



**Beauly to Blackhillock to New Deer to Peterhead
400 kV OHL Project
Environmental Impact Assessment Report
Volume 1 | Non-Technical Summary**

September 2025



**Scottish & Southern
Electricity Networks**

TRANSMISSION

VOLUME 1 – NON-TECHNICAL SUMMARY

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Figure 1: Site Location

Figure 2: Site Layout

Figure 3: Environmental Constraints

LIST OF ABBREVIATIONS

CEMP	Construction Environmental Management Plan
CNMP	Construction Noise Management Plan
CTMP	Construction Traffic Management Plan
DWPA	Drinking Water Protected Area
ECU	Energy Consents Unit (Department of the Scottish Government)
EIA	Environmental Impact Assessment
GEMP	General Environmental Management Plan
GCS	Geological Conservation Sites
GWDTE	Ground Water Dependent Terrestrial Ecosystem
HES	Historic Environment Scotland
HGV	Heavy Goods Vehicle
IEF	Important Ecological Features
LCT	Landscape Character Type
LoD	Limit of Deviation
LPA	Local Planning Authority
NPF	National Planning Framework (Scotland)
NSR	Noise Sensitive Receptors
NTS	Non-Technical Summary
OAMP	Outdoor Access Management Plan
OC	Operational Corridor
OHL	Overhead Line
RSPB	Royal Society for the Protection of Birds
SEPA	Scottish Environment Protection Agency
s37	Section 37 of the Electricity Act 1989
SHEPD	Scottish Hydro Electric Power Distribution
SPA	Special Protection Area
SPP	Species Protection Plan
SSEN Transmission	Scottish and Southern Electricity Networks Transmission
UGC	Underground Cable

1 INTRODUCTION

1.1 Background

- 1.1.1 This Non-Technical Summary (NTS) forms part of the Environmental Impact Assessment Report ('EIA Report') prepared on behalf of Scottish Hydro Electric Transmission ('the Applicant'), who, operating and known as Scottish and Southern Electricity Networks Transmission ('SSEN Transmission'), owns, operates and develops the high voltage electricity transmission system in the north of Scotland and remote islands. In this document, terms, "the Applicant" and "SSEN Transmission" are used interchangeably unless the context requires otherwise.
- 1.1.2 The EIA Report has been prepared to accompany an application for consent under section 37 of the Electricity Act 1989¹. The application seeks consent to install, operate and keep installed a new double circuit steel structure 400 kilovolt (kV) overhead transmission line (OHL) to connect into new substation sites at Beauly, New Deer and Peterhead. The project is referred to as the Beauly to Blackhillock to New Deer to Peterhead 400 kV OHL Project (and hereafter as 'the Proposed Development') and would pass through the local planning authority areas of Highland, Moray, and Aberdeenshire. The Proposed Development also includes the realignment of a section of the existing 275 kV OHL south of Ferness.
- 1.1.3 The Proposed Development also includes an alternative alignment ('the Kellas Alternative Alignment'). In this particular location, the alignment of the Proposed Development passes through an area which is within the application boundary for the proposed Kellas Drum Wind Farm, for which an application for consent has been submitted to the Scottish Government. If the windfarm application were to be consented, then the Kellas Alternative Alignment, which passes to the north of the proposed windfarm, would be constructed. This EIA Report assesses both alternatives and consent is sought for both alignments.
- 1.1.4 The Applicant is also seeking deemed planning permission under section 57(2) of the Town and Country Planning (Scotland) Act 1997² for the construction and operation of the OHL and for carrying out ancillary works. These ancillary works would include the removal of the existing 132 kV OHL from Beauly to Knocknagael substations; installation of temporary and permanent access tracks; and tree and vegetation clearance.
- 1.1.5 The EIA Report has been prepared under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017³ (hereafter referred to as 'the EIA Regulations').
- 1.1.6 The aim of this NTS is to summarise the content and the main findings of the EIA Report in a clear and consistent manner to assist the public in understanding what the environmental effects of the Proposed Development are likely to be. The full EIA Report (**Volume 2: Main EIA Report; Volume 3: Figures; Volume 4: Visualisations; Volume 5: Technical Appendices**) provides a more detailed description of the Proposed Development, and the findings of the environmental assessments undertaken.

1.2 Environmental Impact Assessment (EIA)

- 1.2.1 The primary purpose of the EIA process is to inform the decision maker of the environmental implications of a proposed development. Through this process, information is collected about the possible environmental impacts of the development. These findings are evaluated and presented in a fully transparent manner to assist consultation, and to enable the decision makers to take account of impacts in their determination whether to grant consent for the development. Further to that, the EIA also helps to identify controls over the construction or operation of the proposed development that are required to manage and mitigate (lessen / reduce) impacts.

¹ UK Government (1989). The Electricity Act 1989. Available at: <https://www.legislation.gov.uk/ukpga/1989/29/contents>

² UK Government (1997). Town and Country Planning (Scotland) Act 1997. Available at: <https://www.legislation.gov.uk/ukpga/1997/8/contents>

³ Scottish Government (2017). The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017. Available at: <https://www.legislation.gov.uk/ssi/2017/101/contents/made>

- 1.2.2 The EIA Regulations require that an EIA must be undertaken before consent is granted for certain types of development. The Proposed Development falls within one of the categories requiring EIA and therefore one has been prepared to accompany the s37 consent. The EIA has been undertaken in accordance with the EIA Regulations and the scope of the assessments was agreed with the Scottish Government Energy Consents Unit (ECU), Highland Council, Moray Council, Aberdeenshire Council and other statutory and non-statutory consultees.
- 1.2.3 The findings of the EIA are reported in the EIA Report which was submitted with the s37 consent to the ECU. Electronic versions of the application, including this EIA Report are available to download from the Applicant's website at: <https://www.ssen-transmission.co.uk/projects/project-map/beauly-blackhillock-new-deer-peterhead-400kv/>
- 1.2.4 The EIA Report can also be viewed via the ECU's website: www.energyconsents.scot
- 1.2.5 This EIA Report is available in other formats if required. For details including costs for providing a copy of the EIA Report please contact:

BBNP Community Liaison Manager

SSEN Transmission

10 Henderson Road

Inverness

IV1 1SN

Or

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2 NEED FOR THE PROPOSED DEVELOPMENT

2.1 Established Need: National Planning Policy

2.1.1 National Planning Framework 4 (NPF4)⁴ identifies 18 National Developments, described as: "*significant developments of national importance that will help to deliver the spatial strategy*"⁵. Developments proposed as National Developments are acknowledged as projects expected to provide substantive support to the economy of Scotland in terms of direct and indirect employment and business investment, with wider economic benefits. It adds that: "*Their designation means that the principle for development does not need to be agreed in later consenting processes, providing more certainty for communities, businesses and investors*".⁶

2.1.2 The Proposed Development falls within National Development 3: '*Strategic Renewable Electricity Generation and Transmission Infrastructure*' ('ND3'). The Statement of Need for ND3 provides:

"This national development supports renewable electricity generation, repowering, and expansion of the electricity grid.

A large and rapid increase in electricity generation from renewable sources will be essential for Scotland to meet its net zero emissions targets. Certain types of renewable electricity generation will also be required, which will include energy storage technology and capacity, to provide the vital services, including flexible response, that a zero carbon network will require. Generation is for domestic consumption as well as for export to the UK and beyond, with new capacity helping to decarbonise heat, transport and industrial energy demand."

The electricity transmission grid will need substantial reinforcement including the addition of new infrastructure to connect and transmit the output from new on and offshore capacity to consumers in Scotland, the rest of the UK and beyond. Delivery of this national development will be informed by market, policy and regulatory developments and decisions".

2.1.3 The locational scope for ND3 is set out as being all of Scotland. The Proposed Development is situated within Scotland.

2.1.4 Specific to the Proposed Development is NPF4: Policy 11 Energy. The policy intent of Policy 11 is: "*to encourage, promote and facilitate all forms of renewable energy development onshore and offshore. This includes energy generation, storage, new and replacement transmission and distribution infrastructure and emerging low carbon and zero emission technologies including hydrogen and carbon capture utilisation and storage*". The Proposed Development aligns with that policy intent.

2.1.5 The policy also states that: "*Development proposals for all forms of renewable, low-carbon and zero emissions technologies will be supported. These include: (ii) enabling works, such as grid transmission and distribution infrastructure*"; which applies to the Proposed Development, as enabling works within this definition.

⁴ Scottish Government (2023). National Planning Framework 4. Available at: <https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2023/02/national-planning-framework-4/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4.pdf>

⁵ National Planning Framework 4 Page 97 <https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2023/02/national-planning-framework-4/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4.pdf>

⁶ National Planning Framework 4, <https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2023/02/national-planning-framework-4/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4.pdf>

- 2.1.6 In addition to drawing direct policy support from NPF4, the Proposed Development is consistent with the Scottish Government's broader policy support for the deployment of renewable energy. At the UK level, the 2022 British Energy Security Strategy⁷ recognised the separate issues over the cost of living from rising gas prices and sets out a plan to increase the supply of electricity from zero-carbon British sources to deliver affordable, clean, and secure power in the long-term.
- 2.1.7 In April 2024, the Scottish Government announced that an interim target of a 75% reduction on the baseline 1990 national greenhouse gas levels by 2030 would not be achievable. New legislation is now set to be introduced with regard to the ongoing management and monitoring of emissions to 2045, but at present the net zero 2045 target remains in place. The fact that the interim 2030 targets will not be reached emphasises that, while progress has been made with respect to greenhouse gas emission being reduced and the deployment of renewable energy in Scotland, there is still a requirement to deploy additional clean energy resource to meet Scotland's energy and climate change objectives.

2.2 Established Need: Technical and Economic Need

- 2.2.1 There is an established technical and economic need for the Proposed Development, as shown by:
- a transmission system planning exercise encompassing the entire National Grid (considering the upgrades necessary to accommodate the UK generation and demand requirements); and
 - the regulatory approval from Ofgem as part of its ongoing assessment process.
- 2.2.2 The need for the Proposed Development has been carefully assessed and established as part of those regimes as outlined below.

Energy System Planning

- 2.2.3 The NESO's Pathway to 2030 Holistic Network Design (HND)⁸, Network Options Assessment (NOA) Refresh⁹ and associated HND Follow up exercise (HND FUE)¹⁰ set out the required onshore and offshore transmission network infrastructure required to enable the forecasted growth in renewable electricity across Great Britain (including the Proposed Development as new onshore transmission works). In summary, National Grid ESO was clear in 2022 that further reinforcement of the electricity transmission network is needed to connect the new, large-scale, renewable sources of energy in Scotland.

Ofgem: Regulatory Approval Process

- 2.2.4 To enable the delivery of the required transmission infrastructure for 2030, Ofgem established a new regulatory framework for Transmission Operators, including SSEN Transmission, to obtain regulatory approval of the economic case for delivery (and funding) of qualifying infrastructure projects identified as part of the 'Pathway to 2030 exercise. This process is known as the Accelerated Strategic Transmission Investment (ASTI) Framework.
- 2.2.5 The Proposed Development is within the scope of the ASTI Framework. Ofgem observed in the ASTI Framework Decision¹¹ that: *"By including projects within the list of ASTI projects, we are accepting the needs case for these projects in terms of the technical capabilities reflected in the HND/NOA Refresh"*.
- 2.2.6 Support and endorsement for this has been noted from Ofgem and the Department for Energy Security and Net Zero through NESO's Pathway to 2023 HND Publication.

