation event (March 2023) provided face-to-face public engagement;
- A Consultation Booklet and a feedback form for public consultation events (March and April 2023) was made available at the in-person event
- One online virtual consultation event (March 2023) to supplement the in-person event; Newspaper adverts in the Press and Journal, Caithness Courier, Northern Times, Ross-Shire Journal and Inverness Courier (February 2023);
- Postcards were sent to 28,309 homes and 1,133 businesses and communities potentially impacted by the Proposed Development.
- Posters and communications with community councils;

[5] Socioeconomics, Tourism and Recreation are covered by this topic heading.

- Pre-Application Public consultation events planned to take place in March and June 2024; and
- Pre-Application meetings with THC (September 2023 and March 2024).

1.7.4 The consultation process and feedback received has been documented in a Report on Consultation and a consultation register remains a live document and will be updated on receipt of any further consultation comments.

1.7.5 Members of the public and other interested stakeholders will be invited to attend an information event during the EIA and Consenting phase of the Proposed Development, and the local community, community councils, elected representatives, statutory and non-statutory stakeholders will continue to be engaged as the project progresses.

Pre-Application Consultation with The Highland Council

1.7.6 A pre-application exercise was undertaken with The Highland Council in September 2023, providing the Applicant an opportunity to present the proposals to the Council, and seek advice on the acceptability of the Proposed Development, and likely requirements and expectations for a future application. Following this meeting, The Highland Council provided a formal pre-application response, detailing their understanding of the Proposed Development, and setting out relevant planning policy and environmental considerations that would need to be addressed as part of the application supporting documents.

Proposal of Application Notice

1.7.7 A Proposal of Application Notice (PAN) was submitted on February 21st 2024 to notify The Highland Council of the Applicant's intention to submit a national development application. It described the development and proposed further consultation, including public information events scheduled for March and June 2024.

2. DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Introduction

2.1.1 This chapter describes the elements that constitute the Proposed Development. The detailed design of the Proposed Development is currently in progress, and for the purposes of the EIA scoping the preliminary layout (within the PAN boundary) has been assumed as per Figure 1.1 (See Appendix A). It provides a description of the key components and information regarding the construction, operation, and maintenance of the Proposed Development.

2.2 Description of the Proposed Development

2.2.1 The Proposed Development would be located in The Highland Council authority area, approximately 6 km to the south-west of the town of Beauly and approximately 23 km to the west of the City of Inverness. (National Grid Reference NH 48534 43208). The Proposed Development (PAN boundary) site covers an area of approximately 349 hectares (ha) (see figure 1.1 in Appendix A) and has an elevation ranging from approximately 11.3 m Above Ordnance Datum (AOD) at its lowest point rising to 154.3 m at the highest point.

2.2.2 The objective of the Proposed Development is to support the growth in renewable energy across the north of Scotland and support the drive towards net zero. It will facilitate the connections of the new Spittal-Loch Buidhe- Beauly 400 kV Overhead Line (OHL) and the new Beauly – Blackhillock - New Deer – Peterhead 400 kV OHL onto the transmission network (via the existing Beauly substation) and the Beauly- Denny 400kV OHL. In addition, an HVDC converter station is required in the vicinity of the existing Beauly substation, as this has been identified as the most suitable place on the 400 kV network to connect the proposed Western Isles generation into.

2.2.3 The site is located on agricultural land with few residential properties. Ruttle Wood borders the site to the north. It also has a favourable topography with a reasonably flat site where the substation and converter station will be located. Access to the site is via the A831 which runs adjacent to the River Beauly, with site traffic needing to travel south from the A831 along Fanellan Road, crossing the River Beauly at the Black Bridge crossing. A new permanent access road would be constructed to the Proposed Development from Fanellan Road for use once the site is operational..

2.3 Proposed Development Components

2.3.1 The proposed development will comprise a new 400kV substation and HVDC Converter station and would consist of the following components:

- Existing access point from Fanellan Road to be used for construction access, subject to road upgrades;
- The construction of a new bellmouth and access road to the Proposed Development from the public road (C1106 Fanellan Road) for heavier load vehicles and to reduce the extent of public road use. This access would remain in place permanently following construction for operational use;
- The construction of temporary access tracks;
- The construction of temporary construction compounds;
- Temporary laydown areas and soil stockpile areas;
- Permanent site drainage and water management incorporating Sustainable Drainage Systems (SuDS) and including access for maintenance;
- Landscaping mitigation and biodiversity enhancement;
- Possible demolition of existing agricultural and residential buildings within the immediate proximity to the site; and
- The construction of a new level platform (approximately 875 m x 305 m) through cut and fill earthworks upon which the 400kV Substation and HVDC Convertor will be installed which comprise:

400kV Substation

2.3.2 The 400kV substation will comprise of the following:

- A new substation platform, indicatively 525 m x 305 m ~~870 x 290~~ meters (m) in size, which includes a 4 m security fence.
- Installation of Air Insulated Switchgear (AIS) in order to connect incoming circuits including facilitating connection from the HVDC converter station.
- Installation of Step-Down Transformers in order to provide the site with Low Voltage Alternating Current (LVAC) supply.
- A new control building- indicatively 45 x 25m, with a maximum height of approx. 8m. The design details including finalised position and colour is under development.
- Temporary access tracks to be created for overhead line construction activities.
- Temporary construction compounds – size and locations to be determined and agreed with landowners.
- Temporary storage compounds for topsoil and material - size and location to be determined an agreed with landowners.
- Site clearance activities including some tree felling.
- Landscape forms at the front and sides of the platform to help screen the development- size and location are still in refinement.

HVDC Converter station

2.3.3 The HVDC Converter Station at Fanellan will include the following requirements;

- A co-located Converter Station platform, approximately 350 x 290 m m, adjacent to the new Fanellan 400 kV Substation;
- Main HVDC Converter Station Buildings comprising Valve Hall, Direct Current Hall, Reactor Hall, Transformer Hall (housing 6 Converter Transformers and 5 LVAC (Station) Transformers) with adjacent Service and Control Rooms (Approx. 200 m x 170 m, 28-29 m high);
- AC Filter Buildings (Approx 80 m x 100 m, 26 m high);
- Smaller ancillary and support buildings adjacent to the main converter station building;
- Underground Cable Connection for the associated development underground cable running from Dundonnell to Fanellan site; and
- Landscape forms at the front and sides of the platform to help screen the development- size and location are still in refinement.

As the site is adjacent to the Fanellan 400 kV Substation, both sites will share common access, security arrangements, site drainage infrastructure, landscaping etc.

Operational Infrastructure

2.3.4 Given the scale of the developments, a need for permanent facilities, in addition to any of those already mentioned above, has been identified to support operational requirements.

- Operations depot and store – this would consist of buildings for offices, training facilities, car parking and storage facilities for strategic spares. Approximate dimensions are a height of 24 m, width of 60 m and 124 m length;
- Storage and desk space will be allocated within the 400kV control building, and car parking will be allocated
- Lighting – floodlights would be installed but would only be used in the event of a fault during the hours of darkness; during the over-run of planned works; or when sensor activated as security lighting for night-time access. The access roads would not be lit under normal operation. The perimeter fence would use infra-red lighting (this would only switch to white light if the fence alarm were activated to allow night-time cameras to work better). A light would also be provided permanently at access gates;

- Security fencing – a 4 m high palisade fence would be installed around platforms, in addition a standard post and wire perimeter fence would be installed around the site boundary;
- Underground connectors to the buildings for Low Voltage (LV) and communication cabling. The connection with the HVDC site will likely be overground via busbar rather than cabled (to be confirmed during design).

2.4 Programme and Hours of Working

2.4.1 It is anticipated that construction of the project would take approximately 3 years, starting in 2025 (with a further two years to commission and reach full energisation), although detailed programming of the works would be the responsibility of the Principal Contractor in agreement with SSEN Transmission. It is anticipated that the project will be operational by 2030. The detailed construction phasing and programme would be subject to change as the design progresses.

2.4.2 Construction activities would in general be undertaken during daytime periods. Working hours are currently anticipated between approximately 07.00 to 19.00 in the summer and 07.30 to 17.30 (or within daylight hours) in the winter, Monday to Friday. Weekend working would also be proposed with slightly reduced working hours. Working hour assumptions would be set out within the EIA Report and agreed with The Highland Council.

2.4.3 During the commissioning phase of the Proposed Development, there may be a requirement for 24 hours a day, seven days a week working hours. If required, this would be agreed in advance with The Highland Council.

2.5 Construction Environmental Management

2.5.1 The initial scoping appraisal and the assessment in the EIA Report will be carried out on the basis that standard mitigation measures will be implemented during the construction work, including compliance with both project wide and site-specific environmental management procedures, with reference to SSEN Transmission General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs).

2.5.2 A Construction Environment Management Plan (CEMP) would be developed for the Proposed Development and adopted by the successful Principal Contractor during the construction phase. The principal objective of this document is to provide information on the proposed infrastructure and to aid in avoiding, minimising, and controlling adverse environmental impacts associated with the Proposed Development. Furthermore, this document would aim to define good practice as well as specific actions required to implement mitigation identified in the EIA Report, the planning process and / or other licencing or consenting processes. The CEMP would be updated during the pre-construction phase and would form part of the contractor documents between the Applicant and the appointed construction contractor. It is not proposed to submit an Outline CEMP alongside the EIA Report, instead the mitigation measures and management procedures outlined in the SSEN Transmission GEMPS and SPPs will be referred to, with a specific mitigation detailed within the EIA Report Schedule of Mitigation.

2.6 Construction practices and phasing

Phase 1 – Enabling Works

Delivery of Structures and Materials

2.6.1 All materials would be delivered to the construction compounds. Concrete would be delivered to site pre-mixed or would be batched onsite. Hardcore and earthworks materials for the construction of the Proposed Development would be a combination between site won, through cutting of the existing surface to construct the platforms and locally imported materials. Site won materials would be prioritised over imported materials to reduce the impact on the local roads and the environment.

Construction Compounds

2.6.2 Temporary site compounds would be required during construction, located within the site boundary. The location of which will be confirmed by the Principal Contractor together with plant and material storage areas. The compounds

would provide office and welfare facilities for site staff, parking, laydown areas and holding and servicing space for construction plant.

Forestry Clearance

2.6.3 Construction would require the removal of individual trees and groups of trees within agricultural land. In addition, a small section of Ruttle Wood may be removed as well as approximately half of the young woodland block at Bredaig. This would be undertaken in consultation with the Scottish Forestry and the affected landowner. At this stage, it is assumed that all trees on site would be removed to facilitate construction. However, opportunities to minimise loss of trees will be sought where possible as the design develops.

2.6.4 After felling, any timber removed that is commercially viable would be sold and the remaining forest material would be dealt within in a way that delivers the best practicable environmental outcome and that is compliant with waste regulations.

Landscape Mitigation Measures and Biodiversity Enhancement

2.6.5 Landscape mitigation measures will be considered to provide partial visual screening and help assimilate the Proposed Development into the surrounding landscape. Such measures will also seek to provide habitat biodiversity and opportunities for enhancement.

2.6.6 Further details on landscape mitigation measures would be provided in the EIA Report.

Construction Traffic

2.6.7 The construction will give rise to regular numbers of staff transport movements, with small work crews travelling to the site. It is anticipated that the Principal Contractor will identify the construction compound area(s), with a safe area for parking away from the public road.

2.6.8 Vehicle movements to the site from the local road network will be required to bring construction plant to the site and deliver the foundations, buildings, materials and other infrastructure components to site.

Phase 2 – Construction Works

2.6.9 This phase would comprise:

- Creation of a level platform upon which the substation and HVDC converter station will be installed
- Installation of security fencing
- Laying of foundations, including construction of site drainage
- Erection of control buildings
- Installation of underground cables (UGC)/busbar to connect the substation and the HVDC Converter station
- Construction of SuDS and planting of screening/BNG vegetation

2.6.10 Substations are not generally illuminated, other than motion sensor-activated security lighting. Floodlights would be installed but only used in the event of urgent repairs during the hours of darkness.

Phase 3 – Commissioning

2.6.11 The Proposed Development would be subject to an inspection and snagging process. This allows the Principal Contractor and the Applicant to check that the works have been built to specification and are safe to energise. The Proposed Development would also go through a commissioning procedure for the switchgear, communications, and protection controls through the substation. The circuits would then be energised so the Proposed Development can be connected to the National Grid.

Phase 4 - Reinstatement

2.6.12 Following commissioning of the Proposed Development, all temporary construction areas would be reinstated. Reinstatement will form part of the contract obligations for the Principal Contractor and will include the removal of all temporary access tracks and work sites.

2.6.13 The following principles will inform the approach to reinstatement of all sites:

- Best practice will be followed for reinstatement of all sites; and
- Reinstatement principles are detailed in the GEMP (Appendix C).

2.6.14 The construction compound site will be made good at the end of the construction with all buildings and materials removed and soils appropriately reinstated.

2.7 Operations and Management

Lifetime of the Proposed Development

2.7.1 It is anticipated that the Proposed Development will be operational for at least 40 years. At the end of this period, the Proposed Development could be decommissioned, or the infrastructure upgraded to continue operation.

Future Maintenance

2.7.2 Regular inspections of equipment will be undertaken to identify any deterioration of components, and these parts will be replaced or repaired where needed.

Residues and Emissions

2.7.3 Due to the nature of the Proposed Development, no significant production of residues or emissions are anticipated during the operational phase beyond small amounts of waste e.g. packaging materials and the potential for small spillages of fuel and oils during routine maintenance and repair of the electrical infrastructure and housing. Some operational noise is anticipated from the HVDC converter and substation which is detailed in **Chapter 4: Noise and Vibration**.

2.7.4 During construction, residues and emissions are anticipated to consist primarily of construction noise and any potential fuels/oils/waste generated during construction works. These are assessed in **Chapter 9: Hydrology, Hydrogeology, Geology and Soils** and **Chapter 4: Noise and Vibration**.

2.8 Decommissioning

2.8.1 The Applicant is seeking consent in-perpetuity for the Proposed Development. Should the Proposed Development be decommissioned the site would be restored as follows:

- The Proposed Development infrastructure would be removed;
- Where removal of infrastructure such as foundations would result in more damage than leaving them in place, they would be left in-situ; and
- Disturbed ground would be reinstated.

2.8.2 Full details of any decommissioning plan would be agreed with the appropriate authorities and the landowners prior to any decommissioning works commencing.

2.9 Associated Development

2.9.1 The following associated works will be required to facilitate construction and operation of the Proposed Development:

- Installation of HVDC underground cables (UGC) from Dundonnell to Fanellan Converter Station to connect to the Western Isles (this will be constructed under Class 40 of the Town and Country Planning (General Permitted Development) (Scotland) Order 1992 as amended;

- Temporary and permanent diversion of a section of the Beauly-Denny OHL. This will be subject to a separate consenting process under section 37 of the Electricity Act 1989 and will be screened under the Electricity Works EIA Regulations 2017; and
- The proposed construction access to the site for abnormal loads is currently being reviewed. One option is to utilise a route over the existing Black Bridge over the River Beauly. Should works be required to this structure that require planning permission, then a separate detailed planning application with accompanying assessments as necessary under the Town and Country Planning (Scotland) Act 1997 (as amended) would be pursued. The works to the bridge are currently under consideration and are not in a finalised design stage.

2.9.2 An EIA Screening Opinion has been sought from the Energy Consents Unit in relation to the temporary and permanent diversion of the Beauly-Denny OHL and this has been confirmed as non-EIA development. The Highland Council, as statutory consultee, have also indicated their opinion is that this is non-EIA development. As part of the EA then appropriate environmental mitigation will be identified.

2.9.3 Developments to upgrade / build bridges are categories of development that do not fall within Schedule 1 of the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. Should the work required to the Black Bridge fall under Schedule 2 then an EIA Screening Opinion will be sought in due course and therefore is not considered in this scoping document.

3. EIA APPROACH AND METHODOLOGY

3.1 Introduction

3.1.1 The EIA Report will be prepared in accordance with the EIA Regulations[6]. Consideration will also be given to advice contained in Planning Circular 1/2013[7] and 1/2017[8] (Environmental Impact Assessment), and other good practice guidance documents where relevant.

3.1.2 The intent of any EIA is to assess the environmental consequences of a development to enable it to be constructed and operate in an environmentally responsible manner. The EIA work for the Proposed Development will comprise several chapters, split into different topics and informed by a series of specialist environmental studies which will be targeted to assess the potential significant effects which the Proposed Development is likely to have on the environment. Each topic included in the EIA Report will be incorporated as a separate chapter in the main body of the EIA Report (pertaining to a particular 'section' as required, see sub-section 3.2 of this chapter), or included as an appendix if the assessment of the subject matter requires to be more detailed.

3.1.3 On receipt and consideration of this Scoping Report, The Highland Council, following input by statutory consultees including NatureScot, Historic Environment Scotland and the Scottish Environment Protection Agency, as well as non-statutory consultees deemed relevant, will issue their Scoping Opinion confirming the scope of the EIA Report. Throughout the EIA Report, where an issue raised in the Scoping Opinion is addressed, this will be clearly referenced in the relevant chapter. A scoping matrix will also be included in the EIA Report which will detail all consultation responses received during the scoping and EIA process, with a reference to where these responses have been addressed in the EIA Report. A schedule of mitigation measures will also be included as an appendix and cross-referenced in the relevant assessment work.

3.2 Structure of the EIA Report

3.2.1 It is proposed to structure the EIA Report as follows:

- Volume 1 – Main Report. Describing the project, the alternatives considered, the EIA process, and including an assessment undertaken for each of the environmental topics scoped into the EIA which will identify the likely significant effects from the development and recommend suitable mitigation measures to reduce such effects;
- Volume 2 – Figures. This volume would provide supporting figures (primarily A3 size) to the assessments carried out as part of Volume 1. This would include visualisations of the Proposed Development undertaken from agreed viewpoint locations;
- Volume 3 – Technical Appendices. This volume would provide supporting technical appendices to the assessments carried out as part of Volume 1; and
- A Non-Technical Summary would form part of the EIA Report, summarising the project and its likely significant effects.

3.2.2 The description of the likely significant effects will cover direct effects and indirect (including secondary) effects. The description of effects will identify the effect duration (short-term, medium-term and long-term), whether effects are permanent or temporary, and if effects can be categorised as adverse or beneficial.

3.2.3 Consideration would also be given to the potential for cumulative effects, where the assessment would describe the additional effect associated with the Proposed Development, when considered in combination with other reasonably foreseeable projects of a similar type (defined as those which are the subject of a valid consent or application for

[6] Scottish Government's Energy Consents (Updated July 2022). Good Practice Guidance for Applications under Section 36 and 37 of the Electricity Act 1989. Available at: https://www.gov.scot/publications/good-practice-guidance-applications-under-sections-36-37-electricity-act-1989/documents/ [Accessed: February 2024].
[7] Scottish Government (2013). Planning Advice Note: Environmental Impact Assessment. Available at: https://www.gov.scot/publications/planning-advice-note-1-2013-environmental-impact-assessment/documents/ [Accessed: February 2024].
[8] Scottish Government (2017). Planning Circular: The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. Available at: https://www.gov.scot/publications/planning-circular-1-2017-environmental-impact-assessment-regulations-2017/documents/ [Accessed: February 2024].

consent). The basis for this is that only these developments have the potential to result in significant cumulative effects in combination with those arising from the Proposed Development. The final list of developments to be considered in the cumulative effects assessment would be finalised three months prior to publication to allow sufficient time to compile the EIA Report.

3.2.4 The report will also consider the potential for intra-project effects of combined or synergistic effects on a particular receptor (taking into consideration effects at the site preparation and earthworks, construction, and operational phases), which may collectively cause a more significant effect than individually. A theoretical example is the culmination of disturbance from dust, noise, vibration, artificial light, human presence, and visual intrusion on sensitive fauna (e.g. certain bat species) adjacent to a construction site.

3.2.5 It is considered that there would be no potential for transboundary effects associated with the Proposed Development, and therefore no further assessment of transboundary effects is proposed.

3.2.6 A more detailed overview of the guidance and methodology adopted for each technical study is provided in Chapters 5 to 11 of this EIA Scoping Report.

3.3 Mitigation

3.3.1 The EIA will identify and assess potentially significant effects prior to mitigation, and, where mitigation measures are proposed, their likely effectiveness will be examined, and the significance of the 'residual' effect then assessed. The Applicant will be committed to implementing all the mitigation measures identified in the EIA Report and where appropriate, the mitigation measures implemented will be monitored for effectiveness.

3.3.2 Where there are opportunities for offsetting and/or positively enhancing effects, these will be identified through the EIA process.

3.4 Supporting Documents

3.4.1 It is anticipated that the following documents would also be provided as part of the application:

- Design and Access Statement;
- Habitat Regulations Appraisal (HRA) Report;
- Planning Statement;
- Pre-Application Consultation Report.

3.5 Scoping Methodology

3.5.1 The following chapters of this Scoping Report aim to provide sufficient detail to characterise the potential interactions between the Proposed Development and the environmental receptors identified. In presenting a rationale for the proposed scope of environmental assessment, this report has taken the sensitivity of the current state of the environment into account, based on an understanding of the baseline conditions. The Scoping Report considers the typical construction and operational activities, physical characteristics and potential emissions/residues associated with the Proposed Development.

3.5.2 Where there is sufficient evidence to support scoping a topic out of the EIA process, this is presented. Otherwise, where it is considered that there is the potential for likely significant effects, the EIA Scoping Report provides details of the

proposed scope or detailed impact assessment, including the approach to further baseline data collection and brief details of the proposed methodology for impact assessment that would be employed for each topic.

3.6 Identification of Baseline

3.6.1 To identify the scale of likely significant effects as a result of the Proposed Development, it is necessary to establish the existing baseline environmental conditions.

3.6.2 The baseline scenario will be established through the following methods, where relevant:

- Site visits and surveys;
- Desk-based studies;
- Review of existing information;
- Modelling;
- Review of relevant national and local planning policies;
- Consultation with the relevant statutory consultees;
- Identification of sensitive receptors; and
- Protected species and habitat surveys.

3.6.3 Consistent with Part 1 of Schedule 4 to the EIA Regulations, an identification of the aspects of the environment likely to be significantly affected by the Proposed Development has been undertaken to inform this EIA Scoping Report. This focused on potential impacts upon population, fauna, flora, soil, material assets including the architectural and archaeological heritage, landscape, and inter-relationship between those factors.

3.7 Assessment of Likely Significant Environmental Effects

3.7.1 For the purposes of this EIA Scoping Report the terms used in the assessment of effects are generally defined as follows:

- 'Impact' is specific and defined as the action being taken, for example, cutting down trees.
- 'Effect' is defined as the change resulting from that action.

3.7.2 Where a more appropriate effect, duration, scale or definition of the above terms is applicable to a technical discipline this will clearly be outlined within the technical chapters.

3.7.3 When identifying likely significant effects, all types of effect, such as beneficial and adverse, will be included. As stated in Institute of Environmental Management and Assessment (IEMA) 'Guidelines for Landscape and Visual Impact Assessment 3 (GLVIA3)', '*identifying significant effects stresses the need for an approach that is in proportion to the scale of the project that is being assessed and the nature of its likely effects. Judgement needs to be exercised at all stages in terms of the scale of the investigation that is appropriate and proportional*.'

3.7.4 The result of the assessment is the determination of whether the likely effect of the Proposed Development on the receptor in the study area would be significant or not significant, and adverse or beneficial.

3.7.5 Several criteria will be used to determine whether the likely environmental effects of the Proposed Development will be deemed 'significant'. The effects will be assessed quantitatively where possible. Generally, the significance of effects will be assessed using one of more of the following criteria:

- International, national and local standards;
- Sensitivity of receiving environment;
- Extent and magnitude of the effect; and
- Reversibility and duration of the effect.

3.7.6 Where no published standards exist, the assessments presented in the technical chapters will describe the professional judgements (assumptions and value systems) that underpin the attribution of significance. For certain technical topics, such as ecology, widely recognised published significance criteria and associated terminology will be applied and these are presented in the technical chapters and associated appendices where relevant.

3.7.7 The assessment of significance will consider the magnitude of change (from the baseline conditions), the sensitivity of the affected environment/receptors and (in terms of determining residual effects) the extent to which mitigation and enhancement will reduce or reverse adverse effects. In addition, further influences such as those listed below have been factored into the assessment using professional judgement:

- Likelihood of occurrence;
- Geographical extent;
- The value of the affected resource;
- Adherence of the proposals to legislation and planning policy; and
- Reversibility and duration of the effect.

3.7.8 The magnitude (scale) of change for each effect will be identified and predicted as a deviation from the established baseline conditions, for the construction and operational phases of the Proposed Development.

3.7.9 The sensitivity of the receptor / receiving environment to change will be determined using professional judgement, consideration of existing designations (such as Sites of Special Scientific Interest (SSSIs)) and quantifiable data, where possible.

3.7.10 Each effect will be assessed taking account of the predicted magnitude of change and the sensitivity of the receptor as shown in Table 3-1 below to determine an overall significance.

Table 3-1: Matrix for Determining the Significance of Effects

		Sensitivity of Receptor/Receiving Environment to Change/Effect			
		High	Medium	Low	Negligible
Magnitude of Change/Effect	High	**Major**	**Major**	**Moderate**	Negligible
	Medium	**Major**	**Moderate**	Minor	Negligible
	Low	**Moderate**	Minor	Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

3.7.11 Major and moderate effects are considered to be significant in the context of the EIA Regulations. Minor and negligible effects are not considered significant.

3.7.12 Specific criteria have been adopted for certain technical assessments in accordance with widely recognised EIA guidelines published by professional bodies (such as for landscape and visual impact assessment and the assessment of ecological effects) where applicable, these will be provided in the respective technical chapters.

3.7.13 The characteristics of an effect will vary depending on the duration of the activity causing the effect, the sensitivity of the receptor and the resultant change. It is therefore necessary to assess whether the effect is temporary or permanent and beneficial or adverse. Effects that are temporary are usually reversible and generally confined to the construction period.

3.8 Identification of Mitigation Measures and Assessment of Residual Effects

Following the initial assessment, mitigation measures will be recommended to prevent, reduce, or remedy any significant adverse environmental effects identified. Such measures would be implemented during design, construction and/or operation of the Proposed Development. Each technical chapter will detail the measures recommended to mitigate any identified significant adverse effects, and a summary of the recommended mitigation measures will be provided.

Following the implementation of mitigation measures, an assessment of the significance of any residual effects will be undertaken. The findings will be presented in each technical chapter of the EIA Report.

3.9 Assumptions and Limitations

The key assumptions and limitations applied to the preparation of this EIA Scoping Report are set out below. Assumptions and limitations specific to certain topics are identified in the appropriate technical chapter.

- Baseline conditions have been established from a variety of sources, including historical data, but due to the dynamic nature of certain aspects of the environment, conditions will change during the construction and operation of the Proposed Development;
- Information received by third parties is complete and up to date; and
- The design, construction and completed stages of the Proposed Development will satisfy minimum environmental standards, consistent with contemporary legislation, practice, and knowledge.

4. PLANNING POLICY

4.1 National Policy

4.1.1 National Planning Framework 4[9] (NPF4) was adopted by the Scottish Government in February 2023 and is a long-term plan looking to 2045 that guides spatial development, sets out national planning policies, designates national developments and highlights national and regional spatial priorities.

4.1.2 In contrast to previous National Planning Frameworks, NPF4 places national policy at the heart of planning decision making as it is part of the statutory Development Plan along with Local Development Plans. Following the adoption of NPF4, Scottish Planning Policy and all Strategic Development Plans ceased to have any relevance to planning decision making in Scotland. NPF4 combines the National Planning Framework, and National Planning Policy in the same document for the first time.

4.1.3 NPF4 identifies several National Developments which are significant developments of national importance that will help to deliver the spatial strategy. Statements of need are set out in NPF4 that describe the development to be considered as a national development for consent handling purposes. Amongst the national developments identified is National Development 3: Strategic Renewable Electricity Generation and Transmission Infrastructure which includes:

- New and/or replacement upgraded on and offshore high voltage electricity transmission lines, cables and interconnectors of 132kv or more; and
- New and/or upgraded Infrastructure directly supporting on and offshore high voltage electricity lines, cables and interconnectors including converter stations, switching stations and substations.

4.1.4 As stated above, NPF4 contains National Planning Policies and these policy positions are to be taken into account in land use planning decision making. The NPF4 policies that are of most relevance to the Proposed Development are:

- Policy 1 – Tackling the Climate and Nature Crises. The intent is to encourage, promote and facilitate development that addresses the global climate emergency and nature crisis.
- Policy 2 – Climate Mitigation and Adaptation. Development proposals will be sited and designed to minimise lifecycle greenhouse gas emissions as far as possible and adapt to current and future risks from climate change.
- Policy 3 – Biodiversity. Development proposals need to contribute to the enhancement of biodiversity and integrate nature-based solutions. Proposals requiring an EIA will only be supported where it can be demonstrated that the proposal will conserve, restore, and enhance biodiversity.
- Policy 4 – Natural Places. Development proposals which by virtue of type, location or scale will have an unacceptable impact on the natural environment will not be supported. Development Proposals that are likely to have a significant effect on an existing or proposed European Site and are not directly connected with or necessary to their conservation management, are required to be subject to an appropriate assessment of the implications to conservation objectives. Development proposals will only be supported where they will not compromise the designation status/overall integrity of a National Park, National Scenic Area, Site of Special Scientific Interest (SSSI), Natural Nature Reserve, local conservation site or local landscape area. Development proposals that are likely to have an adverse effect on species protected by legislation will only be supported where the proposal meets the relevant statutory tests. If there is reasonable evidence to suggest that a protected species is present on a site or may be affected by a proposed development, steps must be taken to establish its presence.
- Policy 5 – Soils. Development will only be supported if designed and constructed in accordance with mitigation hierarchy, and in a manner that protects soil from damage. Development proposals on prime agricultural land, or land of lesser quality that is culturally or locally important for primary use (as identified by the LDP), peatland, carbon-rich soils, and priority peatland habitat, will only be supported where it is for essential infrastructure and there

[9] The Scottish Government (2023). National Planning Framework 4. Available at: National Planning Framework 4 - gov.scot (www.gov.scot).

is a specific locational need and no other suitable site. Where development on peatland, carbon-rich soils or priority peatland habitat is proposed, a detailed site-specific assessment will be required.

- Policy 6 – Forestry, Woodland, and Trees. Development proposals that enhance, expand, and improve woodland and tree cover will be supported. Development proposals will not be supported where they will result in any loss of ancient woodlands, ancient and veteran trees, or adverse impact on their ecological condition, native woodlands, hedgerows, individual trees of high diversity value, or identified for protection. Fragmenting or severing woodland habitat without appropriate mitigation will also not be supported. Development proposals involving woodland removal will only be supported where they will achieve significant and clearly defined additional public benefits in accordance with relevant Scottish Government policy on woodland removal. Where woodland is removed, compensatory planting will most likely be expected to be delivered. Development proposals on sites which include an area of existing woodland or land identified in the Forestry and Woodland Strategy as being suitable for woodland creation will only be supported where the enhancement and improvement of woodlands and the planting of new trees on the site (in accordance with the Forestry and Woodland Strategy) are integrated into the design.
- Policy 7 – Historic Assets and Places. Development proposals with a potentially significant impact on historic assets or places will be accompanied by an assessment which is based on an understanding of the cultural significance of the historic asset and/or place. Development proposals in or affecting conservation areas will only be supported where the character and appearance of the conservation area and its setting is preserved or enhanced. Development affecting Scheduled Monuments will only be supported where direct and significant adverse impacts on the integrity of the setting are avoided, or exceptional circumstances have been demonstrated to justify the impact. Development proposals affecting nationally important Gardens and Designed Landscapes will be supported where they protect, preserve, or enhance their cultural significance, character and integrity and where proposals will not significantly impact on important views to, from and within the site, or its setting. Development proposals which sensitively repair, enhance and bring historic buildings, as identified as being at risk locally or on the national Buildings at Risk Register, back into beneficial use will be supported. Non-designated historic environment assets, places and their setting should be protected and preserved in situ wherever feasible. Where there is potential for non-designated buried archaeological remains to exist below a site, developers will provide an evaluation of the archaeological resource at an early stage so that planning authorities can assess impacts. Historic buildings may also have archaeological significance which is not understood and may require assessment.
- Policy 11 – Energy. To encourage, promote and facilitate all forms of renewable energy development onshore and offshore.
- Policy 13 - Sustainable transport. Development proposals should facilitate a transition towards more sustainable, lower emissions travel including active travel and public transport.
- Policy 20 – Blue and green Infrastructure. Development proposals that result in fragmentation or net loss of existing blue and green infrastructure will only be supported where it can be demonstrated that the proposal would not result in or exacerbate a deficit in blue or green infrastructure provision, and the overall integrity of the network will be maintained. Development proposals for or incorporating new or enhanced blue and/or green infrastructure will be supported.
- Policy 22 – Flood Risk and Water Management. Development at risk of flooding or in a flood risk area will only be supported if they are for essential infrastructure. Developments will not increase the risk of surface water flooding, manage rain and surface water through SuDS, and seek to minimise the area of impermeable surface. Development proposals will be supported if they can be connected to the public water mains. Development proposals which create, expand, or enhance opportunities for natural flood risk management, including blue and green infrastructure, will be supported.
- Policy 23 – Health and safety. The development proposal should show protection of health and wellbeing, including ensuring that air and noise pollution are considered and should plan and manage the development to take hazards into account.
- Policy 25 – Community wealth benefits. Development proposals which contribute to the regional community wealth building strategies and are consistent with local economic priorities will be supported. Development proposals linked to community ownership and management of land will be supported.

- Policy 33 – Minerals. Development proposals that seek to explore, develop, and produce fossil fuels (excluding unconventional oil and gas) will not be supported other than in exceptional circumstances.

4.2 Local Planning Policy

4.2.1 Local Development Plans cover all planning authority areas and provide detailed and site-specific planning policy for an area. The current development plan for the Highland Council administrative area is the Highland-wide Local Development Plan, April 2012[10] (referred to as the HwLDP hereafter) and the Inner Moray Firth Local Development Plan[11]. The HwLDP and Inner Moray Firth LDP lay out detailed policies which are used as a basis for determining planning applications on a local scale. As indicated above, NPF4 now forms a part of the Development Plan and has replaced a number of predecessor planning policy documents at various levels. This includes Strategic Development Plans. The Highland-wide LDP 2012 predates the adoption of NPF4 and as such some policy positions stated may be inconsistent with those contained in NPF4. The Town and Country Planning (Scotland) Act 1997 (as amended) makes it clear that where policy positions differ in this circumstance NPF4 policy positions will take priority. Although the Proposed Development falls within Inner Moray Firth LDP, there are no directly relevant policies of note. As such, policies from the HwLDP will be applied. There are several policies that may be relevant in consideration of this proposal.

Table 4-1- Relevant Policies from the Local Development Plan

Policy	Key points relevant to this project
Policy 28 Sustainable Design	The Council will support developments which promote and enhance the social, economic and environmental wellbeing of people of Highland. Proposed Developments will be assessed on the extent to which they: • Maximise energy efficiency in terms of location, layout and design, including the utilisation of renewable sources of energy and heat; • Are affected by physical constraints described in Physical Constraints on Development: Supplementary Guidance; • Demonstrate that they have sought to minimise the generation of waste during construction and operational phases. (This can be submitted through a Site Waste Management Plan); • Impact on non-renewable resources such as mineral deposits of potential commercial value, prime quality agricultural land, or approved routes for road and rail links; • Impact on the following resources; including pollution and discharges particularly within designed areas: • Habitats; o Freshwater system; o Species; o Marine systems; o Landscapes; o Cultural Heritage; o Scenery; and o Air quality. • Contribute to the economic and social development of the community.
Policy 29 Design Quality and Place-making	New development should be designed to make a positive contribution to the architectural and visual quality of the place in which it is located. Applicants should demonstrate sensitivity and respect towards the local distinctiveness of the landscape, architecture, design and layouts in their proposals.
Policy 30 Physical Constraints	Developers must consider whether their proposals would be located within areas of constraints as set out in Physical Constraints: Supplementary Guidance. The main principles of the guidance are: • To provide developers with up-to-date information regarding physical constraints to development in Highland; and

[10] The Highland Council (2012). Highland-wide Local Development Plan. Available at: https://www.highland.gov.uk/info/178/local_and_statutory_development_plans/199/highland-wide_local_development_plan [Accessed: March 2024].

[11] The Highland Council (2015). Inner Moray Firth Local Development Plan. Available at: file:///C:/Users/UKBXH028/Downloads/NEW_IMFLDP_web.pdf. [Accessed: February 2024]

	• To ensure proposed developments do not adversely affect human health and safety or pose risk to safeguarded sites.
Policy 36 **Development in the Wider Countryside**	Development proposals will be assessed for the extent to which they: • Are acceptable in terms of siting and design; • Are sympathetic to existing patterns of development in the area; • Are compatible with landscape character and capacity; • Avoid incremental expansion of one particular development type within a landscape whose distinct character relies on an intrinsic mix/distribution of a range of characteristics; • Avoid, where possible, the loss of locally important croft land; and • Would address drainage constraints and can otherwise be adequately serviced, particularly in terms of foul drainage, road access and water supply, without involving undue public expenditure or infrastructure that would be out of keeping with the rural character of the area.
Policy 42 Previously Used Land	The Council will support development proposals that bring previously used land back into beneficial use provided: 1. site investigation and risk assessment are undertaken and demonstrate that the site is in, or is capable of being brought into, a condition suitable for the proposed development; and 2. the proposed development accords with all other relevant policies of this plan.
Policy 51 Trees and Development	The Council will support development which promotes significant protection to existing hedges, trees, and woodlands on and around development sites. The Council's Trees, Woodland and Development Supplementary Guidance will be adopted as statutory supplementary guidance. The guidance will identify the main principles for the protection and management of trees and woodland in relation to new development. It will: • Identify key relevant legislation and regulation; • Establish the key factors for assessment of development sites in relation to the presence of trees; • Give guidance on preparation of tree protection, management, planting and landscape plans; • For developments involving a significant element of woodland, give advice on the need for a woodland management plan; • Generally support well planned developments which are designed to create and coexist with significant areas of new woodland.
Policy 52 Principle of Development in Woodland	The applicant is expected to demonstrate the need to develop a wooded site and to show that the site has capacity to accommodate the development. The Highland Forest and Woodland Strategy reflects the strategic directions of the Scottish Forest Strategy developing its priorities for action at the regional level and through its key principles seeks to: • ensure sustainability; • increase the community benefit from forestry and woodlands; • identify opportunities for forest and woodland expansion compatible with other interests; • improve existing forests and woodland to enhance forestry's contribution to the economy and environment of Highland; • work with partners to address economic and infrastructure issues; • retain and enhance the level of funding for forestry in Highland.
Policy 53 Minerals	The Council will support the following areas for mineral extraction: • Extension of an existing operation/site • Re-opening of a dormant quarry • A reserve underlying a proposed development where it would be desirable to extract prior to development. Before a new site for minerals development will be given permission, it must be shown that other existing reserves have been exhausted or are no longer viable or, for construction aggregates, amount to less than a ten-year supply of permitted reserves.
Policy 54 Mineral Wastes	The Council will encourage the minimisation and positive re-use/recycling of mineral, construction and demolition wastes.

Policy 55 Peats and Soils	Development proposals should demonstrate how they have avoided unnecessary disturbance, degradation or erosion of peat and soils. Unacceptable disturbance of peat will not be permitted unless it is shown that the adverse effects of such disturbance are clearly outweighed by social, environmental, or economic benefits arising from the development proposal.
Policy 56 Travel	Development proposals that involve travel generation must include sufficient information with the application to enable the Council to consider any likely on- and off- site transport implications of the development and should: • Be well served by the most sustainable modes of travel available in the locality from the outset, providing opportunity for modal shift from private car to more sustainable transport modes wherever possible, having regard to key travel desire lines; • In particular, the Council will seek to ensure that opportunities for • encouraging walking and cycling are maximised; • Be designed for the safety and convenience of all potential users; • Incorporate appropriate mitigation on site and/or off site, provided through developer contributions where necessary, which might include improvements and enhancements to the walking/cycling network and public transport services, road improvements and new roads; and • Incorporate an appropriate level of parking provision, having regard to the travel modes and services which will be available and key travel desire lines and to the maximum parking standards laid out in Scottish Planning Policy or those set by the Council.
Policy 57 Natural, Built and Cultural Heritage	All development proposals will be assessed taking into account the level of important and type of heritage features, the form and scale of the development, and any impact on the feature and its setting, in the context of the policy framework detailed in Appendix 2 (to the Highland wide Local Development Plan). The following criteria will also apply: • For features of local/regional importance 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; and • For features of national importance, we will allow developments that can be shown not to compromise the natural environment, amenity, and heritage resource. Where there may be any significant adverse effects, these must be clearly outweighed by social or economic benefits of national importance. It must also be shown that the development will support communities in fragile areas who are having difficulties in keeping their population services.
Policy 58 Protected Species	Where there is good reason to believe that a protected species may be present on site may be affected by a proposed development, we will require a survey to be carried out to establish any such presence and if necessary, a mitigation plan to avoid or minimise impacts on the species, before determining the application. Development proposals should avoid adverse disturbance, including cumulatively, to badgers and badger setts, protected under the Protection of Badgers Act 1992 (as amended by the Nature Conservation (Scotland) Act 2004.
Policy 59 Other Important Species	The Council will have regard to the presence and any adverse effects of development proposals, either individually and/or cumulatively, on the Other Important Species which are included in the lists below, if these are not already protected by other legislation or by nature site designations (Annexes II and V of EC Habitat Directive, Priority Species listed in the UK and Local Biodiversity Action Plans and species included on the Scottish Biodiversity List).
Policy 60 Other Important Habitats and Article 1 – Features	The Council will seek to safeguard the integrity of features of the landscape which are of major importance because of their linear and continuous structure or combination as habitat “stepping stones” for the movement of wild fauna and flora. (Article 10 Features). The Council will also seek to create new habitats which are supportive of this concept.
Policy 61 Landscape	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.
Policy 62 - Geodiversity	Development proposals that include measures to protect and enhance geodiversity interests of international, national and regional/local importance in the wider countryside, will be supported.
Policy 63 Water Environment	The Council will support proposals for development that do not compromise the objectives of the Water Framework Directive (2000/60/EC), aimed at the protection and improvement of Scotland's water environment.
Policy 64 Flood Risk	Development proposals should avoid areas susceptible to flooding and promote sustainable flood management. Development proposals within or bordering medium to high flood risk areas, will need to demonstrate compliance with Scottish Planning Policy (SPP) through the submission of suitable information which may take the form of a Flood Risk Assessment.
Policy 65 Wastewater Treatment	The Council will support proposals for development that do not compromise the objectives of the Water Framework Directive (2000/60/EC), aimed at the protection and improvement of Scotland's water environment.
Policy 66 Surface Water Drainage	All proposed development must be drained by Sustainable Drainage Systems (SuDS) designed in accordance with The SuDS Manual (CIRIA C697) and, where appropriate, the Sewers for Scotland Manual 2nd Edition. Planning applications should be submitted with information in accordance with Planning Advice Note 69: Planning and Building Standards Advice on Flooding paragraphs 23 and 24. Each drainage scheme design must be accompanied by particulars of proposals for ensuring long-term maintenance of the scheme.
Policy 67 Renewable Energy Developments	Renewable energy development proposals should be well related to the source of the primary renewable resources that are needed for their operation. The Council will also consider: • the contribution of the proposed development towards meeting renewable energy generation targets; and • any positive or negative effects it is likely to have on the local and national economy;
Policy 69 Electricity Transmission Infrastructure	Proposals for overground, underground, or sub-sea electricity transmission infrastructure (including lines and cables, pylons/ poles and vaults, transformers, switches, and other plant) will be considered having regard to their level of strategic significance in transmitting electricity from areas of generation to areas of consumption. Subject to balancing with this consideration, and taking into account any proposed mitigation measures, the Council will support proposals which are assessed as not having an unacceptable significant impact on the environment, including natural, built and cultural heritage features.
Policy 72 Pollution	Proposals that may result in significant pollution such as noise (including aircraft noise), air, water and light will only be approved where a detailed assessment report on the levels, character and transmission and receiving environment of the potential pollution is provided by the applicant to show how the pollution can be appropriately avoided and if necessary mitigated. Where the Council applies conditions to any permission to deal with pollution matters these may include subsequent independent monitoring of pollution levels. Major Developments and developments that are subject of Environmental Impact Assessment will be expected to follow a robust project environmental management process, following the approach set out in the Council's Guidance Note "Construction Environmental Management Process for Large Scale Projects" or a similar approach.
Policy 74 Green Networks	Green networks should be protected and enhanced. Development in areas identified for the creation of green networks should seek to avoid the fragmentation of the network and take steps to improve its connectivity, where this is appropriate.