⁷ UK Government, (2022) British Energy Security Strategy. Available at: <https://www.gov.uk/government/publications/british-energy-security-strategy>

⁸ National Grid ESO (2022). Pathway to 2030 Holistic Network Design. Available at: <https://www.neso.energy/publications/beyond-2030/holistic-network-design-offshore-wind>

⁹ National Grid ESO (2022). Network Options Assessment 2021/22 Refresh. Available at: <https://www.neso.energy/document/262981/download>

¹⁰ National Grid ESO (2024). Beyond 2030: A national blueprint for a decarbonised electricity system in Great Britain. Available at: <https://www.neso.energy/publications/beyond-2030>

¹¹ Ofgem, 2022. *Decision on accelerating onshore electricity transmission investment*. Page 5. Available at: https://www.ofgem.gov.uk/sites/default/files/2022-12/ASTI%20decision%20doc%20-%20Final_Published.pdf

Electricity Transmission License Duties

- 2.2.7 With respect to Section 9 of the *Electricity Act 1989*, SSEN Transmission, as a transmission licence holder, is required to "*develop and maintain an efficient, co-ordinated and economical system of electricity transmission*". These statutory duties are important to the end-consumers of electricity transmitted on the network. A percentage of all UK electricity bills is apportioned to paying for transmission works, meaning that the increases in the costs of construction and operation translates into increases in the amount paid by electricity users.
- 2.2.8 In light of this, when developing the design of the Proposed Development SSEN Transmission has been cognisant of its licence duties and ultimate accountability to Ofgem.

3 PROJECT DESCRIPTION

3.1 Project Overview

3.1.1 The Proposed Development (as shown in **Figure 1: Site Location** and **Figure 2: Site Layout**) would primarily consist of:

- construction of approximately 186 kilometres (km) of new 400 kV double circuit OHL between new substation sites proposed at Beauly (Fanellan 400 kV substation), New Deer (Greens 400 kV substation) and Peterhead (Netherton Hub), also referred to as the 'Proposed OHL Alignment';
- realignment of approximately 2.6 km section of the existing 275 kV OHL south of Ferness;
- construction of approximately 6.3 km in total of permanent modifications to existing OHLs at six locations where the Proposed OHL crosses existing transmission infrastructure;
- construction of approximately 5.8 km in total of temporary OHL diversions to facilitate the permanent modifications to existing OHLs required to construct the new 400 kV OHL; and
- to the south of Kellas in Moray, an alternative alignment that would be taken forward if the proposed Kellas Drum Wind Farm application is consented.

3.1.2 Ancillary development which would be required as part of the Proposed Development, or to facilitate its construction and operation:

- removal of approximately 16.9 km of the existing 132 kV OHL and approximately 1 km of underground cable (UGC) from Beauly to Knocknagael substations;
- removal of the redundant section of the existing 275 kV OHL south of Ferness, following its realignment;
- the upgrade of existing, or creation of new bellmouths at public road access points;
- the formation of access tracks (permanent, temporary, and upgrades to existing tracks) and the installation of bridges and culverts to facilitate access;
- working areas around infrastructure to facilitate construction;
- formation of flat areas from which the conductor would be pulled during construction, which would contain earthed metal working surfaces referred to as Equipotential Zones (EPZs);
- vegetation clearance and management;
- other temporary measures required during construction, such as measures to protect road and water crossings during construction (scaffolding etc.); and
- public road improvements which would be required in some areas to facilitate construction traffic.

3.1.3 Other associated works are required to facilitate construction of the Proposed Development, or would occur because of its construction and operation, and are listed below. These works are not included in the application for s37 consent and do not form part of the description of the Proposed Development. On that basis they are not assessed in detail in this EIA Report. The associated works include:

- three proposed substations that the OHL would connect into, those being (from west to east) Fanellan substation, Greens substation and Netherton Hub. Consent for each substation is being sought separately for these developments under the Planning Act¹²;
- borrow pits and quarries to source stone for the construction of access tracks. The final location and design of borrow pits and quarries would be confirmed by the Principal Contractor and separate planning permissions would be sought as required;

¹² UK Government (1997). Town and Country Planning (Scotland) Act 1997. Available at <https://www.legislation.gov.uk/ukpga/1997/8/contents>

- temporary construction compounds would be required along the Proposed OHL Alignment to facilitate its construction. The final location and design of temporary site compounds would be confirmed by the Principal Contractor and separate planning permissions would be sought as required;
- temporary workers accommodation to supplement existing accommodation in the region; and
- modification of the existing distribution network in some areas to accommodate the Proposed OHL. These works are likely to comprise short sections of undergrounding within the vicinity of the Proposed Development and would be undertaken by Scottish Hydro Electric Power Distribution (SHEPD). Consent would be sought by SHEPD as required.

3.2 Limits of Deviation

- 3.2.1 The Limit of Deviation (LoD) shows the maximum area within which the development can be built in. It is possible that individual tower locations or other infrastructure might alter following geotechnical investigation and detailed design (referred to as micro siting). Consideration is given to avoiding sensitive environmental features and residential receptors, and minimising impacts on land use.
- 3.2.2 The horizontal LoD for which consent is sought is illustrated on **Figure 2: Site Layout**. The LoD for the Proposed OHL Alignment is 100 m, allowing for each proposed tower to be micrositied up to 100 m from its proposed location, including up to 100 m either side of the proposed alignment. There is also an additional allowance for access tracks, construction areas and forestry felling for the Operational Corridor (OC).
- 3.2.3 It is possible that further engineering analysis at the detailed design stage might alter the required heights of towers necessary to maintain statutory ground clearance, therefore a vertical LoD parameter is included to allow a height adjustment of up to +/- 9 m of the proposed tower heights.
- 3.2.4 Where there is a requirement to vary the location (or height) of infrastructure within the LoDs, a change control process would be undertaken to ensure that there is no unacceptable increase in adverse impacts as a result of the change. Relevant environmental information within the EIA Report would be reviewed to establish any potential constraints or adverse change in effect. Consultations would be held with The Highland Council, Moray Council, Aberdeenshire Council, and any relevant statutory consultees as needed.
- 3.2.5 There are exceptions to the horizontal and vertical LoD, with variations to accommodate constraints such as residential gardens, ancient woodlands, planning applications, Scheduled Monuments and Sites of Special Scientific Interest (SSSI) and minimise impacts on these sensitive areas.