Policy 77 Public Access	Where a proposal affects a route included in a Core Paths Plan or an access point to water, or significantly affects wider access rights, then The Council will require it to either: • retain the existing path or water access point while maintaining or enhancing its amenity value; or • ensure alternative access provision that is no less attractive, is safe and convenient for public use, and does not damage or disturb species or habitats.
Policy 78 Long Distance Routes	The Council, with its partners, will safeguard and seek to enhance long distance routes, and their settings.

5. LANDSCAPE AND VISUAL IMPACT

5.1 Introduction

5.1.1 This chapter considers the potential landscape and visual effects of the Proposed Development. It provides a brief overview of the baseline conditions, highlights potentially significant effects in relation to landscape character and visual amenity, and sets out the scope and methodology of the assessment to be undertaken.

5.2 Baseline Conditions

5.2.1 The following section sets out the baseline conditions for the area potentially affected by the Proposed Development, briefly describing the landscape and landscape-related designations, the landscape character, and key visual receptors present. Figure 1.2 (See Appendix A) shows the baseline environment with respect to environmental constraints.

5.2.2 Consideration of the baseline conditions has been informed through desk-based research and by site visits in 2023 and in February 2024 as part of the site selection process and early stages of design to develop embedded mitigation.

5.2.3 For the purpose of the scoping report a study area of 5 km has been adopted.

5.2.4 When identifying the baseline conditions to inform the scoping process, the following information has been taken into consideration:

- Google maps[12];
- NatureScot National Landscape Character Assessment, 2019[13];
- NatureScot Landscape Character Assessment. Landscape Character Types, 2019[14]; and
- Highland Council's Assessment of Highland Special Landscape Areas, 2019[15].

Landscape Context

5.2.5 The Proposed Development is located within The Highland Council Local Authority boundary. Locally, the landscape of the Proposal of Application Notice (PAN) boundary is characterised by agricultural farmland, scattered field and roadside trees, mixed deciduous and coniferous woodland (including native pine woodlands and Ancient Woodlands), plantation woods, and scattered properties. The Proposed Development is located on rising ground just below the ridgeline of Torr Mor, overlooking the valley of the Teanacoil Burn and Brulach burn. An overhead line runs across the Site, backdropped in part by the wooded summits of Torr Mor.

Designated Landscapes

5.2.6 There are no landscape designations or landscape-related designations located within the PAN boundary, or within the study area. The nearest designation is the Central Highlands Wild Land Area (WLA) 24. The WLA 24 site lies approximately 6 km northwest of the PAN boundary at its nearest point. Due to distance and screening provided by the

[12] Google Map data 2023. Available at https://www.google.com/. [Accessed December 2023]
[13] NatureScot (2019). Scottish Landscape Character Types Map and Descriptions. Available at https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions [Accessed: December 2023].
[14] NatureScot. SNH National Landscape Character Assessment, Landscape Character Type 20 Undulating Agricultural Heartland- Aberdeenshire. Available at https://www.nature.scot/sites/default/files/LCA/LCT%20020%20-%20Undulating%20Agricultural%20Heartland%20-%20Final%20pdf.pdf [Accessed: December 2023].
[15] Assessment of Highland Special Landscape Areas. The Highland Council & SNH, 2011. Available at https://www.highland.gov.uk/downloads/file/2937/assessment_of_highland_special_landscape_areas [Accessed February 2024].

undulating topography and tree planting, views towards the WLA 24 site will be limited. As a result, the WLA has been scoped out of the assessment.

5.2.7 Gardens and Designed Landscapes (GDLs) on the Historic Environment Scotland inventory are addressed in the Cultural Heritage chapter.

Landscape Character

5.2.8 The landscapes in Scotland were characterised by Scottish Natural Heritage (SNH - now NatureScot) in the 1990s but have since been updated and refined through identification of landscape character types (LCTs). These can be viewed within the Scottish Landscape Character Types Map and Descriptions website database[16].

5.2.9 The northwestern part of the Proposed Development is located within the northern section of Farmed Strath – Inverness LCT (227), which encompasses the tops of Ruttle Wood and Torr Mor, and then stretches south-west. The southeastern part of the Proposed Development is located within the Enclosed Farmland – Inverness LCT (229), which is relatively more open and runs south-east.

5.2.10 A number of other LCTs are also located within the study area. To the south of LCT 229, and south of Culburnie and Camault Muir, lies LCT 222 Rocky Moorland Plateau - Inverness. To the northeast, LCT 229 transitions into the flatter lands around the edge of the Beauly Firth into LCT 342 Farmed River Plains. To the west of LCT 342, along the lower part of the south-east facing slopes of the broad valley of the River Beauly and north of Fanellan, lies LCT 346 Open Farmed Slopes, which runs from Kilmorack to Clashandorran. The higher parts of the valley side to the west (and north of Torr Mor) lies LCT 345 Farmed and Forested Slopes, a narrow strip between 0.5 and 1 km wide running northeast. Further west still (and adjacent to the west and north-west of LCT 227) are the low summits of a large area of land forming LCT 220 Rugged Massif. Further north, and between LCT 220 and 345 lie LCT 341 Forest Edge Farming to the northeast, and the hills of LCT 331 Rounded Rocky Hills – Ross & Cromarty to the north-west.

5.2.11 The Landscape and Visual Impact Assessment (LVIA) will consider the effect of the Proposed Development on LCT 227 Farmed Strath – Inverness and LCT 229 Enclosed Farmland – Inverness. However, because of the scale of the LCTs and the subtle differences within them, the assessment will also consider landscape character at a finer and more local grain in a series of Local Landscape Character Areas, to be defined as part of the assessment.

5.2.12 The extent to which the Proposed Development would be perceived from the wider landscape is limited due to intervening vegetation, the undulating nature of the local topography, and distance. Given the scale of the LCTs and limited intervisibility, the following LCTs have consequently been scoped out of the assessment and will not be considered further:

- LCT 222- Rocky Moorland Plateau – Inverness
- LCT 342 - Farmed River Plains
- LCT 346 - Open Farmed Slopes
- LCT 345- Farmed and Forested Slopes - Ross & Cromarty
- LCT 220 - Rugged Massif – Inverness
- LCT 331 - Rounded Rocky Hills – Ross & Cromarty

[16] NatureScot Scottish Landscape Character Types Map and Descriptions (2020). Available at: https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions [Accessed February 2024]

Visual Impact

5.2.13 The area immediately around the Proposed Development is reasonably well settled with scattered farmsteads, individual properties, and small villages such as Kiltarlity, located approximately 2.5 km to the south-east of the site. The largest settlement near to the site is Beauly – a village c4.5 km to the north-east.

5.2.14 Views of the site from the north and north-west will be partially screened by the natural topography of the landscape and woodland belts, with some notable ridgelines and hill summits also screening longer range views.

5.2.15 Potential visual receptors are to be found throughout the study area, including frequently occurring farms, farmsteads, and isolated rural properties, residents within local settlements including villages and hamlets, users of the local transport network, tourists, and recreational users of popular walking routes, including Core Paths[17]. In some areas the presence of mature woodland vegetation and forestry plantation as well as undulating topography will help to limit views to the Proposed Development.

5.2.16 The are few commercial receptors in the study area. There are a number of farms and B&Bs which are also residential receptors, and they are therefore considered as such.

5.2.17 The Proposed Development would be visible from Beauly Substation. As a workplace with no particular view to the site, and with workers not being focused on the wider landscape, they are considered to be of low sensitivity that would not be significantly affected, and they are therefore scoped out of further assessment.

5.2.18 The potential visual receptors to be considered in the LVIA are discussed below, grouped as residential, recreational, and transport receptors.

Residential

- People living in properties immediately south / east of the Proposed Development along Fanellan Road
- People living in residential properties and farmsteads near Sunnybrae and Bredaig
- People living in residential properties on the northwestern edge of Wester Balbair
- People living in residential properties in Ruisaurie and Ruilick
- People living in residential properties in Tomnacross and Kiltarity
- People living in residential properties in Culburnie
- People living in residential properties in and near Crerag
- People living in residential properties on the southern edge of Beauly
- People living in residential properties in Torgormack and Broallan
- People living in residential properties in Kilmorack
- People living in residential properties in Camuault Muir and Glaichbea
- People living in residential properties in Crask of Aigas
- People living in residential properties in Farley

Recreational

5.2.19 There are a number of core paths in close proximity to the site, including through the Beaufort Castle estate grounds, which is located approximately 2.5 km east of the site. Key recreational receptors who may therefore experience significant changes to existing views include:

- Local recreational users of core paths IN20.01.

[17] Core Paths in Highland Council area. Available at: Core Paths in Highland Council area (arcgis.com). [Accessed February 2024].

- Local recreational users of core paths IN20.11 and IN20.05.
- Local recreational users of core paths IN20.06, IN20.08 and IN20.10.
- Local recreational users of core paths IN20.07 and IN20.09.
- Local recreational users of core paths IN20.02, IN20.03, IN20.04, (near Belladrum Festival Grounds)
- Local recreational users of core paths IN20.02, IN03.04, IN03.03.

5.2.20 Local recreational users of core paths IN03.01 and IN03.02 (within Beauly) have been scoped out of the assessment as views will be largely obscured by built form and woodland planting in Beauly.

5.2.21 The River Beauly is well used for fishing, with holiday cottages in proximity, such as Cruives Lodge, as well as historic remains, such as the Church near Black Bridge. Users of and adjacent to the river will therefore be considered, as well as visitors using holiday lets.

5.2.22 Belladrum Tartan Heart Festival attracts a large numbers of visitors when it operates for one weekend a year. It lies approximately 5 km south-west of the Proposed Development. Visitors to the Tartan Heart Festival are likely to be focussed on their immediate surroundings rather than wider landscape, and given distance from the site, receptors at the Belladrum Tartan Heart Festival have been scoped out of the assessment.

5.2.23 There are no Great Trails or National Cycle Network Routes within the Study Area.

Transport

5.2.24 Key recreational receptors utilising the following road network may experience significant changes to existing views:

- Users of Fanellan Road which runs directly to the south of the site boundary.
- Users of the A831 to the north of the site.
- Users of the minor road network in the Study Area around the Proposed Development.

5.3 Potentially Significant Effects

Landscape Effects

5.3.1 The Proposed Development would introduce noticeable and intrusive man-made elements into the landscape, modifying the way in which the existing rural landscape is perceived. The 400 kV substation will introduce three large buildings, the highest of which would be approximately 29 m, with two smaller buildings being of 26 m and 8 m high respectively and surrounding transmission infrastructure of up to approximately 15 m in height, access roads, security fencing, sustainable drainage features and external lighting (please see Chapter 2 Description of the Proposed Development, for further detail on the proposed infrastructure). This would be partially screened by regraded landform and new woodland plantations.

5.3.2 Construction works would require tree/hedgerow clearance, large scale earthmoving operations with accompanying heavy plant, machinery and equipment, and construction of industrial built form on an agricultural site. The change in landform and vegetation removal would impact the local drainage pattern (see **Chapter 9** for further details of hydrology), topography and existing vegetation (see **Chapter 6** for further details on habitats). Construction works would also require the temporary provision of welfare facilities, and temporary changes to the road network for traffic management. This all would alter the local character of the landscape, giving rise to temporary significant effects to the local landscape and visual amenity.

5.3.3 The effect of any development on the landscape depends on the scale at which the landscape character is considered. The Proposed Development is unlikely to significantly affect the character of the landscape when considered at the national scale of the NatureScot LCTs. However, the Proposed Development is likely to significantly affect the local

landscape character by changing the land use of the site, introducing new man-made structures into the landscape, altering the vegetation pattern, and changing the landform.

Visual Effects

5.3.4 The buildings and structures would be located on elevated land with wide ranging views in all directions and would potentially have significant visual effects. Potential visual receptors affected by the change in view are described in Section 5.2 Visual Impact.

5.3.5 The Zone of Theoretical Visibility (ZTV), shown in Figure 5.1 (See Appendix A), indicates that the Proposed Development would be discernible within views from areas of higher ground beyond the 5 km study area extents. Whilst views of the Proposed Development may be discernible from these locations, the increased distance in separation is unlikely to result in significant effects occurring. Viewpoints have therefore been selected from locations within 5 km of the site as representative of the visual receptors in the study area. The viewpoints have been agreed with The Highland Council landscape officer.

5.3.6 The Proposed Development, during construction and subsequent operation, is expected to affect visual amenity in the following ways:

- Temporary impacts due to movement of materials and vehicles resulting in uncharacteristic activity, including movement of work crews; presence of plant, welfare facilities and heavy machinery; construction works; temporary lighting; and traffic management requirements during enabling and construction work.
- Permanent impacts from construction including tree and hedgerow clearance affecting views in and out of the site.
- The introduction of a discordant element of an industrial nature into views, in both close proximity views and across longer distance views, permanently disrupting the existing visual amenity.

5.3.7 Effects of construction work, including noise and uncharacteristic vehicle, plant, and work crew movements, are more likely to be perceived as intrusive features in the landscape, as is the operational Proposed Development due to its industrial and man-made nature. Beyond 2 km, however, views have a greater potential to be screened by intervening features such as buildings, topography, or vegetation.

Cumulative Landscape and Visual Effects

5.3.8 The assessment of cumulative effects would consider other developments within the study area. At the time of preparing this EIA Scoping Report, this is anticipated to include the following electricity transmission projects:

- Overhead line diversion of the existing Beauly-Denny 400kV Overhead Line, into and out of the Proposed Fanellan substation with removal of an existing section of line.
- Beauly to Peterhead Overhead Line. All overhead lines entering this Proposed Development would have terminal towers and potentially sealing end compounds.
- Spittal to Beauly Overhead Line. All overhead lines entering this Proposed Development would have terminal towers and potentially sealing end compounds.

5.4 Mitigation

5.4.1 The consideration of landscape and visual amenity formed a key input into the site selection process. This process recognised the scale of development proposed, so an important element in the decision-making process was the potential for large-scale landscape mitigation at the selected site. The site selection process, which was undertaken in line with the SSEN Transmission Internal guidance 'Substation Site Selection Guidelines for Voltages at or above 132kv,' also considered, and was influenced by, the 11 design principles outlined in Section III: Guidelines of the Horlock Rules (where relevant to that stage for the project).

5.4.2 The design for the site is being developed with input from landscape specialists such that the design to be assessed will include a considerable degree of embedded landscape and visual mitigation. This includes landform design to site the

buildings to the rear of the site where the vegetation in Ruttle Wood will provide immediate screening of the Proposed Development in views from the surrounding area to the north. Landform design and mitigation also includes extensive earthworks (including cutting into the ground to create a level platform for the substation and converter buildings which is lower than the existing topography) and mitigation planting to assist in the long-term integration of the Proposed Development into the landscape and provide different levels of screening, as well as providing new and improved habitat to contribute to biodiversity net gain.

5.4.3 Through the EIA process, the LVIA will seek to inform any further refinements to the Proposed Development and to consider how and where the landscape mitigation measures may be developed to further reduce potential landscape and visual effects.

5.5 Proposed Scope of Assessment

5.5.1 The landscape and visual assessment will be undertaken in accordance with best practice guidance, in particular the Landscape Institute and Institute of Environmental Management and Assessment (IEMA) Guidelines for Landscape and Visual Impact Assessment[18] and Landscape Institute guidance on assessing landscape value[19].

5.5.2 The landscape and visual impact assessment will include:

- An illustrated statement on the impact of the Proposed Development on the landscape character and value of the area. The statement will include a description of the methodology used to assess character and the criteria to determine value.
- An illustrated description of the visual impact of the Proposed Development on properties and locations to which the public have access.

5.5.3 The LVIA will consider effects on landscape and visual receptors within the study area during construction and operation. Operational effects will be considered at Year 1 and Year 15 to identify effects of maturing mitigation planting.

5.5.4 The following references would be used to inform the landscape and visual assessment:

- NatureScot's Scotland Landscape Character Types
- Online mapping including Ordnance Survey maps, Google Earth Pro and Google Street View.

5.5.5 From experience of other developments involving large buildings in a rural landscape[20], it is anticipated that significant effects are unlikely beyond 5 km from the Proposed Development. An initial study area limit of 5 km from the site boundary is therefore proposed, to be tested in the early stages of the assessment and refined if appropriate to ensure a focus on potentially significant effects. The initial study area for the visual assessment will be the area covered by the ZTV, cut off at 5 km, whilst the initial study area for the landscape assessment will be the entirety of the area within 5 km. Figure 5.1 (See Appendix A) shows the Zone of Theoretical Visibility (ZTV), the area from which the Proposed Development is anticipated to be visible, in the absence of mitigation.

5.5.6 The initial stage of the process is the identification of the existing landscape and visual conditions of the study area (the baseline conditions). This would be informed by desktop research and field survey. The field work will consider both potential impacts on landscape character and potential impacts on the visual amenity of receptors within the study area - the latter considering both static locations and the view from routes when travelling. Following consultation with The Highland Council, site visits will also be made to the representative viewpoint locations that have been agreed with them. A set of 13 representative viewpoint locations have been identified and agreed for inclusion in the assessment, shown on

[18] Landscape Institute and IEMA (Third edition, 2013). Guidelines for Landscape and Visual Impact Assessment.
[19] Landscape Institute (2021). Technical Guidance Note TGN 02-21 Assessing landscape value outside national designations.
[20] For example, Spittal Converter Station, Caithness, Noss Head Switching Station, Caithness.

Figure 5.2 (See Appendix A). Additional viewpoint locations may be identified during subsequent field visits or included at the request of the LPA following consultation.

5.5.7 The landscape character baseline will be informed by the NatureScot National Landscape Character Assessment descriptions for Enclosed Farmland (LCT 229) and Farmed Strath – Inverness (LCT 227).

5.5.8 As the LCTs cover a wide area, a finer grain of local landscape character within the study area will be identified. The key features of the existing landscape will be identified to establish the immediate and wider landscape context of the Proposed Development. Impacts of the Proposed Development on both National and local landscape character can then be determined.

5.5.9 Baseline reporting in the LVIA chapter will include the identification of relevant landscape planning policy at a national and regional level. Reference will be made to the following documentation:

- National Planning Framework 4 (NPF4, 2023)
- The Highland Council, Highland-wide Local Development Plan (2012).

5.5.10 As part of the design of the landscape mitigation, consideration will also be given to the following:

- Scottish and Southern Electricity Network Transmission, Substation Site Selection Guidelines for Voltages at or Above 132kV, (September 2022)
- National Grid, Horlock Rules for Design of Substations.

5.5.11 Following the initial site surveys and assessment of potential impacts on sensitive receptors during the construction and operation phases, a landscape analysis of the Proposed Development would be completed, and a Landscape Strategy derived to mitigate potential adverse impacts and reduce the likelihood of potential significant effects. Consideration will be given in the landscape design process to geotechnical, flood risk, sustainable drainage design, acoustics, ecology and Biodiversity Net Gain (BNG). Landowner wishes may also be considered. This process aligns with SSEN Transmission's responsibilities under Section 38 and Schedule 9 of the Electricity Act relating to the preservation of amenity.

5.5.12 The assessment of effects on Landscape Character and Visual Amenity during the construction phase and operation phases at Year 1 and Year 15 would be completed, taking into consideration the proposed mitigation measures, and identifying both the magnitude of change for each identified receptor which, combined with the established sensitivity to change for each receptor, will help to determine the significance of the effects. The categories for magnitude, sensitivity and significance will be based on industry best practice guidance set out in GLVIA3 (2013)[21].

5.5.13 For this assessment, effects of **Moderate** or greater significance will be considered to be potentially significant in the context of the EIA regulations.

5.5.14 The assessment of cumulative effects with nearby development projects will also be completed.

5.6 Visualisation Methodology

5.6.1 Within the study area, it is anticipated the potential key visual receptors are likely to be people living in individual residential properties or edge of settlements; users of the road and cycle networks; users of the River Beauly; and popular walking routes used by local residents and visitors. Reference would be made to The Highland Council Core Paths network.

5.6.2 To assist with illustrating the potential magnitude of impact to the visual receptors identified above, visualisations will be prepared from a set of representative viewpoints. An initial set of 13 representative viewpoints have been identified

[21] Landscape Institute and IEMA (Third edition, 2013). Guidelines for Landscape and Visual Impact Assessment.

through desk-based review and site visits but will be verified through further site visits and the production of a digital Zone of Theoretical Visibility (ZTV) plan.

5.6.3 The locations of the agreed 13 representative viewpoints are shown on Figures 5.1 and 5.2 (See Appendix A) and listed in Table 5-1 below.