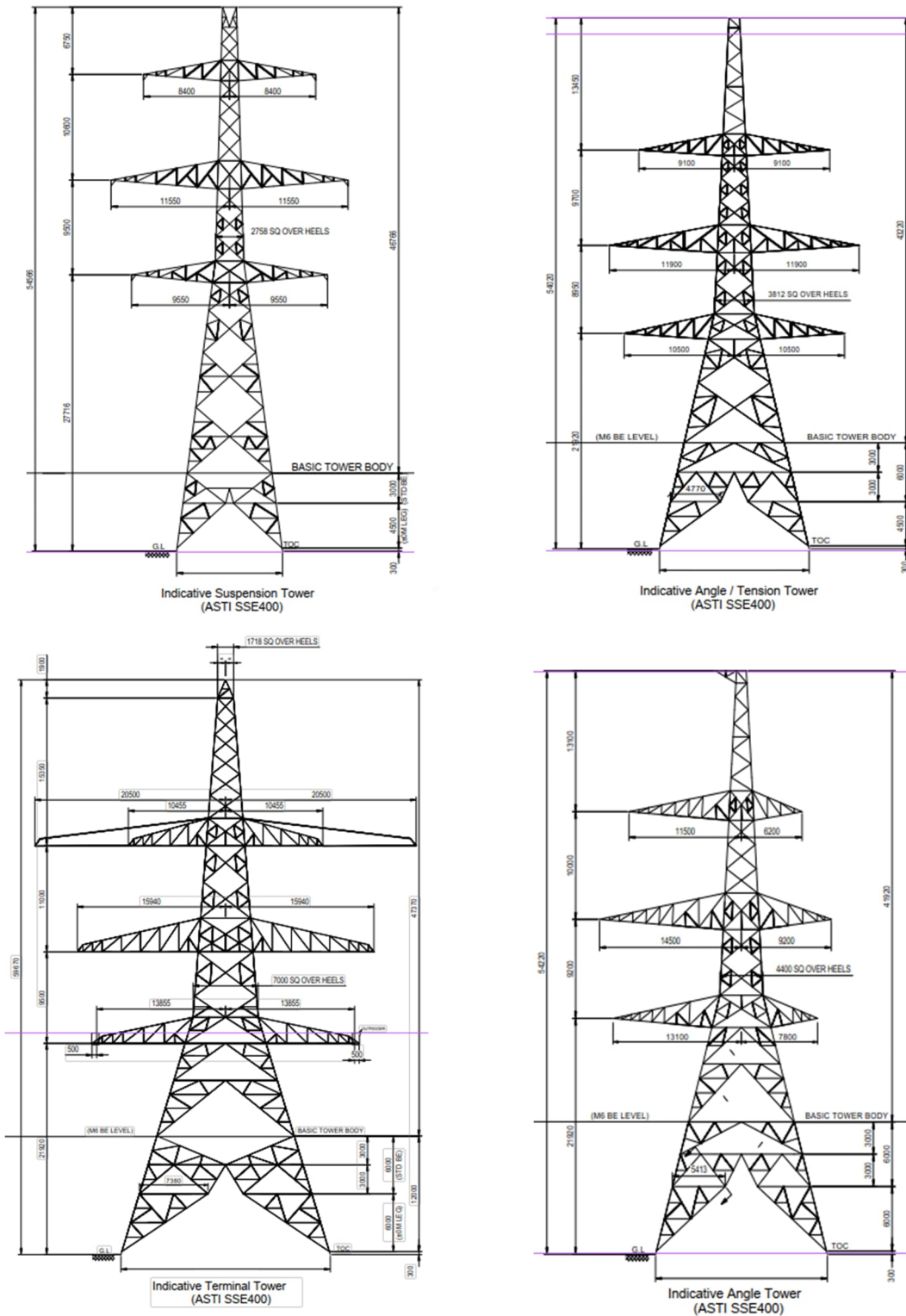
3.3 Description of Overhead Line Infrastructure

Steel Lattice Towers

- 3.3.1 The towers to be used for the Proposed Development would be constructed from fabricated galvanised steel and would be grey in colour.
- 3.3.2 Three basic types of tower are proposed as OHL support structures within the Proposed Development, as follows
- suspension towers: these are used for straight sections of OHL where there is no need to manage uplift loads on the support structure;
 - angle / tension towers: these are used either for straight sections, where there is a need to manage uplift loads on the support structure, where there is an operational security requirement, or where there is a need to change the direction of the OHL alignment; and
 - terminal towers: proposed at the substations, from which the termination of the OHL to the substation is made. The conductors extend from the tower arms horizontally and downwards into the substation.

3.3.3 The Proposed Development would use the ASTI SSE400 Tower Suite, which can vary in height between 48 m and 72 m (see **Plate 3.1**), with the exception of one tower at the crossing of the Caledonian Canal, which has a proposed tower height of 97 m to maintain additional electrical clearance requirements for vessels using the canal. A total of 549 towers are proposed to be constructed for the Development. If the Kellas Alternative Alignment were taken forward, there would be 554 towers.

Plate 3.1: Indicative Tower Design for ASTI SSE400 Tower Suite (Suspension, Angle, Tension and Terminal)