Table 5-1 Proposed Representative Viewpoints

Viewpoint Number	Viewpoint Description	Distance/Direction (approximate) from Proposed Development
1	View looking west from Fanellan Road at Fanellan Cottages	0m/north
2	View looking north from near Sunnybrae and Bredaig	0.9km/north
3	View looking south-west from the northern-western edge of West Balbair	3km/south-west
4	View looking south-west from Ruisaurie	3.5km/south-west
5	View looking north-west from Tomnacross Primary School entrance (south of Kiltarity)	2.7km/north-west
6	View looking north from the western edge of Culburnie	1.3k/north
7	View looking north-east from near Crerag	1.8km/north
8	View looking south-west from Beauly Train Station car park	4km/south-west
9	View looking south from Torgormack near Broallan	1.7km/south
10	View south-west from Kilmorack	1.4km/south-west
11	View north-west from Camuault Muir and Glaichbea	3km/north-west
12	View looking north-east from Crask of Aigas	1.6km/north-east
13	View looking south-east from Farley	2.3km/south-east

5.6.4 The locations of the 13 viewpoints have been agreed with The Highland Council (March 2024). The visualisations will be prepared in accordance with industry guidance, such as the Landscape Institute Guidance[22] but this will be agreed with The Highland Council. Five of the representative viewpoints will be illustrated by photomontages (Type 3) and eight as 3D wirelines (Type 2), as set out in Table 5-2 below. The camera location would be surveyed on site using a handheld Global Positioning System (GPS).

Table 5-2 Photomontage Types

Viewpoint number	Viewpoint Description	Visualisation Type
1	View looking west from Fanellan Road at Fanellan Cottages	Type 3
2	View looking north from near Sunnybrae and Bredaig	Type 3
3	View looking south-west from the northern-western edge of West Balbair	Type 2
4	View looking south-west from Ruisaurie	Type 2
5	View looking north-west from Tomnacross Primary School entrance (south of Kiltarity)	Type 3

[22] Landscape Institute (2019). Technical Guidance Note 06/19 Visual Representation of Development Proposals. Available at: https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2019/09/LI_TGN-06-19_Visual_Representation.pdf [Accessed: February 2024].

Viewpoint number	Viewpoint Description	Visualisation Type
6	View looking north from the western edge of Culburnie	Type 3
7	View looking north-east from near Crerag	Type 2
8	View looking south-west from Beauly Train Station car park	Type 2
9	View looking south from Torgormack near Broallan	Type 2
10	View south-west from Kilmorack	Type 3
11	View north-west from Camuault Muir and Glaichbea	Type 2
12	View looking north-east from Crask of Aigas	Type 2
13	View looking south-east from Farley	Type 2

5.6.5 The presentation format of the visualisations will also be agreed with The Highland Council during the assessment and could consist of A3 single frame views of 50mm or 75mm (recalibrated from the 50mm) focal lengths. A non-50mm camera lens is not anticipated to be required and photos will be taken in landscape format as standard, unless the Proposed Development doesn't fit within the vertical field of view, in which a portrait photograph will be used. A1 panoramas with a field of view of 65.5 or 90 degrees would more clearly illustrate the change in visual amenity as a result of the Proposed Development. The visualisations will include the current view followed by the proposed view at Years 1 and Years 15 using the 3D model of the Proposed Development. It is anticipated that 2m digital terrain data (DTM) will be sufficient to verify the location of the Proposed Development within the baseline panorama. It is assumed that photography will be completed in early 2024.

5.7 Issues to be Scoped Out

5.7.1 Effects of the final design on receptors outside the areas of potential visibility (as shown by the ZTV study and verified via site visits) are scoped out of the assessment due to the lack of likely significant effects. Chapter 13 (Table 13-1) describes additional elements of landscape character and visual amenity to be scoped out of the landscape and visual assessment.

5.8 Summary

5.8.1 The proposed approach to this assessment is the identification and evaluation of potential impacts on the landscape character and visual receptors present within 5 km of the Proposed Development. A desk top assessment will be supported by a detailed field survey with the findings illustrated by photography to current professional guidance. The potential impacts on the landscape character and visual amenity will be identified, the sensitivity and level of magnitude for each type of receptor described and resulting significance of effect determined.

5.8.2 The effects of the Proposed Development on landscape and visual receptors will be assessed, and mitigation measures proposed to prevent, reduce, or offset any likely significant adverse effects on the landscape or on visual amenity. Cumulative effects from the Proposed Development in combination with other developments will also be considered.

6. ECOLOGY, NATURE CONSERVATION AND ORNITHOLOGY

6.1 Introduction

6.1.1 This chapter considers ecological baseline conditions, the potential effects associated with construction and operation of the Proposed Development and the proposed scope of assessment methodology to be considered in the EIA Report.

6.2 Baseline Conditions

Designated Sites

6.2.1 A desk-based study to identify designated sites within and surrounding the Proposed Development was undertaken during the site selection stage. The following statutory designated sites at European or International level were identified within a provisional search area of 10 km beyond the Proposed Development site boundary. The search was extended to 20 km to account for the increased range of certain bird of prey species (osprey) and goose species (greylag goose and pink-footed goose). All other designations of interest, including Sites of Special Scientific Interest (SSSIs), were identified within a search area of 2 km beyond the Proposed Development site boundary.

- Inner Moray Firth Special Protection Area (SPA) and Ramsar (3.1 km north-east) – designated for breeding osprey and common tern, and non-breeding/overwintering greylag goose, goldeneye, greater scaup, teal, wigeon, goosander, red-breasted merganser, bar-tailed godwit, redshank, curlew, oystercatcher, cormorant, and waterfowl assemblage.
- Moniack Gorge Special Area of Conservation (SAC) (5.7 km east) – designated for green shield-moss.
- Moray Firth SPA (6.1 km north-east) – designated for non-breeding common scoter, eider, goldeneye, great northern diver, long-tailed duck, red-breasted merganser, red-throated diver, scaup, shag, Slavonian grebe, and velvet scoter.
- Strathglass Complex SAC (8.1 km west) – designated for Caledonian forest, blanket bog, bog woodland, montane acid grasslands, dry heaths, and alpine and subalpine heaths.
- Moray Firth SAC (8.3 km east) – designated for bottlenose dolphin and subtidal sandbanks.
- North Inverness Lochs SPA (8.4 km south) – designated for breeding Slavonian grebe.
- Glen Affric to Strathconon SPA (9.1 km west) – designated for breeding golden eagle.
- Cromarty Firth SPA and Ramsar (13.7 km north-east) – designated for breeding osprey and common tern, and non-breeding/overwintering whooper swan, greylag goose, pintail, wigeon, greater scaup, red-breasted merganser, bar-tailed godwit, dunlin, knot, curlew, redshank, oystercatcher, and waterfowl assemblage.

6.2.2 There are no statutory designated sites at National or Local level within 2 km of the Proposed Development site.

6.2.3 The Proposed Development site overlaps the following non-statutory designations or nature conservation sites:

- Buglife's 'East Inverness-shire' Important Invertebrate Area[23];
- Butterfly Conservation's 'Great Glen and the Beauly Catchment' Scottish Priority Landscape[24]; and
- A Buglife B-line[25].

[23] Buglife, Important Invertebrate Areas (online). Available at: https://www.buglife.org.uk/our-work/important-invertebrate-areas/ [Accessed: February 2024]
[24] Butterfly Conservation, Our Conservation Strategies (online). Available at: https://butterfly-conservation.org/our-work/our-conservation-strategies [Accessed: February 2024]
[25] Buglife, Downloadable B-Lines Maps (online). Available at: https://www.buglife.org.uk/our-work/b-lines/b-lines-guidance/downloadable-b-lines-maps/ [Accessed: February 2024]

6.2.4 Field surveys applicable to the Proposed Development site and surrounding area which have been completed to date include:

- UK Habitat Classification (UKHab) survey[26], and Habitat Condition Assessment (HCA) following Natural England Biodiversity Metric V3.1[27] (current at the time of survey). Undertaken to the preferred site option during the site selection stage – January 2023;
- Pre-Ground Investigation (GI) Protected Species Survey (PSS) ecological constraints survey. Undertaken to the Proposed Development's GI boundary (at the time of survey), any associated GI compound areas and access routes and their outer 30 m buffers - June 2023; and
- Combined PSS ecological constraints survey. Undertaken to the full Proposed Development's potential site boundary (at the time of survey) and associated protected species survey buffers (hereafter the 'PSS survey area') - July 2023.

6.2.5 A desk-based Multi-Criteria Analysis (MCA) habitat study was conducted to the adjacent Proposed OHL diversion, the study area for which partially overlaps the Proposed Development's site boundary. The MCA habitat study was a desk-based review of freely available data sets used to assign UKHab habitat categories to the MCA study area.

6.2.6 Breeding bird survey within the site and up to 100 m[28] away – four visits April to July 2023. Additional ornithology baseline data will be available from three projects with overlapping survey areas:

- Scarce Breeding Bird Surveys (SBBS) for the Beauly to Peterhead 400 kV OHL;
- Flight activity surveys from a single Vantage Point within the site overlooking the Proposed OHL diversion connected to the Proposed Development. Undertaken by WSP in April-August 2023; and
- Spittal – Loch Buidhe – Beauly 400kV Overhead Line. Flight activity surveys within an overlapping study area with the Proposed Development commenced in September 2023 and will continue until August 2024. Breeding bird surveys will be undertaken in April to June 2024.

Habitats

6.2.7 The UKHab field survey was completed during a suboptimal botanical season (January), but it was possible to map the broad habitat types. The collated habitat types present at the Proposed Development site, classified via a combination of the UKHab field survey and separate MCA, were found to primarily comprise modified, agricultural grassland and woodland. The woodland areas were dominated by a mix of Scot's pine and other coniferous trees, with limited areas of mixed broadleaved trees, and birchwoods. Multiple areas of rhododendron, which is an invasive non-native floral

[26] UK Habitat Classification (2020). The UK Habitat Classification User Manual. Version 1.1.

[27] Natural England (2022). Biodiversity Metric 3.1. Natural England Joint Publication JP039. Available at: (now archived) https://publications.naturalengland.org.uk/publication/5850908674228224 [Accessed: February 2024].

[28] Based on the Common Bird Census. Gilbert G., Gibbons DW, and Evans J. (1998). Bird Monitoring Methods. RSPB, Sandy.

species, have been incidentally observed within the field survey areas, predominantly within the mature conifer woodlands in the north-western portion of the Proposed Development site.

6.2.8 A further UKHab and HCA field survey will be undertaken during March 2024 to ensure a complete set of habitat data covering the Proposed Development site and a 250 m buffer around this.

Badger

6.2.9 Badgers are active in the Proposed Development site and it's outer 100 m buffer. Any signs of badger activity and confirmed or potential setts within this area have been recorded (if present) as per industry guidance[29,30]. Further information has not been disclosed due to their sensitivity to persecution but can be shared directly on request.

6.2.10 Monitoring of any potential badger setts or potential breeding setts that may be affected by the Proposed Development, via the use of automated digital cameras, will be undertaken during April and May 2024.

Bat Species

6.2.11 Structures with the potential to support roosting bats have been identified in the Proposed Development site and it's outer 30 m buffer. A majority of these comprised private residential buildings, sheds or field shelters with signs of current human occupation and relating baseline disturbance activities. In addition, a number of trees with the potential to support roosting bats have been identified in the same area.

6.2.12 A Preliminary Roost Assessment (PRA) will be undertaken in March 2024 to the identified structures that may be affected by the Proposed Development. The PRA will be used to identify if any further bat surveys are required to establish the presence and nature of roosts. If required, further dusk emergence activity surveys will be undertaken during May to June 2024, if the PRA identifies roosting suitability. A detailed tree climbing programme will be undertaken during May to July 2024 to the trees identified to date as containing potential bat roost featured that may be affected by the Proposed Development. These surveys will be conducted in line with industry guidance[31,30].

Pine Marten

6.2.13 No direct observations of pine martens were made during the field surveys. However, potential pine marten scats (droppings) were found within a woodland in the south-western portion of the PSS survey area. The mature conifer woodlands in the north-western portion of the Proposed Development site have the potential to support this species. However, other suitable habitat for this species within the Proposed Development site is relatively scarce. No specific potential denning areas have been identified to date within the Proposed Development site or its outer 250 m buffer.

Red Squirrel

6.2.14 No direct observations of red squirrels were made during the field surveys. However, signs of squirrel foraging were found within the woodlands in the south-western portion of the Proposed Development site. The mature conifer woodlands in the north-western portion of the Proposed Development site have the potential to support this species. However, other suitable habitat for this species within the Proposed Development site is relatively scarce. No specific potential dreys have been identified to date within the Proposed Development site or its outer 50 m buffer.

Great Crested Newt

6.2.15 A Habitat Suitability Index (HSI) survey was completed on 14 waterbodies in the PSS survey area. 10 of these ponds received an HSI result of 'below average' or greater. These waterbodies will be subject to environmental DNA (eDNA)

[29] Scottish Badgers (2018). Surveying for Badgers. Good Practice Guidelines (V1). Available at: https://www.scottishbadgers.org.uk/wp-content/uploads/2020/12/Surveying-for-Badgers-Good-Practice-Guidelines_V1-2020-2455979.pdf [Accessed: February 2024]
[30] NatureScot (no date). Planning and Development: Protected Species (online). Available at: https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/planning-and-development-protected-species [Accessed: February 2024]
[31] Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust, London.

sampling and lab analysis in June 2024 in line with industry guidance[32], to establish the presence or absence of great crested newts. The remaining four ponds were found to no longer be present or had HSI scores of 'poor'. No further surveys will be undertaken of these waterbodies. With respect to terrestrial habitat, the woodlands and rough field margins within the Proposed Development site have the potential to support this species.

Water Vole

6.2.16 The watercourses identified within the PSS survey area were observed to present negligible suitability for water voles, due to rocky substrates, lack of suitable bank-side vegetation and/or poaching from livestock. No direct observations or fields signs of their presence or activity have been observed.

Otter

6.2.17 Whilst the watercourses identified within the PSS survey area may be used infrequently for commuting purposes, they were observed to present low suitability for otters, due to their small size, lack of fish and low abundance of potentially suitable resting sites. No direct observations or fields signs of their presence or activity have been observed.

Ornithology

6.2.18 Flight activity surveys at the site for the related OHL diversion recorded flight activity from three raptor species on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)[33] (osprey, honey-buzzard, red kite). In addition, SBBS data from the Beauly to Peterhead 400 kV OHL project recorded nest sites for osprey, peregrine and red kite in the wider area beyond the site.

6.2.19 Twenty-two species were observed in the breeding bird survey area (site and 100 m buffer). The assemblage of birds found were mainly typical farmland and woodland passerines (songbirds) including 11 species red listed and eight species amber listed within Birds of Conservation Concern 5 (BoCC 5)[34]. In addition, a single territory was recorded within the site for a wader species, lapwing. This species is red listed within BoCC 5. There were low densities of breeding birds within the site, and the Proposed Development is unlikely to cause significant adverse impacts to the breeding bird assemblage.

Other Species

6.2.20 In the absence of field surveys, a review of the suitability of the site habitats for other protected species identified limited habitat for otter, invertebrates, reptiles, and fish. Hedgerows may provide some refuge for reptile species. However, the habitats surrounding these are heavily managed and therefore the site is unlikely to represent a key area for these species. Similarly, ditches at the site are unlikely to represent key habitat for otter, lampreys, or salmonids. The areas of damp semi-natural neutral grassland at the site and field margins may support common and widespread species of invertebrates.

6.3 Sensitive Receptors

6.3.1 Based on the information available to date, sensitive receptors are likely to include:

- Bat species;
- Badger; and
- Great crested newt.

[32] Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F 2014. Analytical and methodological development for improved surveillance of the Great Crested Newt. Defra Project WC1067. Freshwater Habitats Trust: Oxford.

[33] Wildlife and Countryside Act 1981 – Schedule 1 Birds. Available at: https://www.legislation.gov.uk/ukpga/1981/69/schedule/1 [Accessed: February 2024]

[34] Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114: 723-747. Available at: https://britishbirds. co.uk/content/status-our-bird-populations [Accessed: February 2024]

6.3.2 As additional surveys are progressed, it is possible that other species will be identified as sensitive receptors. The EIA Report chapter will include a full review of the baseline data and conservation status of each receptor to identify the Important Ecological Features (IEFs).

6.4 Potentially Significant Effects

6.4.1 As badgers are active in the area, it is considered likely that the Proposed Development will result in the loss of supporting habitat and potentially reduce the territory size(s) of any social group(s) present. The mitigation hierarchy will be applied through the ongoing design phase to retain badger setts, where possible, prioritising main/breeding setts and supporting habitat where possible. However, the loss of certain setts is likely to be unavoidable. The significance of this would be informed by the sett monitoring results. In the absence of further survey data or mitigation, the collective impacts of habitat and sett loss have potential to result in significant negative effects on badgers using the Proposed Development site.

6.4.2 There is potential for construction related injury to or incidental killing of badgers – although good construction practices (e.g., securing work areas, safely storing materials, restricting vehicle speed limits) would suitably reduce this risk such that it is not anticipated to have a significant effect.

6.4.3 It is not anticipated that the operational phase of the Proposed Development would significantly increase the mortality rate of badgers. The area is already adjacent to roads and farm plant movement. Any planned roads within the Proposed Development site will likely be restricted to reduced speed limits during the construction and operational phases.

6.4.4 The Proposed Development may affect bats through roost loss and/or disturbance if bats are identified to be using the potential roost features within buildings and trees within 30 m of proposed construction works. Final details regarding the Proposed Development's construction methods are not available at this time. Should high-impact construction methods, such as piling or blasting, be required, this proximity will be increased to 100 m. Where roosts are identified, the mitigation hierarchy will be applied to retain these where possible. At this stage, it is possible that the loss of roosts may have a significant effect on the local bat population – depending on the characteristics (type/use, species, numbers, etc.) of the roost(s) effected (if any).

6.4.5 The Proposed Development may affect great crested newts through interconnecting habitat loss and/or disturbance, if they are identified to be using the four waterbodies within 500 m of the Proposed Development site found to be suitable through HSI. Where the presence of great crested newts in a waterbody is identified via future studies, the mitigation hierarchy will be applied to retain these and interconnecting habitats, where possible. At this stage, it is possible that the loss of breeding ponds may have a significant effect on the local population.

6.4.6 All works affecting confirmed badger setts, bat roosts and great crested newt populations (if identified via future studies) will be subject to licensing. The unavoidable loss of any resting or breeding sites may require compensation. All mitigation and compensation will be described in the EIA Report.

6.5 Mitigation

6.5.1 Mitigation hierarchy will be applied throughout the assessment, including from the design stage. The consideration of potential significant effects on habitats and species, informed by further survey data, will be used to influence the siting of both temporary and permanent infrastructure and construction activities, where technically feasible, to avoid or minimise effects.

6.5.2 In addition, the Applicant has established best practice construction techniques and procedures that have been agreed with statutory consultees, including Scottish Environment Protection Agency (SEPA) and NatureScot. These are set out

within the SSEN Transmission GEMPs and SPPs. The Proposed Development would be constructed in accordance with these plans.

6.5.3 A contractual management requirement of the successful Principal Contractor would be the development and implementation of a comprehensive and site-specific robust CEMP. This document would detail how the successful Principal Contractor would manage the works in accordance with all commitments and mitigation detailed in the EIA Report, the SSEN Transmission GEMPs, SPPs, statutory consents and authorisations, and industry best practice and guidance, including pollution prevention guidance.

6.5.4 Additional mitigation measures to remove or suitably reduce potential significant effects will be identified through the EIA. This may include ecological compensation. The EIA Ecology Report chapter will fully detail any additional measures including responsibilities, timescales, and any follow-on monitoring requirements.

6.5.5 Where current planned, or future required, protected species surveys are undertaken after the production of the EIA Report, a precautionary approach to the EIA assessment and the design of mitigation measures in the EIA Report will be applied. Mitigation hierarchy will be applied in the first instance to retain as many potential protected features as possible. Other measures are likely to include additional pre-construction surveys for areas or operations which may affect potential protected features.

6.6 Proposed Scope of Assessment

6.6.1 Field surveys to inform the assessment are ongoing (Section 8.2).

6.6.2 The ecological impact assessment will be completed in accordance with the Chartered Institute of Ecological and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment. The assessment will use the ecological baseline and results of field surveys to identify the IEFs that could be affected by the construction and/or operation of the Proposed Development, by assigning a geographic level of importance to each receptor based on its conservation status, population/assemblage trends and other relevant criteria (including size, naturalness, rarity, and diversity). Details of the Proposed Development will then be used to assess what level of effect each IEF is likely to receive and whether that effect will be beneficial or adverse, significant or negligible, and temporary or permanent.

6.6.3 Where appropriate, mitigation measures will be detailed within the EIA to remove or reduce any adverse effects and measures to enhance the local ecology will also be incorporated within the assessment. An assessment of residual effects will then be undertaken and reported within the EIA Report.

6.7 Proposed Approach to Biodiversity Net Gain

6.7.1 The Applicant has committed to delivering a 10% gain for biodiversity enhancement for all projects. This is aligned to the Scottish Government's National Planning Framework 4 (NPF4)[35] Policy 3 aim for proposed developments to contribute 'significant biodiversity enhancements'. It is also aligned with expectations to achieve 10% Biodiversity Net Gain (BNG) elsewhere in the UK.

6.7.2 The Applicant has developed specific guidance and toolkits to measure BNG, based on the Natural England Biodiversity Metric 3.1 and adapted to reflect the requirements of Scottish Habitats[36]. Area and linear habitats are assessed separately. The Toolkit produces a unit score for three categories of habitat: Biodiversity Units[37], Linear Hedgerow (H) Units and Linear Watercourse (W) Units[38]. The BNG toolkits are used to quantify losses and gains of biodiversity, allowing site locations or design options to be compared by quantifying the net change in biodiversity between the

[35] The Scottish Government (2023) *National Planning Framework 4*, The Scottish Government, Edinburgh. Available at: https://www.gov.scot/publications/national-planning-framework-4/

[36] Scottish and Southern Electricity Networks (2020) TG-NET-ENG-526: Biodiversity Net Gain Toolkit User Guide. Version 3.01. SSEN, Perth

[37] The Biodiversity Units associated with area (polygon) habitats.

[38] The Biodiversity Units associated with linear habitats (hedgerows or watercourses).

preconstruction baseline and proposed post-development units. This ensures that the mitigation hierarchy is embedded through project design and development and enables biodiversity units to be calculated and measured to ensure a 10% net gain against the baseline is delivered for each project.

6.7.3 Irreplaceable habitats and designated sites (e.g. SPAs, SACs, SSSIs) must be identified. Impacts to these areas should be avoided, mitigated and, as a last resort, compensated for, following national legislation, policy, and guidelines. Irreplaceable habitats include Ancient Woodland Inventory Categories 1a and 2a, ancient and veteran trees, and blanket bog (in good or moderate condition). Where unavoidable impacts to irreplaceable habitats are identified, these are assessed using a separate toolkit from non-irreplaceable habitats to ensure bespoke compensation can be provided. The biodiversity metric will be used to calculate the mitigation required for any losses, ensuring more habitat is restored than lost. Support for irreplaceable habitat restoration schemes is preferred over new habitat creation.

6.7.4 Consideration should also be given to the foraging habitat of SPA designated feature species, even where this is outside of the designated site area. The implications of proposed habitat changes with respect to SPA conservation objectives should be summarised in the BNG assessment report. Regarding foraging habitats, only impacts which may be considered to adversely affect SPA site integrity will be considered irreplaceable.

6.7.5 A Biodiversity Net Gain Assessment Report will be produced, detailing the approach to assessment and toolkit results (including baseline units, post development units, temporary impacts, and irreplaceable habitat impacts). The BNG Assessment report will include any proposed compensation to achieve the target biodiversity units. A Long-Term Habitat Management Plan will be produced to support the creation and/or enhancement of proposed post-development habitats to meet the proposed target conditions.

Ornithology

6.7.6 Considering updates to the design and extent of the Proposed Development, Schedule 1 raptors are scoped in to assess the potential impacts of audial and visual disturbance/displacement from foraging areas and breeding territories, through construction activities to facilitate the Proposed Development.

6.7.7 Some of the Schedule 1 raptor nest locations recorded during surveys to inform the related Beauly to Peterhead 400 kV OHL project were just within the maximum predicted Zone of Influence (ZoI) for disturbance from the Proposed Development[39]. Based on these 2023 nest locations, screening effects from forestry and topography would make significant effects from disturbance because of the Proposed Development unlikely. However, numerous osprey and red kite flights were recorded crossing the site during flight activity surveys for the related OHL diversion. The site and surrounding area may be an important foraging route for Schedule 1 raptors. Additionally, honey-buzzard was on territory within the ZoI of the Proposed Development in 2023, but no nest site was found. Finally, honey-buzzard, red kite, and osprey may have alternative nest sites within a ZoI for disturbance from the Proposed Development.

6.7.8 Osprey is a qualifying species of the Inner Moray Firth and Cromarty Firth SPA and Ramsar sites. Ospreys breeding within a ZoI of the Proposed Development could form part of the qualifying population of the European sites given the

[39] Goodship, N.M. and Furness, R.W. (MacArthur Green) Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species. NatureScot Research Report 1283.

maximum predicted foraging range for this species of 20 km[40]. Therefore, a Habitats Regulations Appraisal (HRA) screening will be undertaken for this species.

6.8 Issues Scoped Out

Designated sites

6.8.1 Due to their distance from the Proposed Development site and lack of functional connectivity, there are no perceived effect pathways for impacts on the qualifying interests of the Moniack Gorge SAC, Strathglass Complex SAC or Moray Firth SAC.

6.8.2 Due to the predominance of modified/improved habitats, there are no perceived effect pathways for impacts on the identified non-statutory designations which overlap the Proposed Development site.

6.8.3 There are no perceived effect pathways for impacts on qualifying interests of the Moray Firth SPA. The qualifying interests are specialist marine species for which the Site and surrounding area are wholly unsuitable.

6.8.4 There are no perceived effect pathways for impacts on qualifying interests of Glen Affric to Strathconon SPA. The SPA is 9.1 km away which would be at the maximum predicted foraging range for golden eagle from the designated site[41]. Further to this, habitat within and surrounding the site is considered unsuitable for this species.

Habitats

6.8.5 It is proposed that impacts to improved and semi-natural habitats at the Proposed Development site, when considered solely as habitat interests (i.e., not as supporting species), are scoped out of further assessment. This is based on their relatively low ecological value, the fact they are comprised of commonly occurring or widespread species, current modified/land use condition, and being well represented in the wider landscape. It is anticipated that woodlands surrounding properties and treelines at the Proposed Development will be retained as far as reasonably possible through the design. A BNG assessment will be undertaken in parallel with the EIA to inform the landscape designs. The BNG assessment will be documented within a standalone BNG report and associated toolkit. The Proposed Development has a target to achieve a 10% net gain in Biodiversity Units.

Pollution

6.8.6 All issues arising from pollution during the construction and operational phases are scoped out. If any, these would be short-term and likely to be localised events. Effective, industry-standard mitigation measures will be embedded within the project (detailed within the Principal Contractor's CEMP and the SSEN Transmission GEMPs).

Invasive Non-Native Species

6.8.7 The spread of rhododendron and subsequent effects of habitat degradation have been scoped out. Effective, industry-standard invasive species mitigation measures will be embedded within the project (detailed within the Principal Contractor's CEMP and the SSEN Transmission GEMPs).

Protected Species (Non-Avian)

6.8.8 Based on the baseline information available, the follow species are scoped out of further assessment through EIA: red squirrel, pine marten, reptiles, invertebrates, otter, water vole and fish. The site offers low suitability habitat and is unlikely to represent a key area for these species/groups. The same habitat types are well represented in the wider landscape. Preliminary surveys of woodlands at the site for red squirrel and pine marten did not identify any definitive

[40] NatureScot (formerly Scottish Natural Heritage (SNH)) (2016). Assessing Connectivity with Special Protection Areas (SPAs). Version 3 – June 2016
[41] NatureScot (formerly Scottish Natural Heritage (SNH)) (2016). Assessing Connectivity with Special Protection Areas (SPAs). Version 3 – June 2016

evidence of their resting sites. Any new evidence of these species, or other protected and conservation priority species, which may be recorded during subsequent bat surveys and other visits to the site will be reconsidered as part of the EIA.

Ornithology

6.8.9 The effects from the Proposed Development to populations of foraging geese are scoped out of further assessment through EIA due to a lack of evidence of large foraging aggregations within a ZoI of the Proposed Development.

6.8.10 There was partial overlap between the Proposed Developments ZoI and flight activity surveys for the related Beauly to Peterhead 400 kV OHL project. There was only one observation from the closest VP location to the site of foraging geese during September 2022 - August 2023, involving eight greylag geese. A low number of flights for greylag and pink-footed geese were recorded (two and six respectively). Furthermore, the foraging distribution shown for geese populations in Mitchell (2012)[42] does not indicate that the Proposed Development is within an important foraging area.

6.8.11 As greylag goose is a qualifying species of the Inner Moray Firth and Cromarty Firth SPA and Ramsar sites, this species will be considered in HRA Screening. No likely significant effects are anticipated, and much larger foraging areas are available elsewhere.

6.8.12 Other ornithological interests, aside from Schedule 1 raptors discussed above, are scoped out of further assessment through EIA. Breeding bird surveys to date have found that the arable and grazing dominated habitat within the site held low densities of typical farmland passerines (songbirds) during the breeding season including 11 red-listed species within BoCC5. There was a single territory for a red-listed wader, lapwing.

6.8.13 However, taking account of the relatively localised nature of the Proposed Development in comparison to the extensive suitable habitat (arable and grazed farmland) present in the wider area, no significant effects to the species are predicted.

6.8.14 Effective, industry-standard mitigation measures and sensitive timings of works will be embedded within the project for the protection of all active bird nests, to ensure compliance with the Wildlife and Countryside Act (1981, as amended).

6.9 Summary

6.9.1 Baseline studies for ecology are ongoing, but initial data suggests bats, badgers, and great crested newts to be the main sensitivities at the Proposed Development site. The EIA Report chapter will focus on these species and review additional data obtained through future surveys to assess fully the significance of any impacts to these species and their supporting habitat. The mitigation hierarchy will be applied from the early design stage. However, in the event of unavoidable impacts on resting sites (e.g., badger setts, bat roosts) or great crested newt breeding ponds, species-specific mitigation, compensation, and licensing will be required.

6.9.2 Effects on habitats and other species have been scoped out at this stage (pending further surveys). Notwithstanding, a BNG assessment will be undertaken. This will seek to deliver significant habitat enhancements, in collaboration with development of landscape designs that would also benefit wildlife.

6.9.3 As the Proposed Development has a Zone of Influence (ZoI) that potentially includes several European designated sites, a Habitats Regulations Appraisal screening exercise will be carried out in line with the Conservation (Natural Habitats, &c.) Regulations 1994 (the 'Habitats Regulations'). This initial screening stage of the process will first seek to determine whether the Proposed Development, either alone or in combination with other plans or projects, may result in likely significant effects on these, or any other designated sites to which it may be connected (i.e. either ecologically or hydrologically) or their qualifying interests. Where the Habitats Regulations Appraisal screening indicates any likely

[42] Mitchell, C. (2012). Mapping the distribution of feeding Pink-footed and Iceland Greylag Geese in Scotland. Wildfowl & Wetlands Trust / Scottish Natural Heritage Report, Slimbridge. 108pp.

significant effects are predicted, a further ‘Appropriate Assessment’ will be undertaken to establish whether those likely significant effects may adversely affect the integrity of those sites in light of their Conservation Objectives.

7. CULTURAL HERITAGE

7.1 Introduction

7.1.1 This chapter of the Scoping Report provides a brief overview of the cultural heritage baseline conditions, the potential effects associated with construction and operation of the Proposed Development and the proposed scope of assessment methodology to be considered in the EIA Report.

7.1.2 Cultural heritage comprises a diverse range of elements that will be referred to throughout the EIA Report as heritage assets. Heritage assets are features created or that have undergone modification from human agency. This includes a wide range of visible and buried archaeological sites and monuments, as well as other historic features or places. Heritage assets comprise World Heritage Sites, Scheduled Monuments, Listed Buildings, Gardens and Designed Landscapes (GDL), Battlefields, Conservation Areas, buried archaeological remains, other historic buildings, and earthworks.

7.2 Baseline Conditions

7.2.1 There are no designated heritage assets within the Proposed Development boundary. There are no World Heritage Sites, Marine Protected Areas, Historic Battlefields or Conservation Areas within 1 km of the PAN boundary. There are two Scheduled Monuments, one Garden and Designed Landscape, and 10 Listed Buildings within a 1 km study area surrounding the Proposed Development, which are listed in Table 7-1 and illustrated on Figure 1.1 (See Appendix A).

7.2.2 There are 10 non-designated heritage assets within the PAN boundary, consisting of pits, structures, cairns, and other archaeological remains discovered during the GI monitoring works of potential prehistoric date, as well as a post-medieval grave, and post-medieval cottages (see Table 7-1).

7.2.3 A review of historic mapping of the Proposed Development area shows that it has mostly been forested and it was used for gravel extraction and processing, and agricultural activity.

Table 7-1 Heritage assets

Heritage Asset Designation	Heritage Asset Names and Reference Numbers
Schedule Monuments	The following scheduled monuments have been identified within 1 km of the Proposed Development: • Kiltarlity Old Parish Church (SM5570) approx. 200 m to the east; • Culburnie Ring Cairn and Stone Circle (SM2425) approx. 440 to the south.
Gardens and Designed Landscapes	The following gardens and designed landscapes have been identified within 1 km of the Proposed Development: • Beaufort Castle (GDL00052) immediately to the east
Listed Buildings	The following listed buildings have been identified within 1 km of the Proposed Development: • Beaufort Castle (LB8068; Category A) approx. 760 m to the east; • Kilmorack Old Parish Church and Burial Ground (LB7122; Category B) approx. 300 m to the north; • Kilmorack Old Manse and Steading (LB7124; Category B) approx. 330 m to the north; • Beaufort Castle Gardener's Cottage (LB8071; Category B) approx. 600 m to the south-east; • Beaufort Castle Walled Garden (LB8072; Category B) approx. 730 m to the south-east;

Heritage Asset Designation	Heritage Asset Names and Reference Numbers
	• Beaufort Castle Home Farm Steading (LB8073; Category B) approx. 800 m to the south; • Kiltarlity Old Parish Burch Burial Ground (LB8081; Category B) approx. 200 m to the east; • Kilmorack Old Burial Ground (LB7123; Category C) approx. 260 m to the north; • Beaufort Castle, West Lodge (LB8070; Category C) approx. 540 m to the south; • Beaufort Castle, the Coach House (LB47970; Category C) approx. 400 m to the east.
Non-designated	The following non-designated heritage assets have been identified within the PAN boundary: • Fanellan structure (Canmore 346720) • Fanellan pits and structure (Canmore 346470) • Clach Tarrail Grave (Canmore 12390) • Kiltarlity Cottages (Canmore 116604) • Ruttle Wood Cairns (Canmore 116606) • Two possible pits/postholes (TP24) • Possible posthole (TP28.1) • Possible posthole (TP43) • Possible pit (TP47) • A linear feature (TP59)

7.3 Potentially Significant Effects

7.3.1 The ten identified non-designated heritage assets within the Proposed Development area (see Table 7-1) have the potential to be physically impacted by the Proposed Development, resulting in significant adverse effects if they cannot be avoided.

7.3.2 The Listed Buildings in the study area are either located in Kilmorack, to the north east, or associated with Beaufort Castle (GDL00052) to the east. There is the potential that the Proposed Development will be visible from some of the Listed Buildings associated with Beaufort Castle (GDL00052), and from open areas within the GDL. It is unlikely there

would be a significant change to the settings of these heritage assets due to the distance and intervening vegetation, but they will be considered within the assessment.

7.3.3 There is limited potential for visibility of the Proposed Development from the Listed Buildings around Kilmorack due to intervening topography and vegetation, and the power station within 100 m of these Listed Buildings.

7.3.4 The two Scheduled Monuments within the 1 km study area both at a lower elevation than the Proposed Development, but the intervening topography and vegetation is likely to partially block visibility of the Proposed Development, with significant effects not anticipated.

7.4 Mitigation

7.4.1 Mitigation measures to minimise adverse effects on cultural heritage will be developed through the EIA stage.

7.4.2 Where practical, potential direct physical impacts will be mitigated through design modifications and the use of micrositing to avoid non-designated heritage assets and preserve them in-situ.

Where avoidance cannot be achieved, mitigation will aim to reduce the effects through the implementation of archaeological works to record any heritage assets, providing preservation by record. A focussed programme of supporting archaeological work, such as archaeological monitoring during construction, as well as excavation and recording of any discovered archaeological remains, will help to further mitigate any potential impacts, if required. The details and scope of such a programme of mitigation would need to be agreed through consultation with HCHET.

7.5 Proposed Scope of Assessment

7.5.1 The assessment of potential effects on heritage assets within the baseline will be carried out in accordance with the standards set by the Chartered Institute for Archaeologists (CIfA), and in agreement with HES and HCHET.

7.5.2 A detailed desk study will be undertaken to inform the cultural heritage baseline and will include consultation with HES and HCHET. The assessment will be informed by a review of all available archaeological records, historical documentary evidence, cartographic evidence, and photographic material. This will involve consultation of the following sources:

- Geographic Information System (GIS) data on scheduled monuments, listed buildings, and GDLs obtained from HES;
- GIS data on other heritage assets will be obtained from the Scottish National Record of the Historic Environment (SNRHE), which is maintained by HES, and from the Highland HER, which is maintained by HCHET;
- Readily accessible primary and secondary historical sources for information relating to the area's historical past, including past land use;
- Pre-Ordnance Survey maps of the Proposed Development area, available online from the National Library of Scotland (NLS);
- First and subsequent editions of the Ordnance Survey (OS) maps of the Proposed Development area, examined via the NLS;
- LIDAR datasets of the general area through NLS;
- The solid and drift geology for the Proposed Development area based on that recorded by the British Geological Survey/Geological Survey of Great Britain maps;
- A detailed walkover survey of the Proposed Development area; and
- The results of the watching brief conducted during Geotechnical Investigations conducted in 2023

7.5.3 The study area for the assessment will be set at 1 km for designated heritage assets, but the Zone of Theoretical Visibility (ZTV) will be used to ensure other designated heritage assets outside of the study area are considered during the baseline gathering exercise. The 1 km study area was chosen due to the lack of potential for significant effects to arise from impacts on designated heritage assets outside of this study area, following initial assessments at site selection

stage and responses from consultees. Consideration of a more extensive study area will also be given where cumulative effects with associated developments may cause impacts to designated heritage assets outside of the 1 km study area.

7.5.4 Due to the abundance of heritage assets within the PAN boundary, a wider study area was not considered to gauge the potential for archaeological remains. In addition, non-designated heritage assets outside the Proposed Development mainly relate to the village of Kilmorack or post-medieval farming activity, and it is not anticipated there would be significant effects from changes within the setting of these non-designated heritage assets.

7.5.5 Effects on the cultural heritage resource will be determined by identifying the value of the heritage assets within the baseline and assessing the magnitude of any potential impacts. The effects will be assessed by taking account of the predicted magnitude of impact and the value of the receptor. Mitigation measures will be recommended to minimise the impact of the Proposed Development on cultural heritage, and a residual effect will be determined.

7.5.6 The determination of the value of heritage assets is based on statutory designation and/or professional judgement against the characteristics and criteria expressed in HES Designation Policy and Selection Guidance[43] and the Historic Environment Policy for Scotland[44]. The determination of setting has been undertaken in accordance with guidance provided within the Managing Change Guidance[45], and the proposed Zone of Theoretical Visibility (ZTV) (see Chapter 5 Landscape and Visual Impact) will aid in determining impacts arising through change within the setting of heritage assets.

7.5.7 Five ratings will be adopted for ascertaining the value of heritage assets: very high, high, medium, low, and negligible. The magnitude of impact will be determined on a five-point scale as well, from No Change to Major, with beneficial as well as adverse impacts noted.

7.5.8 The significance of the effect of change on an attribute of a heritage asset is a function of the importance of the attribute and the scale of change. For this assessment, impacts of Moderate or greater significance are potentially significant in the context of the EIA regulations and are highlighted in bold in Table 7-2.

Table 7-2 Significance of Effect

		Magnitude of Impact				
Value		Major	Moderate	Minor	Negligible	No Change
	Very high	**Very Large**	**Large or Very Large**	**Moderate or Large**	Slight	Neutral
	High	**Large or Very Large**	**Moderate or Large**	**Moderate** or Slight	Slight	Neutral
	Medium	**Moderate or Large**	**Moderate**	Slight	Neutral or Slight	Neutral
	Low	Slight or **Moderate**	Slight	Neutral or Slight	Neutral or Slight	Neutral
	Negligible	Slight	Neutral or Slight	Neutral or Slight	Neutral	Neutral

[43] Historic Environment Scotland (2019). Designation Policy and Selection Guidance.
[44] Historic Environment Scotland (2019). Historic Environment Policy for Scotland.
[45] Historic Environment Scotland (2020). Managing Change in the Historic Environment: Setting.

7.6 Issues Scoped Out

7.6.1 The direct impacts during construction and operation of the Proposed Development on World Heritage Sites, Historic Battlefields and Conservation Areas will be scoped out of the cultural heritage assessment as there are none present within the Proposed Development area or within the 1 km study area.

7.6.2 Temporary construction impacts through changes within the setting of designated and non-designated heritage assets will be scoped out as these temporary effects are not anticipated to result in significant effects.

7.6.3 Indirect impacts from the Proposed Development are not anticipated so will be scoped out of the assessment.

7.7 Summary

7.7.1 The proposed approach to the assessment has been designed to identify and evaluate any heritage assets present within the Proposed Development area, through examination of desk-based sources and detailed field survey, and to identify heritage assets outside the Proposed Development that may experience significant effects from impacts arising through change within their setting. Direct physical impacts on known and potential heritage assets within the Proposed Development, as well as direct impacts arising through change in the setting of designated heritage assets within 1 km of the Proposed Development, will be considered within the assessment.

7.7.2 The effects of the Proposed Development on heritage assets will be assessed and mitigation measures, where appropriate, will be proposed to prevent, reduce, or offset any direct physical impacts on heritage assets, or any likely significant adverse effects arising from change within the setting of heritage assets.

8. TRAFFIC AND TRANSPORT

8.1 Introduction

8.1.1 This chapter provides a brief overview of the methodology proposed to support the preparation of the Traffic and Transport chapter of the EIA Report. It sets out the baseline conditions and identifies the potential effects associated with the Proposed Development's construction and operation.

8.2 Baseline Conditions

8.2.1 The Proposed Development will be accessed from the unclassified C1106 (Fanellan Road) which is located immediately to the south of the site. The C1106 connects with the A831 approximately 1.5 km to the north-east of the site, with the road crossing the River Beauly via Black Bridge close to the junction between the two roads. The bridge has no signed restrictions on its usage, but its width has been reduced as a result of its current condition, with the implementation of an existing priority working arrangement controlled by give way signage.

8.2.2 It is anticipated that the majority of construction and operational traffic will access the A831 from either the A832 or A862, with these roads supporting access from the A82 and A90 which form part of the strategic road network. Vehicles would then access the site via the unclassified C1106 (Fanellan Road).

8.2.3 The existing structural issues associated with Black Bridge may result in a requirement for HGVs to access the site from the A833 via the C1106 and U1604 should these issues not be addressed in advance of the commencement of construction activities. To establish baseline traffic flows, data will be obtained from the Department for Transport (DfT) for the most recently available period. Annual Average Daily Flow (AADF) information will be obtained for the agreed study network, which will confirm the traffic levels, including Heavy Goods Vehicles (HGVs), currently using the key access route(s).

8.3 Potentially Significant Effects

8.3.1 It is intended that potential effects of the Proposed Development will be reviewed in accordance with the Institute of Environmental Management and Assessment (IEMA) Guidelines for the Environmental Assessment of Traffic and Movement[46] which confirms that an assessment should be undertaken in accordance with the following two rules:

- Rule 1: On road links where traffic flows are predicted to increase by more than 30% (or where the number of heavy goods vehicles is predicted to increase by more than 30%); and
- Rule 2: On road links of high sensitivity where traffic flows have increased by 10% or more.

8.3.2 The IEMA guidelines suggest that 30%, 60% and 90% changes in traffic levels should be considered as "slight, moderate and substantial" impacts, respectively. It is generally considered that traffic flow increases of less than 10% are 'not significant' and further detailed assessment is not warranted.