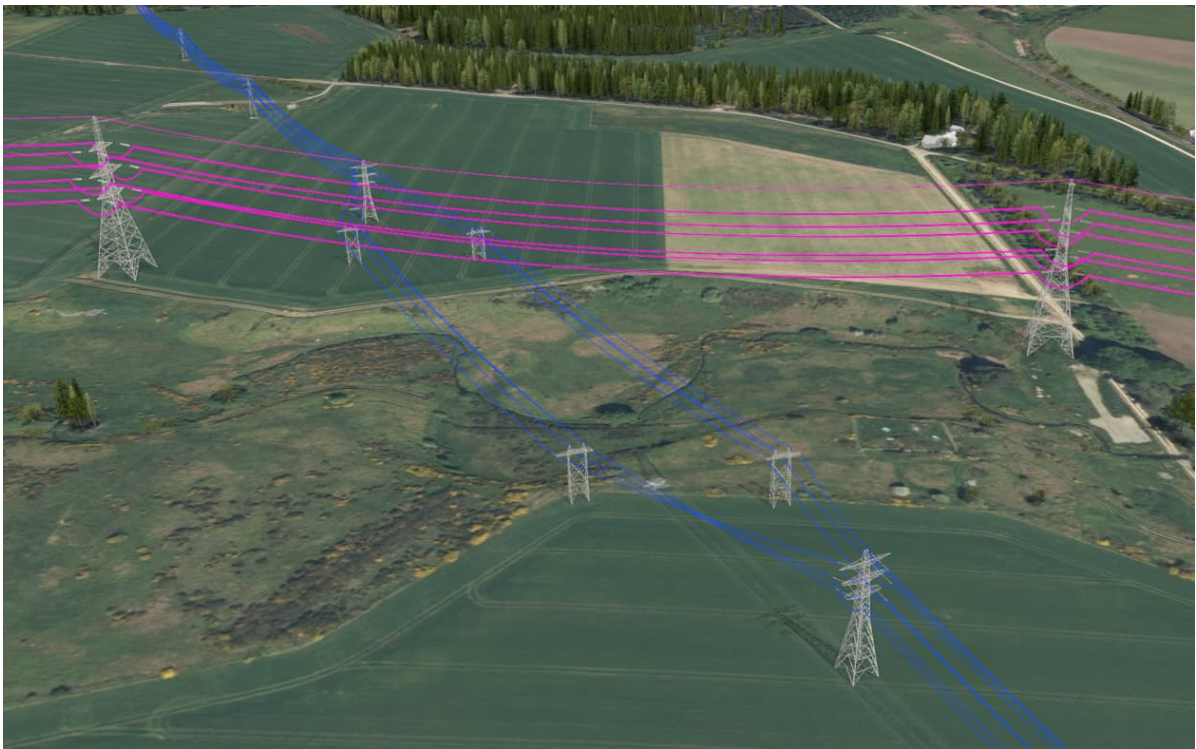


- 3.3.4 Where the Proposed OHL crosses existing transmission infrastructure, either a 'diamond crossing' or 'duck under' tower arrangement would be used to enable the existing OHL to pass underneath the Proposed OHL (**Plate 3.2a** and **Plate 3.2b**). The towers used for the realignment of the existing 275 kV OHL at Ferness and for works required to enable existing OHLs to cross the Proposed Development, would be in line with the tower suites already used for the respective OHLs.

Plate 3.2a: Diamond Crossing Example (Pink OHL is proposed 400 kV OHL; blue is existing OHL)



Plate 3.2b: Duck Under Crossing Example (Pink OHL is proposed 400 kV OHL; blue is existing OHL)



Conductors and Span Length

Proposed 400 kV OHL

- 3.3.5 The towers would carry two circuits, one each side of the tower, with three conductor bundles (or sets of wires) suspended from the horizontal cross arms on either side of each steel lattice tower. These bundles would be supported by insulator sets made of glass, with lengths of 5.1 m for suspension towers and 7.7 m for tension towers.
- 3.3.6 An earth wire conductor with a fibre optic core (referred to as Optical Ground Wire) would be suspended at the top of the tower.
- 3.3.7 The span length (distance between towers) would vary depending on topography, constraints, and land usage. The current average span is 338 m with maximum span of 517 m. The conductors would have diameters ranging from 23.9 mm to 37.3 mm and maintain a minimum ground clearance of 9 m.

Existing 275 kV OHL Realignment at Ferness

- 3.3.8 The proposed steel lattice towers would support six conductor bundles, each with two wires, on six horizontal cross-arms. These bundles would be supported by insulator sets made of glass. The span length between towers would vary, averaging 323 m and reaching a maximum of 394 m. The conductors would have diameters ranging from 20.6 mm to 24.7 mm. An Optical Ground Wire with a fibre optic core would be suspended between the tower peaks, above the phase conductors.

3.4 Typical Construction Activities for Overhead Line Infrastructure

- 3.4.1 High voltage OHL construction typically follows a standard sequence of events as follows:

- Phase 1 – enabling works;
- Phase 2 – construction works;
- Phase 3 – commissioning;
- Phase 4 – removal of existing OHL sections; and
- Phase 5 – re-instatement.

Phase 1 - Enabling works

- 3.4.2 Enabling works would involve the following activities:

- Setting-up temporary site compounds. It is currently anticipated that there would be one main compound required to facilitate construction works (including office provision), alongside an arrangement of small sub-yards, to minimise the number of journeys from the main compounds to the work areas. The locations would be confirmed by the Principal Contractor.
- Moving or undergrounding the existing transmission and distribution network infrastructure which are crossed by the OHL.
- Provision of access tracks to the individual tower locations using a combination of existing track upgrades (where available), new permanent tracks and new temporary tracks. All watercourse crossing engineering works (including both temporary and permanent watercourse crossings) would be in compliance with the Water Environment (Controlled Activities) (Scotland) Regulations 2011¹³ and would follow best practices in line with SEPA guidance. Some tracks would be of 'floated' track design to minimise impact on peatland and other sensitive habitats.

¹³ Scottish Government (2011) The Water Environment (Controlled Activities) (Scotland) Regulations. <https://www.legislation.gov.uk/ssi/2011/209/contents>
<https://www.legislation.gov.uk/ssi/2011/209/contents><https://www.legislation.gov.uk/ssi/2011/209/contents>

- Public Road Improvements to enable larger construction vehicles to access the individual tower locations.
- Where the Proposed OHL Alignment passes through woodland or forested areas (and elsewhere), an OC is established which is defined by the area which during the life of trees growing, they could grow to a height which would compromise the safe operation of the OHL. Trees are therefore removed within the OC to facilitate construction and ensure continued safe operation of the OHL. In general, an OC of 90 m through plantation woodland, which may be reduced to 70 m through broadleaf woodland dependent on site-specific checks, has been applied within which trees are to be permanently removed to ensure safe operation of the Proposed OHL Alignment; additional forestry removal has also been included for new access track formation with a corridor of 20 m.