8.3.3 The following groups and special interests will also be considered for each link on the agreed study network in line with the IEMA guidance, to determine the sensitivity of receptors:

- People at home;
- People at work;
- Sensitive locations – including hospitals, schools, places of worship and historical buildings;
- People walking;
- People cycling;

[46] IEMA (2023) Institute of Environmental Management and Assessment (IEMA) Guidelines: Environment Assessment of Traffic and Movement. Available online: https://www.iema.net/resources/blog/2023/07/12/new-iema-guidance-environmental-assessment-of-traffic-and-movement.

- Recreational and shopping areas;
- Ecological/nature conservation sites; and
- Tourist/visitor attractions.

8.4 Mitigation

8.4.1 The Proposed Development's construction will be supported by the implementation of a Construction Traffic Management Plan (CTMP) which will set out the mitigation measures to be implemented during the construction phase. The measures will manage the impact of all construction traffic, including abnormal loads, on the operation of the local road network.

8.4.2 The CTMP will be developed by the Principal Contractor and agreed with The Highland Council prior to the commencement of construction activities.

8.5 Proposed Scope of Assessment

8.5.1 The EIA Traffic and Transport chapter will be prepared in accordance with relevant guidance and policy including the IEMA Guidelines for the Environmental Assessment of Traffic and Movement, and include the following:

8.5.2 A review of the Proposed Development's impact on the operation of the following roads which constitute the proposed Study Area:

- C1106 between the Proposed Development and the A831;
- C1108 between the A833 and the U1604;
- U1604 between the C1108 and C1106;
- A883 between the A862 and the C1108;
- A831 between the C1106 and the A862;
- A862 between the A831 and Muir of Ord;
- A862 between the A831 and the A82; and
- A832 between Muir of Ord and the A9.
- Where either of the two IEMA thresholds are exceeded, the impact of construction traffic will be assessed in terms of the following effects:
    - Severance;
    - Driver delay;
    - Pedestrian delay;
    - Pedestrian amenity;
    - Fear and intimidation; and
    - Accidents and safety.
- It is not intended to undertake a detailed assessment where neither of the two IEMA thresholds are exceeded;
- A cumulative assessment taking cognisance of consented developments which may have an impact on the operation of the study area's road network;
- Use of baseline traffic flow data obtained from the DfT and TS for the most recently available period. Annual Average Daily Flow (AADF) information will be obtained for the agreed study network, which will confirm the traffic levels including Heavy Goods Vehicles (HGVs) using each of the road links contained within the study area. Additional traffic flow information will be captured using Automatic Traffic Counters on road links where no existing data exists; and

- Review of the most recently available five-year period of personal injury accident data obtained from the online Crashmap database[47] for the study area.

8.5.3 The nature of the Proposed Development is expected to require the transportation of certain components to the site as abnormal loads. It is therefore intended to undertake an Abnormal Load Route Assessment (ALRA) to review the ability of the route between the port of entry (yet to be identified) and the site to accommodate the largest component which is required to be delivered to the site. The ALRA will be supported by a swept-path analysis of identified pinch points to be undertaken using AutoTrack.

8.6 Issues Scoped Out

8.6.1 As vehicles travel away from the Proposed Development during the construction phase, they will disperse across the wider road network, thus diluting any potential effects. It is therefore expected that the effects relating to Traffic and Transport are unlikely to be significant beyond the identified Study Area, and as such no further routes are proposed to be included.

8.6.2 The traffic impacts associated with the operational phase are anticipated to be of low volume, being limited to movements associated with maintenance activities and low numbers of staff commuting to the site. Therefore, further assessment of the traffic impacts of the Proposed Development during the operational phase is not considered necessary.

8.7 Summary

8.7.1 It is anticipated that the majority of construction and operational traffic will access the A831 from either the A832 or A862, prior to using the unclassified C1106 (Fanellan Road) to access the Site. The existing structural issues associated with the Black Bridge may result in a requirement for HGVs to access the Site from the A833 via the C1106 and U1604 should these issues not be addressed in advance of the commencement of construction activities.

8.7.2 It is proposed to assess the potential effects of the Proposed Development in accordance with the IEMA Guidelines for the Environmental Assessment of Traffic and Movement, with baseline traffic flow data captured from a mix of existing counter sites and Automatic Traffic Counters installed to support the study as appropriate. A proposed Study Area has been identified and it is intended to undertake a detailed assessment of the Proposed Development's impact on the local road network where the level of generated traffic triggers one of the two thresholds as defined by the IEMA.

8.7.3 It is considered that the level of traffic generated by the operation of the Proposed Development once completed will be minimal and it is therefore proposed to scope the impact of this out of the EIA.

[47] Crashmap (2024). Providing access to maps and information about crashes on roads near you. Available at: https://www.crashmap.co.uk/ [Accessed: February 2024].

9. HYDROLOGY, HYDROGEOLOGY, GEOLOGY AND SOILS

9.1 Introduction

This chapter provides a brief overview of the Hydrology, Hydrogeology, Geology and Soils baseline conditions, the potential effects associated with construction and operation of the Proposed Development and the proposed scope of assessment methodology to be considered in the EIA Report.

9.2 Baseline

Study Area

9.2.1 The study area for hydrology, hydrogeology, geology, and soils receptors includes the area within the PAN boundary and within 1 km of the PAN boundary.

9.2.2 Scottish Environment Protection Agency (SEPA)'s guidance on assessing the impacts of developments on groundwater abstractions and Groundwater Dependent Terrestrial Ecosystems (GWDTE) (LUPS-GU31)[48] requires assessment of groundwater abstractions and potential GWDTE located within 250 m of excavations greater than 1 m and within 100 m of excavations less than 1 m. Therefore, the 'GWDTE Study Area' includes the area within 250 m of the PAN boundary. Abstractions within 250 m of the PAN boundary have also been identified.

River Catchment

9.2.3 The PAN boundary for the Proposed Development is located within the River Beauly Catchment, with its closest point being approximately 10m to the river at the north east of the boundary. The River Beauly flows in an easterly direction before discharging into the Beauly Firth, leading into the Moray Firth coastal water body.

9.2.4 The Proposed Development is located approximately 400m northwest of Allt na Loin, 800m southeast of Breakachy Burn, and 900m west of Bruiach/Belladrum Burn; all tributaries of the River Beauly. The "River Beauly – Beauly Firth to Cannich" (SEPA Water Body name) (ID: 20209) has been classified by SEPA under the Water Framework Directive (WFD) as having a good overall status (2022) and a good ecological potential. "Allt na Loin" (ID: 20215) is classified as having a moderate overall status (2022), on account of moderate ecology status. "Breakachy Burn" (ID: 20216) is classified as having a high overall status (2022). "Bruiach Burn / Belladrum Burn" (ID: 20213) is classified as having a moderate overall status (2022).

9.2.5 The Proposed Development does not require any crossings or culverting of existing watercourse channels, shown on OS 1:50,000 mapping that would be subject to Controlled Activities Regulations licensing[49]. It would be reasonable to

[48] SEPA Land Use Planning System. SEPA Guidance Note 31 (2017). [online] Available at: https://www.sepa.org.uk/media/144266/lups-gu31-guidance-on-assessing-the-impacts-of-development-proposals-on-groundwater-abstractions.pdf (Accessed December 2023)

[49] Scottish Environment Protection Agency (2023) The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) - A Practical Guide [online]. Available at: https://www.sepa.org.uk/media/r3cmimzy/car-a-practical-guide-v93-final.pdf [Accessed March 2024].

anticipate a combination of smaller or ephemeral surface channels and sub-surface field drainage in this area, which may be more apparent during wet conditions.

9.2.6 OS 1:10,000 scale mapping and aerial imagery indicate several small unnamed watercourses and drainage channels, within the PAN boundary; with one crossing required in the north east for the proposed access track.

Statutory Designated Sites

9.2.7 No SSSI, SAC, SPA, Ramsar sites, Geological Conservation Review (GCR) sites, or Marine Protection Areas have been identified within 1 km of the Proposed Development.

Private Water Supplies

9.2.8 The Highland Council has confirmed there are two private water supplies (PWS) located within 1 km of the Proposed Development. Of these, none are located within the PAN boundary:

- Culburnie (groundwater - spring); and
- Aigas Power Station (surface - watercourse).

9.2.9 SEPA has advised in relation to the Beauly-Denny OHL Diversion project their records indicate a well at NGR: NH 48485 43033, approximately 250 m to the southeast of the Proposed Development, within the PAN boundary, which is also indicated on OS 1:25,000 scale mapping.

9.2.10 Scottish Water (SW) data indicates that there are no public water abstraction points within a 1 km radius of the PAN boundary. SEPA data indicates that there is one potential abstraction and one authorised abstraction within 1 km of PAN boundary.

9.2.11 The Scottish Government Drinking Water Protected Areas (DWPA) – Scotland River basin district maps[50] indicate that the PAN boundary is not located within a DWPA for surface water; however, it is located within a DWPA for groundwater.

Geology

9.2.12 According to the British Geological Survey (BGS) Geoindex Onshore Bedrock[51] and Superficial Deposits geology mapping, superficial deposits underlying the Proposed Development include glacial sand and gravel, and till (diamicton), alluvium (clay, silt, sand, and gravel) and undifferentiated river deposits (clay, silt, sand, and gravel). The underlying bedrock is the Ousdale Arkdale Formation, composed of Breccia, conglomerate and sandstone with subsidiary mudstone.

9.2.13 According to the NatureScot Carbon and Peatland map[52] the Proposed Development is underlain by Class 0 (mineral soils – peatland soils are not typically found on these soils), which are not classified as priority peatland habitats and indicates that peat is not present within the PAN boundary. A sizeable area of Class 2 peat (nationally important carbon-

[50] The Scottish Government drinking water protected areas - Scotland river basin district: maps [online]. Available at: https://www.gov.scot/publications/drinking-water-protected-areas-scotland-river-basin-district-maps/ [Accessed February 2024].
[51] BGS Geoindex (interactive web map). Available at: https://mapapps2.bgs.ac.uk/geoindex/home.html?_ga=2.245552583.25395335.1617804149-924903878.1582883826 [Accessed: February 2024].
[52] NatureScot Carbon and Peatland (interactive web map). Available at: https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/ [Accessed: February 2024].

rich soils, deep peat, and priority peatland habitat), likely to be of high conservation value and restoration potential is located approximately 1.5 km south of the PAN boundary.

9.2.14 According to the National Soil Map of Scotland[53], the Proposed Development is mostly underlain by humus-iron podzols, with a very small area within the eastern PAN boundary underlain by mineral alluvial soils with peaty alluvial soils.

9.2.15 Ground investigation (GI)[54] trial pit information indicates the presence of peat soils are limited to few isolated pockets within the PAN boundary, with only four out of 91 machine excavated trial pits showing evidence of peat soils present within.

Hydrogeology

9.2.16 The online BGS hydrogeology map (1:625,000 scale)[55] indicates the Proposed Development is underlain by the Lower Old Red Sandstone moderately productive aquifer, which is a locally important multi-layered aquifer.

Flood Risk

9.2.17 SEPA's indicative flood risk mapping[56] suggests that there are no areas of high, medium, or low risk of river flooding within the PAN boundary, except in the northeastern corner of the PAN boundary, which lies in an area of medium risk of river flooding (0.5% chance of flooding annually). There is a high risk associated with the River Beauly, approximately 0 m-100 m from the northeastern PAN boundary and 500 m-600 m from the northern and western PAN boundary of the Proposed Development, respectively.

9.2.18 There are small, localised areas at high risk of surface water flooding within the forested areas in the northern and eastern extents of the PAN boundary and immediately west beyond the PAN boundary.

Groundwater Dependent Terrestrial Ecosystems (GWDTE)

9.2.19 A complete habitat survey dataset was not available at the time of this report in order to establish potential GWDTE supporting habitats; however, there is the potential for the presence of GWDTE within the PAN boundary. Further habitat information will be considered, as it becomes available.

Fisheries

9.2.20 The Proposed Development is in the area managed by the Beauly District Fishery Board. The Beauly Angling Club and the river management team are responsible for the operation of a hatchery (location not currently known), the commissioning of electro surveys of juvenile population, the repairing of riverbanks and improving the accessibility to the spawning beds of the returning adult salmon and trout[57].

9.3 Sensitive Receptors

9.3.1 Sensitive receptors are considered to be:

- Watercourses (River Beauly) and its tributaries;
- PWS;
- Areas subject to surface water flood risk;
- Groundwater; and
- GWDTE.

[53] National Soil Map of Scotland (interactive web map). Available at: https://map.environment.gov.scot/Soil_maps/?layer=1 [Accessed: February 2024].
[54] BAM Ritchies (2024) ASTI Substations – LT459 Beauly 400kV Ground Investigation Factual Report.
[55] BGS Geoindex (interactive web map). Available at: https://mapapps2.bgs.ac.uk/geoindex/home.html?_ga=2.245552583.25395335.1617804149-924903878.1582883826 [Accessed: February 2024].
[56] Scottish Environment Protection Agency – Flood Maps: https://map.sepa.org.uk/floodmap/map.htm [Accessed: February 2024].
[57] Beauly District Fishery Board. Available at: https://beauly.dsfb.org.uk/ [Accessed: February 2024].

9.4 Potentially Significant Effects

9.4.1 Potentially significant effects that may result from the construction, operation, and decommissioning phases (including cumulative) of the Proposed Development include:

- Pollution of surface watercourses, groundwater, and private water supplies: including from suspended sediment in surface water bodies, hydrocarbon, and oil pollution. Potential sources of suspended sediments on construction sites include excavations, exposed ground and stockpiles, plant and wheel washing, dust, and mud on site access roads. Sources of oils and hydrocarbons include leaks from access vehicles and powered hand tools;
- Increased flood risk; increased areas of impermeable surfaces from construction sites will increase runoff and areas of standing water if not appropriately mitigated; and
- Modifications to groundwater conditions, including levels and flows, which may cause alteration to receptors such as GWDTE or groundwater-fed water supplies.

9.5 Mitigation

9.5.1 The review and analysis of data gathered during the EIA process will ensure that the Proposed Development and associated construction access and requirements are carefully sited to ensure potential effects on the water environment are minimised where practicable through design.

9.5.2 The drainage design will ensure the Proposed Development will be constructed to ensure management of drainage on/from the Proposed Development from both water quality and flow perspectives.

9.5.3 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 SSEN Transmission GEMPs (Appendix C). The Proposed Development would be constructed in accordance with these plans.

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

9.5.5 The CEMP will also outline measures to ensure that the works minimise the risk to soils, geology, groundwater and surface water, private water supplies and licensed water uses. A Construction Site Licence would also be required by the Controlled Activity Regulations, and this will specify control and management procedures to ensure water resources, and GWDTE, are not impaired as a consequence of development.

9.6 Proposed Scope of Assessment

9.6.1 A desk study and data search will be undertaken to identify the baseline environment, including information on solid and drift geology, surface water and groundwater, flood risk and designated sites. Available information will be sought from the following sources:

- Drainage Strategy, Flood Risk Assessment and Drainage Impact Assessment for the Proposed Development;
- SSEN GI information and groundwater monitoring results;
- Ordnance Survey (OS) Map data at 1:10,000, 1:25,000 and 1:50,000 scales;
- SEPA Water Classification Hub (River Basin Management Plan interactive web map)[58];
- SEPA Flood Maps (2020) (interactive web map)[59];

[58] Water Classification Hub (interactive web map), SEPA. Available at: https://www.sepa.org.uk/data-visualisation/water-classification-hub/ [Accessed: February 2024].

[59] Scottish Environment Protection Agency – Flood Maps: https://map.sepa.org.uk/floodmap/map.htm [Accessed: February 2024].

- British Geological Survey (BGS) Geoindex Onshore Bedrock and Superficial Deposits geology 1:50,000 scale (interactive web map)[60];
- BGS Hydrogeological Map of Scotland 1:625,000 scale (interactive web map)[61];
- James Hutton Institute National Soil Map of Scotland 1:250,000 scale (interactive web map)[62];
- NatureScot Carbon and Peatland (interactive web map)[63]; and
- NatureScot SiteLink[64] (interactive web map).

9.6.2 Consultation has been undertaken for Hydrology, Hydrogeology, Geology and Soils. The following consultees have been approached for information to inform the EIA:

- SEPA (regarding licensed abstractions and engineering activities in the water environment);
- Scottish Water (regarding public water supplies); and
- The Highland Council (regarding PWS).

9.6.3 The following tasks will be undertaken in the completion of the assessment:

- Review of data obtained from relevant stakeholders, including SEPA, Scottish Water and The Highland Council;
- Desk-based study to obtain baseline and historical data;
- Review of GI data;
- Identification of the potential impacts of the Proposed Development and assessment of their significance based on the magnitude of the impact and the sensitivity of receptors;
- Identification of options for the mitigation of potential effects in accordance with applicable legislation, policies and guidance; and
- Identification of residual effects.

9.6.4 The significance of the impacts upon the baseline environment will be defined as a function of the sensitivity of receptors and the magnitude of change. The impact assessment will be undertaken in accordance with the EIA Regulations and follow the significance criteria provided in Chapter 3.

9.6.5 This assessment will also include the impacts of any works required along the access route upon the baseline environment. Particular attention will be paid to the potential hydrological and water quality impacts upon any water supplies within the vicinity of the Proposed Development and any aquatic ecological features identified within the Ecology chapter. The potential water quality impacts through enhanced erosion of disturbed soil will also be considered. A flood risk assessment and drainage impact assessment have been carried out in line with NPF4.

9.7 Issues Scoped Out

9.7.1 It is considered that good design, including a Drainage Strategy incorporating FRA and Drainage Impact Assessment outcomes, implementation of construction good practice, including mitigation related to alterations to hydrological regime, fluvial geomorphology and pollution impacts detailed within the SSEN Transmission GEMPs, will reduce the potential for,

[60] BGS Geoindex (interactive web map). Available at: https://mapapps2.bgs.ac.uk/geoindex/home.html?_ga=2.245552583.25395335.1617804149-924903878.1582883826 [Accessed: February 2024].
[61] BGS Geoindex (interactive web map). Available at: https://mapapps2.bgs.ac.uk/geoindex/home.html?_ga=2.245552583.25395335.1617804149-924903878.1582883826 [Accessed: February 2024].
[62] The James Hutton Institute (2024) Soils Map of Scotland. Available at: https://www.hutton.ac.uk/learning/natural-resource-datasets/soilshutton/soils-maps-scotland [Accessed: February 2024].
[63] NatureScot (2020) Carbon and Peatland 2016 Map. Available at: https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/soils/carbon-and-peatland-2016-map [Accessed: February 2024].
[64] NatureScot Sitelink (interactive web map). National Soil Map of Scotland interactive mapping. Available at: https://map.environment.gov.scot/Soil_maps/?layer=1 [Accessed: February 2024].

and magnitude of any effects. As a result, operational impacts and the following construction impacts have been scoped out:

- Impacts to statutory designated sites on the basis that there are none present within 1 km of the Proposed Development.
- Impacts to bedrock and superficial geology as they have not been identified as sensitive receptors and significant effects are therefore not anticipated.
- Impacts related to disturbance, compaction, and loss of peat on the basis of BGS Superficial Deposits geology mapping, James Hutton Institute National Soil Map of Scotland, and NatureScot Carbon and Peatland mapping indicating peat soils to be limited within the PAN boundary, therefore, significant effects are not anticipated.
- Impacts related to changes to groundwater flows and levels, and surface water drainage patterns; and
- Impact of pollution on fisheries, including from suspended sediment in surface water bodies, oil and hydrocarbons.

9.8 Summary

9.8.1 The above section outlines the tasks to be undertaken during the EIA with regards to Hydrology, Hydrogeology, Geology and Soils. Any potential impacts likely to have a significant effect on the sensitive receptors, such as flood risk, GWDTE and private water supplies, will be evaluated within the EIA Report.

9.8.2 Mitigation measures will be proposed, where required, for likely significant effects.

9.8.3 It is proposed to scope out operational impacts, and the following construction impacts on: statutory designated sites, geology, peat, groundwater flows and levels, surface water drainage patterns, pollution on fisheries.

10. NOISE AND VIBRATION

10.1 Introduction

10.1.1 This chapter provides an overview of the noise and vibration baseline conditions, the potential effects associated with the construction and operational phases of the Proposed Development and the proposed scope of assessment methodology to be considered in the EIA Report.

10.2 Baseline Conditions

10.2.1 The Proposed Development is located in a sparsely populated area, although there are several individual receptors in the vicinity of the site including the residential properties of the hamlet of Fanellan.

10.2.2 In October 2023, a baseline noise survey was conducted to determine the prevailing ambient and background noise levels representative of nearby noise sensitive receptors (NSRs). The background sound levels at the NSRs range between 25 and 34 dB $L_{A90,15\ minutes}$ during the daytime (i.e. between 07:00 and 23:00 hours) and between 23 and 32 dB $L_{A90,15\ minutes}$ during the night-time (i.e. between 23:00 and 07:00 hours). Baseline monitoring has subsequently been undertaken at an additional NSR to the South-West of the Proposed Development and therefore an additional NSR has been added to the dataset with monitoring undertaken between March and April 2024.

10.2.3 The key sources which contribute to the prevailing sound levels across the site and nearby NSRs likely to be affected by the Proposed Development include:

- Distant road traffic on the A831 and the surrounding road network; and
- Natural sources such as birdsong and resulting of vegetation.

10.2.4 Details of the baseline surveys, including the measurement locations and survey durations, have been shared with The Highland Council through consultation and their advice received. The appropriate scope and approach to the assessments required for the Noise and Vibration EIA Report chapter will also be agreed.

10.3 Potentially Significant Effects

10.3.1 At this preliminary stage, it is anticipated that possible effects associated with construction and operation of the Proposed Development include:

- Noise and vibration during the construction phase; and
- Operational effects of noise from the 400kv substation and HVDC converter station[65].

10.3.2 The potential effects at this stage are conservative and are expected to reduce upon a more detailed assessment when design information is refined.

Construction Noise

10.3.3 There is the potential for construction noise and vibration impacts from static, quasi static and mobile plant items. Typical construction activities associated with the construction phase are likely to include:

- Enabling works and site clearance including earthworks and felling of trees;
- Potential for rock blasting and rock crushing on site;
- Substation and HDVC platform construction;
- Public road improvements, Delivery of materials and vehicle movements;
- Structure demolition;

[65] HVDC Converter stations contain similar equipment to substations.

- Building construction; and
- Installation and testing of electrical plant.

10.3.4 For construction noise, a 300 m Study Area will be adopted. This is in line with the guidance of British Standard (BS) 5228-1:2009+A1:2014 *Code of Practice for noise and vibration control on construction and open sites – Part 1: Noise*[66] and is considered sufficient to ensure that all potential significant effects will be addressed.

10.3.5 Where appropriate (e.g. if rock blasting should be required), construction vibration arising from the Proposed Development will be assessed at sensitive receptors within a study are of 300 m (subject to refinement once further detail known) from the closest construction activities with the potential to generate vibration.

10.3.6 Routes for construction traffic are yet to be finalised. Professional judgement will be used to determine whether further assessment of construction traffic noise is required once the construction programme is available. This will include consideration of the number of vehicles, distance between routes and sensitive receptors, time of day, the existing noise environment, and the noise characteristics of individual vehicles.

Operational Noise

10.3.7 With respect to operational noise, the most significant sources of environmental noise associated with substations and HVDC converter stations are air handling units, capacitors, valve coolers, reactors, transformers and associated cooling equipment.

10.3.8 Transformers and other electrical equipment associated with substation developments emit noise at frequencies of twice the normal operating current frequency due to magnetostriction of the transformer core. In the UK the supply current frequency is 50 Hertz (Hz), which results in 100 Hz and harmonics thereof being produced by the transformer. The nature of the noise generation mechanism results in tonal noise being emitted. The noise is continuous and consistent depending on the electrical load of the equipment, and therefore is not expected to have any impulsive characteristics.

10.3.9 For operational noise, a 500 m Study Area will be adopted. This is considered sufficient to ensure that all potentially significant noise effects will be addressed. The operational noise assessment will extend to include a representative sample of sensitive receptors in closest proximity to the Proposed Development.

10.4 Mitigation

10.4.1 As part of the impact assessment process, mitigation measures may be identified to reduce the level of predicted noise impacts, particularly where this is necessary to avoid significant adverse effects. Two types of measure can be distinguished, as follows:

- Mitigation measures, aimed at managing potential impacts of moderate or major significance to reduce residual effects to an acceptable level; and
- Measures including adoption of good practice aimed at managing potential effects of minor significance.

Construction Noise and Vibration

10.4.2 Best practice measures will be put in place during Construction to mitigate impacts from noise and where relevant, vibration. The measures will be included in a Noise Management Plan which will be incorporated into the CEMP, to be agreed with The Highland Council and secured by an appropriately worded planning condition and will include reference to best practice measures (as practicable) as outlined in BS 5228 such as:

- Avoiding undertaking noisy activities at the weekends or outside of daytime defined hours as necessary (where possible). In setting working hours, consideration is given to the fact that the level of noise through the normal

[66] Subcommittee B/564/1 (2009). BS 5228-1:2009+A1:2014 Code of Practice for noise and vibration control on construction and open sites – Part 1: Noise. London: BSi.

working day is more easily tolerated than during the evening and night-time. Selecting quiet working methods, including the use of inherently quiet plant/equipment, power down plant when not in use, reasonable working hours for noisy operations, and economy and speed of operations. Site work continuing throughout at 24-hour period should be programmed, where appropriate, including scheduling of haulage vehicles during the working day;

- Avoidance of vehicles waiting or queuing, particularly on public roads or in residential areas with their engines running; and
- Ensuring plant and equipment are regularly and properly maintained. All plant should be situated to sufficiently minimise noise impact at nearby properties.

10.4.3 In addition, advance notice of unavoidable periods of high noise levels will be provided to local residents in the vicinity of the Proposed Development.

Operational Noise

10.4.4 A detailed noise impact assessment will be carried out to determine the extent of mitigation required to reduce the impact of the Proposed Development on NSRs. There may be opportunities to mitigate noise generated by externally housed equipment of the Proposed Development. This may come in the form of low-noise equipment, acoustic enclosures to house noisy equipment, barriers within the site, bunds around the site, or building at lower platform heights to effectively "sink" the site to reduce direct noise propagation to NSRs. There may also be opportunities to mitigate noise generated by the HDVC convertor station building through careful consideration of the location of openings, acoustically attenuated louvres or a higher specification of façade sound insulation.

10.5 Proposed Scope of Assessment

Construction Noise and Vibration

10.5.1 The assessment of construction noise and vibration will comply with the following standards and guidance.

British Standard 5228-1:2009 +A1:2014 (BS5228), Code of Practice for Noise and Vibration Control on Construction and Open Sites

10.5.2 Guidance on the prediction and assessment of noise and vibration from construction sites is provided in BS 5228-1, which provides recommended limits for noise from construction sites. The construction noise impact assessment would be carried out according to the ABC method specified in Table E.1 of BS5228-1, in which noise sensitive receptors (NSRs) are classified in categories A, B or C according to their measured or estimated background noise level.

10.5.3 In line with best practice, a construction Noise Management Plan (NMP) will be developed by the principal contractor prior to starting construction works. The details of the NMP will be agreed with The Highland Council and is expected to be secured by an appropriately worded planning condition.

10.5.4 Construction vibration would be assessed using the guidance in BS 5228 2009 +A1:2014 *Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 2: Vibration* (BS 5228-2)[67] where vibration is applicable. For a sample of potential vibration generating activities (e.g. piling and earth compaction), vibration impact (i.e. human

[67] Subcommittee B/564/1 (2009). BS 5228-2:2009+A1:2014 Code of Practice for noise and vibration control on construction and open sites – Part 2: Vibration. London: BSi.

exposure) at a series of set-back distances would be determined. Appropriate mitigation measures would be presented, including BPM and the good practice recommendations presented in BS 5228.

Operational Noise

10.5.5 The Highland Council has advised that the noise assessment must demonstrate that the operational noise arising from the proposed development will not have any adverse impact on existing noise sensitive properties and the operational noise from the proposed substation must meet the following criteria:

- Operational noise from the proposed sub-station when measured and/or calculated as an LZeq, 5min, in the 100Hz one third octave frequency band must not exceed 30 dB, at any noise sensitive premises; and
- The Rating Level of the operational noise from the proposed sub-station must not exceed the current background noise levels at noise sensitive premises.

10.5.6 The assessment of operational noise will comply with the following standards and guidance.

Planning Advice Note (PAN) 1/2011: 'Planning and Noise'

10.5.7 Published in March 2011, this document provides advice on the role of the planning system in helping to prevent and limit adverse effects of noise (Scottish Government, 2011). Information and advice on noise assessment methods are provided in the accompanying Technical Advice Note (TAN): Assessment of Noise. Included within the PAN document and the accompanying TAN are details of the legislation, technical standards, and codes of practice for specific noise issues.

10.5.8 Neither PAN 1/2011 nor the associated TAN provides specific guidance on the assessment of noise from fixed plant, but the TAN includes an example assessment scenario for 'New noisy development (incl. commercial and recreation) affecting a noise sensitive building', which is based on BS 4142:1997: *Method for rating industrial noise affecting mixed residential and industrial areas*. This British Standard has been replaced with BS 4142:2014: Methods for rating and assessing industrial and commercial sound.

British Standard 4142:2014+A1:2019: Methods for rating and assessing industrial and commercial sound (BS 4142)

10.5.9 BS 4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound* (BS 4142)[68] describes methods for rating and assessing the following:

- Sound from industrial and manufacturing processes.
- Sound from fixed installations which comprise mechanical and electrical plant and equipment.
- Sound from the loading and unloading of goods and materials at industrial and/or commercial premises.
- Sound from mobile plant and vehicles that is an intrinsic part of the overall sound emanating from premises or processes, such as that from forklift trucks, or that from train movements on or around an industrial and/or commercial site.

10.5.10 The methods use outdoor sound levels to assess the likely effects of sound on people who might be inside or outside a dwelling or premises used for residential purposes upon which sound is incident.

10.5.11 In accordance with the assessment methodology, the specific sound level ($L_{Aeq,T}$) of the noise source being assessed is corrected, by the application corrections for acoustic features, such as tonal qualities and/or distinct impulses, to give a

[68] British Standard BS 4142:2014+A1:2019: Methods for rating and assessing industrial and commercial sound. London: BSi.

"rating level" ($L_{Ar,Tr}$).The British Standard effectively compares and rates the difference between the rating level and the typical background sound level (LA90,T) in the absence of the noise source being assessed.

10.5.12 The British Standard advises that the time interval ('T') of the background sound measurement should be sufficient to obtain a representative or typical value of the background sound level at the time(s) when the noise source in question is likely to operate or is proposed to operate in the future.

10.5.13 Comparing the rating level with the background sound level, BS 4142 states:

- "Typically, the greater this difference, the greater the magnitude of impact.
- A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.
- A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context.
- The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context."

Noise Rating Curves and BS8233:2014

10.5.14 Where background noise levels are considered to be low, i.e. below 30 dB LA90, consideration will be given to internal noise levels in accordance with the Noise Rating - NR – curve. The NR curve was developed by the International Organization for Standardization (ISO 1973) to determine the acceptable indoor environment for hearing preservation, speech communication and annoyance.

10.5.15 The noise rating graphs for different sound pressure levels are plotted as acceptable sound pressure levels at different frequencies. Acceptable sound pressure level varies with the room and the use of it. Different curves are obtained for each type of use. Each curve is referenced by a NR number.

Table 10-1 Noise Rating

Noise Rating	Application
NR 20	Quite rural area (council defined) for protection of amenity
NR 25	Concert halls, broadcasting and recording studios, churches
NR 30	Private dwellings, hospitals, theatres, cinemas, conference rooms
NR 35	Libraries, museums, court rooms, schools, hospitals operating theatres and wards, flats, hotels, executive offices
NR 40	Halls, corridors, cloakrooms, restaurants, night clubs, offices, shops
NR 45	Department stores, supermarkets, canteens, general offices
NR 50	Typing pools, offices with business machines
NR 60	Light engineering works
NR 70	Foundries, heavy engineering works

10.5.16 British Standard 8233:2014: *Guidance on sound insulation and noise reduction for buildings*[69] provides guidance for the control of noise in and around buildings. The guidance provided within the document is applicable to the design of new

[69] British Standard 8233:2014: Guidance on sound insulation and noise reduction for buildings. London: BSi.

buildings, or refurbished buildings undergoing a change of use, but does not provide guidance on assessing the effects of changes in the external noise levels to occupants of an existing building.

10.5.17 The guidance provided includes appropriate internal and external noise level criteria which are applicable to dwellings exposed to steady-state external noise sources. It is stated in the British Standard that it is desirable for internal ambient noise level not to exceed the criteria set out in Table 10-2.

Table 10-2 Summary of internal ambient noise level criteria for dwellings from with BS 8233:2014

Activity	Location	Period	
		07:00 to 23:00 Hours, i.e. Daytime	23:00 to 07:00 Hours, i.e. Night-time
Resting	Living Room	35 dB $L_{Aeq,16\ hour}$	-
Dining	Dining Room/Area	40 dB $L_{Aeq,16\ hour}$	-
Sleeping (daytime resting)	Bedroom	35 dB $L_{Aeq,16\ hour}$	30 dB $L_{Aeq,8\ hour}$

10.6 Issues Scoped Out

10.6.1 There are no known vibrational noise issues associated with the operation of the Proposed Development at nearby NSRs. Therefore, it is proposed that vibration, in relation to the operational phase, is scoped out of the EIA assessment.

10.6.2 It is anticipated that flows from traffic during the operational phase would be very low and would be unlikely to result in a baseline noise level (BNL) increase of 1dB in the opening year or 3dB in the future year. Assessment of operational traffic noise is scoped out of the assessment.

10.7 Summary

10.7.1 The above section outlines the tasks to be undertaken during the EIA with regards to Noise and Vibration. Any potential impacts likely to have a significant effect on the NSRs with respect to operational noise and construction noise of the Proposed Development, will be evaluated within the EIA Report. Mitigation measures will be proposed, where required, for likely significant effects.

10.7.2 Noise limits (in line with best practice guidance) will be agreed with The Highland Council. Appropriate mitigation measures will be implemented to ensure these limits will be met.

10.7.3 Construction noise (and where applicable vibration) will be scoped in together with operational noise. It is proposed to scope out operational vibration assessment as there are no known vibrational noise issues associated with the operation of the Proposed Development.

11. FORESTRY

11.1 Introduction

11.1.1 Forestry typically involves extended areas of trees, grown and managed as a crop, in third party ownership and impacts are typically assessed against whether development affects commercial viability or management operations.

11.1.2 Other impacts to trees and woodland are possible without affecting any known forestry resource. Impacts on these silvicultural features will be assessed alongside effects on forestry within the assessment.

11.2 Baseline Conditions

11.2.1 A preliminary desktop study has been carried out to inform this chapter. Site visits have not been conducted.

11.2.2 According to Scottish Forestry map viewer, the forests mapped in the study area have been subject to various felling applications, woodland grant schemes, and management plans. It appears there are at least two forest management plans active currently in the study area. This suggests that some woodland in the study area is currently actively managed as forestry. These activities are predominantly situated at the edges of the Study Area within Ruttle Wood and Fanellan Wood. However, an approximate 10Ha young woodland at Bredaig is subject to a Scottish Rural Development Programme woodland creation planting grant.

11.2.3 Most forestry at the edges of the Study Area is registered on the Ancient Woodland Inventory (Scotland) (AWI) as long-established woodland of plantation origin (LEPO Category 2b). Approximately half of the forestry within the study area is registered as native woodland, native pinewood, on the Native Woodland Survey of Scotland inventory.

11.2.4 Other tree and woodland resources without known forestry operations are present. These are mostly present within agricultural land as scattered trees, field boundary features and smaller tree groups.

11.2.5 There are no Tree Preservation Orders (TPOs) or conservation areas within the study area.

11.3 Potentially Significant Effects

11.3.1 Anticipated tree removal for the substation includes individual trees and groups of trees within agricultural land. The quality of these trees is not known at this stage but would be determined by a tree survey in cognisance of British Standard 5837:2012 *Trees in relation to design, demolition, and construction – Recommendations*. Effects on individual trees and groups of trees in the local landscape have the potential to be significant given the anticipated size and scale of development. Tree impacts should be assessed within an Arboricultural Impact Assessment.

11.3.2 In terms of impacts on forestry, one small section at the very edge of Ruttle Wood may require removal as well as approximately half of the young woodland block at Bredaig. Given the anticipated removal of Ruttle Wood is restricted to one location at the very outer edges of the forest, and the scale of tree removal is minor in relation to forestry resource, effects on this forestry resource are likely to be negligible and not significant. However, given the potential for intensive change over a limited area within the woodland at Bredaig Cottages, a significant effect is possible.

11.4 Mitigation

11.4.1 Best practice measures will be put in place during construction to mitigate impacts on trees and ensure maximum retention where possible. The measures will be included in an Arboricultural Method Statement, to be agreed with THC and secured by an appropriately worded planning condition and will include best practice measures as outlined in BS

5837. Appropriate mitigation measures will be shown on a Tree Protection Plan supplied to the contractor for use prior to and during construction.

11.4.2 To comply with the Scottish Government's Control of Woodland Removal Policy (CoWRP), woodland loss should be compensated for through the implementation of a landscape design including new tree planting. Recommendations will be made for tree planting within the forestry chapter and will take account of baseline and current constraints and pressures.

11.5 Proposed Scope of Assessment

11.5.1 The forestry chapter will assess both impacts on arboricultural and silvicultural features (individual trees, groups of trees and woodlands) as well as operational forestry activities and management.

11.5.2 The arboricultural and forestry study area will cover the extents of the Site plus up to a further 15m in order to comply with BS 5837. Assessment of felling boundaries will be undertaken to ensure windfirm boundaries are maintained to reduce the potential impact of windblow.

11.5.3 A desk study will be undertaken to identify specific statutory and non-statutory constraints which may apply to arboricultural and forestry features within the Study Area.

11.5.4 An arboricultural and forestry survey will be undertaken of all trees within the study area. The arboriculture survey will be undertaken to comply with BS 5837. The forestry survey will be undertaken alongside the arboriculture survey and note physical indications of forestry operations.

11.5.5 It will be appropriate to assess the impacts on individual trees, groups, and woodlands within an Arboricultural Impact Assessment once design is frozen. This will also consider potential impacts on ancient woodland which is located within the study area. The Proposed Development's potential impacts on ancient woodland will also be considered within the Forestry chapter of the EIA Report.

11.5.6 The assessment will also consider the Proposed Development's impact on forestry including forestry operations, management and windthrow. An assessment on forestry operations will be based on the information made available. Where a forest management plan is not provided, this may be limited.

11.5.7 The forestry assessment will identify and quantify areas of forest which would need to be removed to accommodate the Proposed Development, those available for replanting once construction is complete and the net area of forest land lost and will assess the potential impacts of this loss on the forest resource and structure, where possible.

11.5.8 The complex, multi-faceted nature of environmental services and produce means there is no standardised approach to assessing forestry and arboriculture impacts. Sensitivity and magnitude criteria will be developed using professional judgement and in consideration of appropriate industry guidance such as BS 5837, the UK Forestry Strategy, Scotland's Forestry Strategy 2019 to 2029, and the Scottish Government's Control of Woodland Removal Policy. The forestry chapter will use these criteria in combination with professional judgement to determine significant effects on forestry and arboriculture.

11.5.9 The preparation of the Arboricultural and Forestry Impact Assessment will refer to relevant industry guidance including, but not limited to:

- British Standard (BS5837 (2012)). Trees in relation to design, demolition, and construction – Recommendations. British Standards Institution;
- Forestry Commission (2023): The UK Forestry Standard (versio5), The Government's Approach to Sustainable Forestry. Forestry Commission, Edinburgh and associated Guidelines, General Forestry Practice, Biodiversity, Climate Change, Historic Environment, Landscape, People, Soils, Water;
- Scottish Government (2019) Scotland's Forestry Strategy 2019-2029. Scottish Government, Edinburgh

- UKWAS (2018): The UK Woodland Assurance Standard Fifth Edition. UKWAS, Edinburgh;
- Forestry Commission Scotland (2009): The Scottish Government's Policy on Control of Woodland Removal. Forestry Commission Scotland, Edinburgh;
- Forestry Commission (2011): Forests and Water. UK Forestry Standard Guidelines (and other guidelines in the same series). Forestry Commission, Edinburgh;
- SEPA (2013) Guidance on the Management of Forestry Waste . SEPA;
- The Highland Council (2006): Highland Forest & Woodland Strategy;
- The Highland Council (2013): Supplementary Guidance. Trees, Woodlands & Development. The Highland Council, Inverness; and Implementation Guidance (2019).

11.6 Issues Scoped Out

11.6.1 The PAN boundary defines the limit within which the Applicant will further define a red line boundary that a consent under the provisions of the Town and Country Planning (Scotland) Act 1997 (as amended) will be sought for. As such, the Forest Impact Assessment will not provide an assessment of any felling or restocking requirements out with the PAN boundary. These works are the responsibility of the landowner and will be undertaken in accordance with the requirements set out within the Forestry and Land Management (Scotland) Act 2018.

11.6.2 Impacts on commercial forestry operations will be assessed at a high level, however timber volume, and value, using mensuration calculations, will not be provided. Where deemed appropriate, this detailed assessment should be carried out by the forest manager to determine suitable compensation.

11.6.3 Once the Proposed Development is constructed, there won't be a need for the removal of additional trees beyond what will be accounted for in the construction phase, and this will be assessed within the forestry chapter. Therefore, operational impacts related to tree removal or disturbance have been scoped out.

11.7 Summary

11.7.1 The above section outlines the tasks to be undertaken during the EIA with regards to arboriculture and forestry. Any potential impacts likely to have a significant effect on the trees during construction of the Proposed Development, will be evaluated within the EIA Report. Mitigation measures will be proposed, where required, for likely significant effects.

11.7.2 It is proposed to scope out the following: timber volume and value using mensuration calculations; and operational impacts related to tree removal or disturbance.

12. CUMULATIVE EFFECTS

12.1 Introduction

12.1.1 The cumulative effects chapter of the EIA Report will assess the likelihood of significant cumulative environmental effects as a result of the Proposed Development.

12.1.2 In accordance with the EIA Regulations, the cumulative effects assessment will consider the following types of cumulative effects:

- In-combination effects: The combined effect of the Proposed Development together with other reasonably foreseeable developments (taking into consideration effects at the site preparation and earthworks, construction, and operational phases); and
- Effects Interactions: The combined or synergistic effects on a particular receptor (taking into consideration effects at the site preparation and earthworks, construction, and operational phases), which may collectively cause a more significant effect than individually. A theoretical example is the culmination of disturbance from dust, noise, vibration, artificial light, human presence, and visual intrusion on sensitive fauna (e.g. certain bat species) adjacent to a construction site.

12.2 Proposed Assessment Methodology

12.2.1 At present, there is no widely accepted methodology or good practice for the assessment of cumulative effects although there are a number of guidance documents available. The following approach that will be adopted is based on previous experience, the types of receptors being assessed, and the nature of the projects being considered.

12.2.2 The assessment will be qualitative and based on the available information. Where information is not available, assumptions will be made based on professional judgement and clearly stated alongside any uncertainty as part of the assessment. The adopted methodology for the appraisal of in-combination effects will be undertaken in three stages as follows:

- Identification and evaluation of projects for consideration;
- Identification of common sensitive receptors; and
- Assessment of cumulative effects.

In-combination Effects

12.2.3 The adopted methodology for the appraisal of in-combination effects will be undertaken in three stages as follows:

- Identification and evaluation of projects for consideration;
- Identification of common sensitive receptors; and
- Assessment of cumulative effects.

12.2.4 To identify relevant projects for inclusion within the cumulative assessment, a review of the following documents / online data bases will be undertaken to identify relevant projects (in addition to other SSE proposed projects) for consideration of cumulative effects within 3 km of the Proposed Development:

- The Highland Council Planning Portal[70];
- The Highland-wide LDP[71]; and
- Scottish Energy Consent Unit Portal[72].