Phase 2 – Construction Works

- 3.4.3 The three main elements included within this phase are the construction of the tower foundations, the towers themselves, and conductor stringing.
- 3.4.4 Foundation types and designs for each tower would be confirmed following detailed geotechnical investigation at each tower position. All tower positions would require foundations at each leg, the design of the foundation dependent on the ground conditions; see image **Plate 3.2**.

Plate 3.2: Illustrative Image of Tower Foundation Construction



- 3.4.5 Tower construction can typically commence four weeks after the foundations have been cast, subject to weather conditions and concrete curing rates. Tower steelwork would be delivered to each tower construction site either as individual steel members or as prefabricated panels, depending on the method of installation and the available access. A working area, up to either 80 m x 80 m for suspension towers or up to 100 m x 100 m for tension towers, is required at each tower location to facilitate access, laydown and assembly.

- 3.4.6 The conductor would be delivered to site on wooden drums in pre-determined pulling section lengths. Prior to stringing the conductors, temporary protection measures (e.g. netted scaffolds), would be required across public roads and existing access tracks. **Plate 3.3** provides an illustrative image of temporary scaffolding.

Plate 3.3: Illustrative Image of Temporary Construction Scaffolds



- 3.4.7 Prior to stringing the conductors, temporary protection measures (normally netted scaffolds) would be required across public roads and existing access tracks. Winches and tensioners would then be set out across pre-selected section of the OHL and a pilot wire would be pulled through. The pilot wire can be installed using multiple methods including conventional (using a tractor to carry the pilot wire from tower to tower) and helicopter piloting. The conductor would then be pulled through along the pilot wire, tensioned and permanently clamped at each tower.

Phase 3 – Commissioning

- 3.4.8 An inspection and commissioning procedure would be undertaken to confirm that the Phase 2 works have been completed to satisfaction. Following this, the OHL would be energised.

Phase 4 – Dismantling existing OHLs / Underground Cables (Beauly to Knocknagael 132kV OHL)

- 3.4.9 Once the existing OHL line is disconnected, earthed and made safe, the phase and earth conductors would be safely lowered to the ground and reeled up in sections. The towers would then be felled through cutting two neighbouring legs at the base of the tower and pulling the tower over. The tower would then be cut up and sent for recycling.

3.4.10 To remove a section of UGC near Knocknagael Substation, specialist machinery would be used to pull the cable and avoid digging up the whole area. Temporary panels would be laid down to help access the site. In some locations, limited digging may be needed to avoid damaging other utilities. If pulling isn't possible, the cable would be removed in parts with the land restored afterward. Once the work is complete, the area would be returned to landowners.

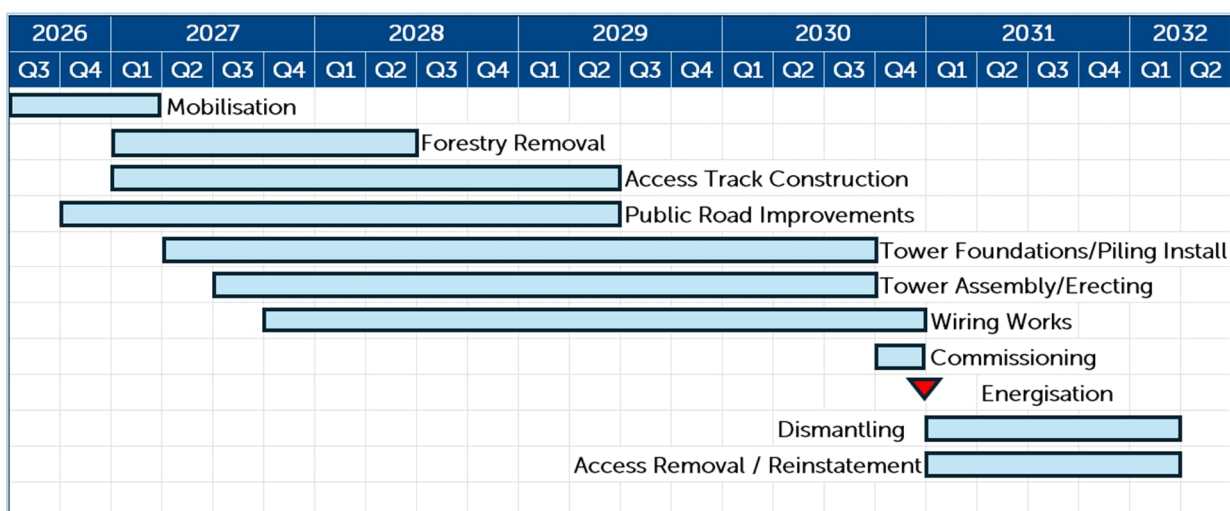
Phase 5 – Reinstatement

3.4.11 After the project is finished, the construction areas would be cleaned up and restored. This includes removing temporary towers, tracks, and work sites, and reinstating vegetation. For areas with stone tracks, the soil and turf would be replaced, and drainage fixed. If turf is missing, nearby sources or natural regrowth would be used. At tower sites, soil and turf would be saved during construction and reused afterward. All materials and buildings from work compounds would be cleared, and the land would be returned to its original state.

3.5 Construction Programme

3.5.1 It is anticipated that construction would commence in 2026 (subject to consents and approvals being granted), with an estimated completion date of Quarter 4 of 2030. Dismantling of existing OHLs and reinstatement would follow and is anticipated to be completed by Quarter 2 of 2032. **Table 3.1** presents the high-level construction phasing.

Table 3.1 Construction Programme



3.6 Construction Employment and Hours of Work

3.6.1 Employment of construction staff would be the responsibility of the Principal Contractor but the Applicant encourages the Principal Contractor to make use of suitable labour and resources from areas local to the location of the works.

3.6.2 It is envisaged that there would be a number of separate teams working at the same time at different locations along the Proposed Development. The resource levels would be dependent on the final construction sequence and would be determined by the Principal Contractor.

- 3.6.3 Construction working is likely to be during daytime periods only. Working hours are currently anticipated to be between approximately 07:00 to 19:00 during British Summer Time (BST) and 07:00 to 18:00 during Greenwich Mean Time (GMT), seven days a week. Special measures and arrangements would be made for works in proximity to sensitive receptors. Any out of hours working would be agreed in advance with the relevant local planning authority.

3.7 Construction Traffic

- 3.7.1 Construction of the Proposed Development would involve regular staff transport and vehicle movements for delivering materials, equipment, and constructing access roads. Safe parking would be provided at construction compounds. The Principal Contractor would prepare a Detailed Construction Traffic Management Plan (CTMP), which would be agreed by the three local authorities. This document would set out the measures to reduce impacts of construction traffic on the road networks.

3.8 Construction Environmental Management

- 3.8.1 A Construction Environmental Management Plan (CEMP) would be implemented during construction which would include measures to manage risks associated with pollution of water, soils, air and human health (including construction noise). This document would detail how the Principal Contractor would manage the site in accordance with all commitments and mitigation detailed in the EIA Report and statutory consents and authorisations. It would also include the Applicant's own General Environmental Management Plans (GEMP) and Species Protection Plans (SPP) and industry best practice and guidance.
- 3.8.2 The CEMP would be implemented and managed by an environmental professional, with support from other environmental specialists as required.

3.9 Operation and Maintenance

- 3.9.1 OHLs generally require minimal maintenance, but regular inspections are carried out to identify and replace deteriorating components. The OC is also monitored to manage tree growth and vegetation that could interfere with the line's safety or access. Weather events like storms or lightning may occasionally damage insulators or conductors, which are typically replaced every 40 years, with towers repainted every 15–20 years. In the event of faults, access to tension towers is maintained for safe repairs, often using tracked all-terrain vehicles. Some earthworks from construction are retained to support safe working areas for future maintenance activities.

4 THE ROUTEING PROCESS AND ALTERNATIVES

4.1 Introduction

- 4.1.1 The EIA Regulations require the Applicant to report upon the reasonable alternatives that were studied and the main reasons for the choice of the development, taking into account the environmental effects.
- 4.1.2 The Applicant is also obliged under section 9 of the Electricity Act 1989 to consider technical, economic and environmental factors in evaluating the alternatives for the Proposed Development, whilst identifying a solution to the objectives of the Proposed Development.

4.2 Scope of Alternatives Study

- 4.2.1 The following alternatives have been considered during project development:

- **Do nothing:** the “do-nothing” scenario; and
- **Alternative technology types:** UGC and subsea cable options.

“Do-Nothing” Scenario

- 4.2.2 The Proposed Development is of national importance, contributing significantly towards the delivery of UK and Scottish Government’s Net Zero Targets and helping reduce the UK’s dependence on imported oil and gas. In a “do-nothing” scenario, the current electricity network would not have capacity to support the transfer of power from both onshore and offshore renewable generation to key centres of demand across the country, and therefore the UK Government’s targets of 50 GW of offshore wind generation by 2030 and delivery of Net Zero targets could not be met. This Strategic Option would not meet the requirements of the network and was discounted from further consideration given it did not represent a reasonable alternative. Accordingly, it was necessary to consider the available options for new infrastructure, during the holistic network design (‘HND’) and network options assessment (‘NOA’) processes.

Alternative Technology Types

Primary Solution: OHL and Underground Cable

- 4.2.3 The Applicant undertook an initial assessment of the technology options to reinforce the transmission network and consider the project need. Potential technical options were considered against the statutory and licence framework, which considered both onshore and offshore options. This led to a strategic decision between UGC and OHL technology, the key factor distinguishing these two technology types was their relative cost. An independent costing study endorsed by the Institution of Engineering & Technology¹⁴ showed that UGC was substantially more expensive than OHL in both build and lifetime costs. Draft UK Government policy¹⁵ at the time also supported a strong presumption in favour of OHL due to its lower costs and fewer technical challenges.
- 4.2.4 Based on these considerations, SSEN Transmission submitted its proposal to the National Energy System Operator using OHL technology, which was later confirmed as the basis for the Beaulieu to Blackhillock to New Deer to Peterhead 400 kV OHL Project. The final government policy statements reinforced this decision, and further technological challenges of undergrounding were shared during consultations.

¹⁴ Institute of Engineering and Technology (IET) (2012). Electricity Transmission Costing Study - An Independent Report by Parsons Brinkerhoff. Available at: <https://www.theiet.org/media/9376/electricity-transmission-costing-study.pdf>

¹⁵ Department of Energy Security and Net Zero (2021) Draft Overarching National Policy Statement. Available at: <https://assets.publishing.service.gov.uk/media/6132402cd3bf7f05b2ac1f4b/en-1-draft-for-consultation.pdf>

Combined Solutions: Partial Underground Cable Options

- 4.2.5 During the development of the Proposed Development, SSEN Transmission considered the use of UGC for sections of the route but ultimately determined that OHL technology was the most suitable option, as there were no challenges that could not be overcome through re-routing the OHL to minimise impacts on sensitive areas, such as those of national significance. Technical and system limitations of UGC, such as reduced efficiency, the need for reactive compensation equipment, and expanded substation infrastructure were also explained during consultations and supported by internal studies. These studies showed that even short UGC sections would require significant infrastructure changes and pose operational challenges. As a result, SSEN Transmission concluded that UGC was not a reasonable alternative and progressed with a continuous OHL solution.