[70] The Highland Council Planning Portal (2023). Planning. Available at (online): https://wam.highland.gov.uk/wam/ [Accessed: January 2024]
[71] The Highland Council (2012). Highland Local Development Plan. Available at (online): https://www.highland.gov.uk/info/178/local_and_statutory_development_plans/199/highland-wide_local_development_plan [Accessed: January 2024].
[72] Scottish Energy Consents Unit Portal (2023). Energy Consents Unit. Available at (online): https://www.energyconsents.scot/ [Accessed: Jan 2024].

12.2.5 Applicable projects for consideration of inter-project cumulative effects will include:

- Projects under construction;
- Permitted application(s) not yet implemented;
- Submitted applications(s) not yet determined;
- All refusals subject to appeal procedures not yet determined; and
- Projects identified in the relevant development plans (and emerging development plans).

12.2.6 In order to ensure that only projects where there is the potential for significant cumulative effects are selected for further assessment, each of the projects identified will be evaluated to determine whether the following criteria are met:

- Is there a concurrent construction or operational phase with the Proposed Scheme?
- Is the project within a relevant geographical boundary to the Proposed Scheme?
- Is there potential that the Proposed Scheme shares common sensitive receptors with the project(s)?

12.2.7 Cumulative projects that have been identified are the following:

- Fanellan Farmhouse Kiltarlity – Erection of agricultural building – (ref: 20/02801/FUL) – approximately 400 m (via road) south-west of the site. The application was permitted. However, this agricultural building has now been constructed
- Kilmorack Power Station – replacement of existing Kilmorack Substation – (ref: 22/04837/PAN); (ref: 23/05130/PAN); and (ref: 23/04885/SCRE)
- Erection of replacement Overhead Line – (ref: 22/03536/PNO) – approximately 3 km (via road) north-east of the site
- Proposed energy storage facility – (ref: 20/04849/PAN) – approximately 3 km (via road) north-east of the site
- Replacement of existing Aigas Substation (ref: 22/04835/PAN) – approximately 4 km (via road) north-east of the site
- The Spittal-Beauly 400kV OHL adjacent to the Proposed Development
- The Beauly-Peterhead 400kV OHL adjacent to the Proposed Development
- The Western Isles Link HVDC underground cable (tying into the Proposed Development)
- The Beauly-Denny OHL Diversion, which will be required to facilitate the Proposed Development.

12.2.8 All available documentation submitted in support of the projects will be reviewed to identify programmes, sensitive receptors, and relevant effects to determine the projects that should be considered for further assessment.

Effects Interactions

12.2.9 The approach to the assessment of effect interactions will consider the changes in baseline conditions at common sensitive receptors. Common sensitive receptors include receptors affected by two or more environmental impacts of the Proposed Development as identified in the EIA Report.

12.2.10 The Study Areas that will be used for identifying common sensitive receptors will be the same as those identified within each of the technical chapters of the EIA Report. The assessment will consider the potential combined effects where the Study Areas of the technical chapters overlap. There is potential for multiple 'non-significant effects' to act cumulatively to result in an overall significant effect. Therefore, a high-level appraisal of the environmental topics scoped out of the EIA Report will be undertaken for the combined effect and where necessary, more detailed study undertaken.

12.2.11 An overall qualitative assessment of the cumulative effect on the common sensitive receptors identified will be made using professional judgement and the technical information provided in the EIA Report and supporting appendices. A matrix of residual intra-project cumulative effects will be formulated corresponding to the construction and operational phase of the Proposed Development.

13. TOPICS "SCOPED OUT"

13.1.1 As explained above, a number of topics are considered not to be significant and will be scoped out from further consideration within the EIA process. Table 13-1 below lists each topic and the elements scoped out from further assessment; with a summary of the justification for doing so.

Table 13-1 Issues Scoped Out

Topic	Scoped Out	Justification
Landscape and Visual Impact	Landscape Character: National Scenic Areas, Wild Land Areas	There are no national or regional landscape designations located within the 5 km study area. The nearest designation is the Central Highlands Wild Land Area 24 approximately 6 km to the northwest at its nearest point. Due to distance and screening provided by the undulating topography and tree planting, views towards the site will be limited and any effect unlikely to be significant. As a result, the WLA has been scoped out of the assessment.
	Landscape Character Types (LCT)s	The following LCTs lie at a distance from the Proposed Development: Farmed and Forested Slopes – Ross & Cromarty (LCT 345), Open Farmed Slopes (LCT 346), Rugged Massif – Inverness (LCT 220) and Rocky Moorland Plateau – Inverness (LCT 222). Due to the scale of the LCTs, intervening vegetation, and the undulating nature of the local topography, the extent to which the Proposed Development would be perceived from the wider landscape is limited. There is therefore not considered a likelihood that these LCTs would experience significant effects and they are therefore scoped out of further assessment.
	Visual Receptors	• Residents: People living in properties in the Crask of Aigas – these receptors are unlikely to experience views of the Proposed Development above the intervening vegetation in Ruttle Wood, as a result these receptors have been scoped out of the assessment. • Recreational: Attendees of Belladrum Festival Grounds are likely to be focussed on the event and the immediate landscape of the festival grounds rather than wider views. • Recreational: Local recreational users of core paths IN20.02, IN20.03, IN20.04, (near Belladrum Festival Grounds) are located at the periphery of the 5 km study area, due to intervening vegetation and the undulating nature of the local topography the extent to which the Proposed Development would be perceived is limited. • Commercial: The are no obvious purely commercial receptors in the study area. There are a number of farms and B&Bs which are also residential receptors and are considered as such. • Commercial: The Proposed Development would be visible from Beauly Substation. As a workplace with no particular view to the site and where workers attention is not focussed on the landscape, their visual amenity is not likely to be significantly affected, and they are therefore scoped out of further assessment. • Night time working is not anticipated to be required and proposed buildings are not expected to be illuminated at night, during normal operation. There would be emergency floodlights installed for health and safety purposes, but these would not be permanently lit. The access roads would also not be lit under normal operation. As such, there are no anticipated impacts from light pollution as a result of the Proposed Development during operation and a night-time visual assessment at operation has therefore been scoped out of this assessment.
	Designated Sites	Due to their distance from the Proposed Development site and lack of functional connectivity, there are no perceived effect pathways for

Topic	Scoped Out	Justification
Ecology, Nature Conservation and Ornithology		impacts on the qualifying interests of the Moniack Gorge SAC, Strathglass Complex SAC or Moray Firth SAC. Due to the predominance of modified/improved habitats, there are no perceived effect pathways for impacts on the identified non-statutory designations which overlap the Proposed Development site. The effects from the Proposed Development to populations of foraging greylag geese potentially linked to the Inner Moray Firth and Cromarty Firth SPA and Ramsar sites are scoped out of further assessment through EIA. This is due to a lack of evidence of large foraging aggregations within a ZoI of the Proposed Development. There are no perceived effect pathways for impacts on qualifying interests of the Moray Firth SPA. The qualifying interests are specialist marine species for which the site and surrounding area are wholly unsuitable. There are no perceived effect pathways for impacts on qualifying interests of Glen Affric to Strathconon SPA. The SPA is 9.1 km away which would be at the maximum predicted foraging range for golden eagle from the designated site. Further to this, habitat within and surrounding the site is considered unsuitable for this species.
	Habitats	It is proposed that impacts to improved and semi-natural habitats at the Proposed Development, when considered solely as habitat interests (i.e. not as supporting species), are scoped out of further assessment. This is based on their relatively low ecological value, the fact they are comprised of commonly occurring or widespread species, current modified/land use condition, and being well represented in the wider landscape.
	Direct and Indirect impacts from pollution	All issues arising from pollution during the construction and operational phases are scoped out. Effective, industry-standard mitigation measures will be embedded within the project.
	Invasive Non-Native Species	The spread of rhododendron and subsequent effects of habitat degradation have been scoped out. Effective, industry-standard mitigation measures will be embedded within the project.
	Red squirrel, pine marten, otter, water vole, reptiles, invertebrates, and fish (Non-Avian)	Based on the baseline information available, the follow species are scoped out of further assessment through EIA: red squirrel, pine marten, otter, water vole, reptiles, invertebrates, and fish. The site offers low suitability habitat and is unlikely to represent a key area for these species/groups.
	Ornithology	Aside from Schedule 1 raptors, other ornithological interests are scoped out. Breeding bird surveys to date have found that the arable and grazing-dominated habitat within the site holds low densities of species, mainly comprising passerines (songbirds).
Cultural Heritage	Direct impacts during construction and operation phase on designated assets	The direct impacts during construction and operation of the Proposed Development on World Heritage sites, Historic Battlefields and Conservation Areas will be scoped out as there are none present within the Proposed Development area or within the 1km study area.
	Indirect impacts during construction and operation phase on cultural heritage assets	It is not anticipated that there will be any indirect impacts from the construction or operation of the Proposed Development, therefore the assessment of indirect impacts on heritage assets has been scoped out.
	Temporary construction impacts through changes within the setting of heritage assets	Temporary construction impacts through changes within the setting of designated and non-designated heritage assets will be scoped out as these temporary effects are not anticipated to result in significant effects.
Traffic and Transport	Assessment of impact on road network outwith the Study Area	The impact of construction traffic would be reduced as vehicles disperse onto the wider road network and the effects relating to Traffic and Transport are unlikely to be significant beyond the identified Study Area.

Topic	Scoped Out	Justification
	Traffic impacts during operational phase	The traffic impacts associated with the operational phase are anticipated to be of low volume being limited to movements associated with maintenance activities and staff commuting to the Proposed Development. Therefore, further assessment of the traffic impacts of the Proposed Development during the operational phase is not considered necessary.
Hydrology, Hydrogeology, Geology and Soils	Impacts related to disturbance, compaction and loss of peat	An initial review of BGS Superficial Deposits geology mapping, James Hutton Institute National Soil Map of Scotland, and NatureScot Carbon and Peatland mapping indicates peat soils to be limited to a small area within the eastern extent of the PAN boundary, and the area within the PAN boundary mapped as NatureScot Carbon and Peatland Class 0 (Mineral soil - Peatland habitats are not typically found on such soils). GI trial pit information indicates the presence of peat soils are limited to few isolated pockets within the PAN boundary, with only four out of 91 machine excavated trial pits showing evidence of peat soils present within. Therefore, significant effects are not anticipated.
	Impacts to statutory designated sites	On the basis that there are none present within 1 km of the Proposed Development.
	Impacts to bedrock and superficial geology	Using BGS geology mapping, bedrock and superficial deposits have not been identified as sensitive receptors and significant effects are therefore not anticipated.
	Impact of pollution on fisheries: including from suspended sediment in surface water bodies, hydrocarbon and oil pollution	It is considered that good design and construction good practice, including pollution prevention mitigation detailed within the SSEN Transmission GEMPs will reduce the potential for pollutants or sediment to be released into water bodies as a result of the Proposed Development.
	Operational impacts	
Noise and Vibration	Operational Vibration	There are no known vibrational noise issues associated with the operation of the Proposed Development at nearby NSRs. Therefore, it is proposed that vibration is scoped out of the EIA assessment.
	Operational Traffic Noise	It is anticipated that flows from traffic during the operational phase would be very low and would be unlikely to result in a baseline noise level increase of 1dB in the opening year or 3 dB in the future year. Therefore, assessment of operational traffic noise is scoped out of the assessment
Land Use and Agriculture	Land-use and agriculture during the operation phase Whole topic	A review of the Land Capability for Agriculture Map[73] showed that the site is predominately located within Class 4.1 agricultural land, defined as land capable of producing a narrow range of crops, primarily grassland with short arable breaks of forage crops and cereal. The Proposed Development encroaches on land classed 5.1, defined as land capable of use as improved grassland. As the Proposed Development is not located on high quality agricultural land, there would be a minor potential for impact. There is one core path (track) located approximately 800 m south of the Proposed Development, including the Home Farm to Hughton by Lonbuie. However, this core path is not directly affected by the Proposed Development, and therefore recreational activities are likely to remain unaffected. The is one water body, namely the River Beauly, located approximately 1.2km north-east of the Proposed Development. The site is located in an area managed by the Beauly District Fishery Board.

[73] Scottish Government (2022) Land Capability for Agriculture Map Viewer. Available at (online): https://soils.environment.gov.scot/maps/capability-maps/national-scale-land-capability-for-agriculture/ [Accessed February 2024].

Topic	Scoped Out	Justification
		There are no Special Areas of Conservation (SAC), or Sites of Special Scientific Interest (SSSI), located near the Proposed Development. Apart from land take impacts which are assessed during the construction phase and are permanent, the effects during operation are expected to be limited to impacts associated with regular maintenance activities. Therefore, impacts to Land Use and Agriculture are scoped out for the operation stage of the Proposed Development. Based on the above information, significant effects on Land Use and Agriculture are unlikely, and therefore, have been scoped out from further assessment in the EIA.
Forestry	Timber volume and value	Due to the amount of tree removal proposed, forestry operations will be assessed at a high level. Where deemed appropriate, this detailed assessment should be carried out by the forest manager to determine suitable compensation.
	Operational impacts	Once the Proposed Development is constructed, there will not be a need for the removal of additional trees beyond what will be accounted for in the construction phase and this will assessed within the forestry chapter. Therefore, operational impacts related to tree removal or disturbance have been scoped out.
Population and Human Health	Whole Topic	The Proposed Development is located in a rural area with relatively few nearby sensitive receptors. The nearest settlement to the Proposed Development containing businesses is Kiltarlity, approximately 2.5 km to the south-east. A small number of businesses including local shops and a post office are located in Kiltarlity. Due to its location, nature, and scale, the Proposed Development is not anticipated to have any significant direct or indirect effects on residential properties or businesses within Kiltarlity. There may be short-term disruption to residents and businesses using the local road network during the construction period, however, this will be managed through the implementation of a CEMP and CTMP by the Principal Contractor, which will be agreed in advance with the Highland Council. There is one primary school, namely Tomnacross Primary School, located approximately 5 km via road from the Proposed Development. However, due to the location of this receptor, it is unlikely to be subject to disruption. There is one tourist business, namely Highland Discovery Tours, located in Kiltarlity. However, it is considered unlikely to be subject to adverse effects as a result of the Proposed Development. In relation to recreation, the closest Highland Council Core Path is located approximately 800 m south of the Proposed Development, namely the Home Farm to Hughton by Lonbuie track. There are no core paths designated across the Proposed Development site or any records of rights of way, although the record of rights of way is not definitive. It is not known what level of informal use, if any, is made by residents local to the area. As such, as they are outside the Proposed Development site it is not expected that any core paths would be directly affected by the Proposed Development. However, it has been noted that there is a well-used community footpath near to the site. Indirect visual effects to users of public roads and recreational routes will be considered within the Landscape and Visual Impact chapter and where there may be interactions with recreational users during the construction of the Proposed Development, an Outdoor Access Plan would be prepared as part of the Principal Contractor's CEMP, and signage would be erected at suitable locations to warn of construction traffic. Any disturbance during construction would be temporary and short term in nature. The impacts on human health for a development of this nature and scale are limited to increased exposure to noise and changes in amenity value of residential or recreational resources. These will be considered in the Landscape and Visual Impact and Noise and

Topic	Scoped Out	Justification
		Vibration chapters of the EIA Report and therefore a specific Human Health assessment has been scoped out of the EIA. Based on the above, it is proposed that the Population and Human Health topic (including potential impacts to Socioeconomics, Tourism and Recreation) is scoped out of further assessment in the EIA. Please see Appendix F for further justification.
Electric and Magnetic Fields (EMF)	Whole topic	The UK Health Protection Agency (HPA) is the government body responsible for policy and guidance on Electric and Magnetic Fields (EMF). Exposure guidelines have been developed by the International Commission on Non-Ionising Radiation Protection (ICNIRP) to ensure protection of human health in different situations, occupational exposure and public exposure, which have been adopted by the HPA for application in the UK. Whilst substation equipment is known to generate EMFs, these have been observed to drop away to background levels quickly with distance from source. In addition, EMF generated by substation infrastructure has been consistently recorded to be lower than that associated with incoming/outgoing overhead line or underground cables associated with the substation. All EMF generating infrastructure will be set back from the site boundary and accounting for this, the nearest properties to the Site (those immediately south / east of the Proposed Development along Fanellan Road) are unlikely to be located within 150-200 m of any electrical infrastructure. It is therefore anticipated that EMF would be at, or close to background levels at the Project site boundary. The Proposed Development will adhere to the relevant regulations and guidance relating to EMF and no significant effects are likely. It is proposed that EMF is scoped out of further assessment in the EIA. Please refer to Appendix D for further explanation.
Major Accidents and Disasters	Whole Topic	The EIA Regulations require the consideration of the vulnerability of the Proposed Development to major accidents and disasters. Given the nature of the Proposed Development, the potential for effects related to the vulnerability to major accidents and disasters are likely to be limited to those associated with unplanned power outages, due to extreme weather or structural damage. Crisis management and continuity plans are in place across the SSE Group. These are tested regularly and are designed for the management of, and recovery from, significant energy infrastructure failure events. Where there are material changes in infrastructure (or the management of it) additional plans are developed. Potential significant effects on the vulnerability of the Proposed Development to Major Accidents and Disasters has therefore been scoped out of the EIA Report.
Air Quality and Climate	Whole Topic	The Proposed Development is not located within an Air Quality Management area (AQMA). The closest AQMA is located approximately 18 km east at Inverness City Centre and has been declared for exceedances of Nitrogen Dioxide (NO_2) air quality standard limits. The Proposed Development has the potential to give rise to some localised and temporary construction related releases associated with dust (foundation construction, passage of vehicles along access tracks) and construction plant and traffic exhaust emissions. However, the nature of the construction activities is that these would be localised, short term for individual activities and intermittent. Any potential for nuisance effects on residential or recreational amenity during construction would be strictly controlled in accordance with a CEMP. In regard to climate, in the context of the EIA process, climate is assessed both in relation to the contribution of the Proposed Development to increasing or decreasing the nature and magnitude of greenhouse gas emissions (GHGs), and the vulnerability of the Proposed Development to climate change.

Topic	Scoped Out	Justification
		The construction of the Proposed Development is anticipated to contribute to local GHGs due to the use of vehicles during construction and from the carbon footprint of the materials required to build the Proposed Development. The emissions directly associated with construction are likely to be temporary and short in duration from exhaust gases associated with vehicles and construction plant. Where practicable, the resources required to construct the Proposed Development will be locally sourced to minimise the generation of GHGs. Where possible, excavated material will also be reused on-site to prevent the need for disposal of material off-site. The amount of material and potential emissions required during construction and operation is not considered disproportionate for a development of this scale. Therefore, the GHGs emitted from the Proposed Development are unlikely to increase or decrease the concentration of GHGs, as annually, there will be projects of this scale that are required to ensure that infrastructure needs are met in Scotland. In relation to climate adaptation, the design and location of the Proposed Development has considered the potential risk posed by increased flood risk and ground instability (further details provided in Chapter 11). The intention is to reduce potential risks to the electricity assets so that repairs and upgrades are less frequent. Based on the above, it is therefore proposed that Air Quality and Climate can be scoped out of the EIA Report. Please refer to Appendix E for further justification.
Socio Economic Considerations	Whole Topic	The socio-economic assessment undertaken as part of the needs case for National Developments as defined in National Planning Framework 4 is an established and settled policy in Scotland. Given that the proposed project fits within the provisions of the policy and its supporting framework it is unnecessary to revisit or argue material relevance of socio-economic impact. Furthermore, any socio-economic statement would be best set out as a standalone assessment of socio-economic impacts in the context of evidence of compliance with national and local development policy. Accordingly, a socio economic assessment is scoped out of EIA based on an understanding of the relative scales of individual transmission infrastructure projects proposed in this project where any assessment of impacts is minor and likely not significant. A stand-alone report will be provided to accompany the EIA Report as part of the application to provide information on this topic to be considered in relation to wider policy, as part of the determination process. Please refer to Appendix F for further justification.
Material Assets and Waste	Whole Topic	The materials and waste associated with construction activities will be captured and addressed within a Materials Management Plan and Site Waste Management Plan which will form part of the Principal Contractor's CEMP. This will include use of recycled material, efficient use of material to minimise waste, and other waste management measures. To minimise the generation of waste, material excavated to create the platforms for the proposed buildings as far as is practicable will be reused on-site to minimise the off-site deposition of material. Considering the nature and scale of the Proposed Development, significant effects on material assets and waste are not anticipated. It is therefore proposed that Materials and Waste can be scoped out of requiring a specific chapter within the EIA Report.

14. NEXT STEPS

14.1.1 The Applicant invites consultees to provide responses on the following:

- Please provide any environmental information that you hold or are aware of that will assist in the EIA described here;
- Do you agree with the proposed approach for baseline collection, prediction and significance assessment, and that the range of surveys across particular topics is sufficient and appropriate to inform the assessment of environmental effects?
- What other relevant existing baseline data do you expect to be taken into account?
- What key issues or possible effects have been omitted?
- Do you agree with the list of issues to be scoped out, and the rationale behind the decision?
- Of those issues identified for assessment, which do you consider the most important/material and which the least?

14.1.2 All responses should be addressed to The Highland Council.

14.1.3 When submitting a response to the Scoping Report, the Applicant would be grateful if you could also send a copy of your response to the address below:
Email: stephanie.wade@sse.com

OR

For the Attention of Stephanie Wade

Inveralmond House
200 Dunkeld Road
Perth
PH1 3AQ

14.1.4 The Scoping Opinion provided will be used to finalise the terms of the EIA and the specific approach to the individual assessments.

14.1.5 All comments received will be included in the EIA Report for reference, unless consultees request otherwise.

Appendix A: Figures

Appendix B: SSEN Transmission's Pathway to 2030 Projects

Appendix C General Environmental Management Plans

Appendix D Scoping out EMF for Fanellan 400kV Substation and Converter Station in Environmental Impact Assessment Report Technical Note

Appendix E Scoping Out Climate Change Assessments in Environmental Impact Assessment Technical Note

Appendix F Scoping Out Socio-Economic Assessments in Environmental Impact Assessment Technical Note