4.3 Routeing process

- 4.3.1 Routeing of new high voltage OHLs has traditionally been informed by guidelines known as the Holford Rules¹⁶ which have been widely used throughout the UK electricity supply industry since the 1960s. The Holford Rules set out a hierarchical approach to routeing which advocates the avoidance of areas of high amenity value, minimising changes in direction, taking advantage of topography, and minimising visual interaction with other transmission infrastructure.
- 4.3.2 Based on the principles set out in the Holford Rules, SSEN Transmission has developed its own guidance, within which SSEN Transmission has broadened the basis for routeing decisions to reflect contemporary practice, and to provide a framework to ensure technical, economic (cost) and environmental considerations are identified and appraised at each stage of the routeing process.
- 4.3.3 The approach to corridor, route and alignment selection has been informed by SSEN Transmission's guidance. The guidance splits the routeing stage of a project into four principal stages, as follows:
- Stage 0: Routeing Strategy Development¹⁷;
 - Stage 1: Corridor Selection;
 - Stage 2: Route Selection; and
 - Stage 3: Alignment Selection.
- 4.3.4 Each stage is an iterative process and involves an increasing level of detail and resolution, bringing cost, technical and environmental considerations together in a way which seeks to achieve the best balance at each stage. Consultation with stakeholders and the public is carried out at stages 1-3 of the process.
- 4.3.5 Further detail of routeing stages 1-3 can be found in the following documents:
- Corridor Selection Consultation Document¹⁸;
 - Corridor Report on Consultation¹⁹;
 - Route Section Consultation Document²⁰;
 - Route Report on Consultation²¹;

¹⁶ Scottish Hydro Electric Transmission Limited (SHETL) (2004). The Holford Rules: Guidelines for the Routeing of New High Voltage Overhead Transmission Lines with NGC 1992 and SHETL 2003 Notes; Revision 1.01. Available at: <https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf>

¹⁷ Setting out the proposed strategy for the routeing stage of a particular project.

¹⁸ SSEN Transmission (2022). Corridor Stage Consultation Document. Available at: <https://www.ssen-transmission.co.uk/projects/project-map/beauly-blackhillock-new-deer-peterhead-400kv/>

¹⁹ SSEN Transmission (2023). Report on Consultation – Corridor. Available at: <https://www.ssen-transmission.co.uk/projects/project-map/beauly-blackhillock-new-deer-peterhead-400kv/>

²⁰ SSEN Transmission (2023). Route Stage Consultation Document. Available at: <https://www.ssen-transmission.co.uk/projects/project-map/beauly-blackhillock-new-deer-peterhead-400kv/>

²¹ SSEN Transmission (2024). Report on Consultation – Route. Available at: <https://www.ssen-transmission.co.uk/projects/project-map/beauly-blackhillock-new-deer-peterhead-400kv/>

- Alignment Selection Consultation Document²²; and
- Alignment Report on Consultation²³.

4.4 Corridor Selection (Stage 1)

- 4.4.1 A digital toolkit was used to identify corridor options connecting the four substations Beaulieu (Fanellan Hub), Blackhillock (Coachford)²⁴, New Deer (Greens) and Peterhead (Netherton Hub). The process involved:
- Confirming the Study Area was influenced by coastal topography and avoiding major amenity areas like Cairngorms National Park and Loch Ness.
 - Initial Data Gathering to include collecting and assessing constraints data sets with sensitivity weightings.
 - Developing a Heat Map included layering constraints onto a map to create a composite heat map, with weightings and buffers applied depending on the sensitivity of the constraint, or opportunity. The weightings and parameters were refined following site visits and sensitivity analysis to verify the outputs.
 - Potential Corridor Development using a 'Least Impact Path' analysis to identify corridors with minimal environmental impact, refined through site visits and sensitivity analysis and professional judgement.
- 4.4.2 The corridor was divided into five sections, with sections 1 to 4 having two corridor options for comparative appraisal and one corridor being identified for section 5 as it was a shorter section. The outcome of the corridor stage comparative appraisal was a Preferred Corridor, comprised of the preferred corridor option in each section, which was then taken forward to consultation. The comparative appraisal took account of environmental engineering and cost elements as is detailed in the Corridor Selection Consultation Document.
- 4.4.3 Following feedback received at consultation from stakeholders and the public, amendments were made to the Preferred Corridor to reflect the issues and concerns raised during the consultation period. Within Section 4, it was decided to take both corridor options (4A and 4B) forward to the Route Selection Stage. This was largely due to feedback highlighting the use of Crombie Moss by Common Crane, and proximity to settlements in Corridor 4A. By taking both corridor options forward to the route selection stage, potential route options were explored within both corridor options to ensure the optimum Preferred Route could be established. A number of small corridor deviations were also made in all of the five sections to ensure there was suitable opportunity to identify viable route options at the next stage when taking account of the numerous constraints which needed consideration; including scattered residential properties.
- 4.4.4 The final 'Proposed Corridor' is detailed in the Corridor Stage Report on Consultation²⁵, which outlines the consultation process and feedback received.

4.5 Route Selection (Stage 2)

- 4.5.1 The heat map approach used in the corridor stage was continued for the route stage, establishing route options approximately 1 km wide, with some areas up to 2 km wide. The study area was divided into eleven sections, with nodes at section breaks to allow flexibility in connecting preferred routes.

²² SSEN Transmission (2024). Alignment Stage Consultation Document. Available at: <https://www.ssen-transmission.co.uk/projects/project-map/beaulieu-blackhillock-new-deer-peterhead-400kv/>

²³ SSEN Transmission (2025). Report on Consultation – Alignment. Available at: <https://www.ssen-transmission.co.uk/projects/project-map/beaulieu-blackhillock-new-deer-peterhead-400kv/>

²⁴ Since removed from Scope

²⁵ SSEN Transmission (2023). Report on Consultation – Corridor. Available at: <https://www.ssen-transmission.co.uk/projects/project-map/beaulieu-blackhillock-new-deer-peterhead-400kv/>

- 4.5.2 Route development focused on refining work from the corridor stage, avoiding designated sites, high amenity areas, settlements, and peatland habitats. Each section had two to six route options for comparative appraisal based on environmental, technical, and cost parameters. The outcome of the route stage comparative appraisal was a Preferred Route, comprised of the preferred route option in each of the eleven sections, which was then taken forward to consultation. The comparative appraisal took account of environmental engineering and cost elements as is detailed in the Route Selection Consultation Document.
- 4.5.3 Following feedback received at consultation, amendments to all route sections were made, which included the following:
- Widening of the route corridor in some sections was required, and refinement in others where the Applicant was made aware of new constraints. Key considerations included minimising woodland loss and impacts on Beaufort Castle Garden and Designed Landscape; and reducing landscape and visual impacts, notably around the Great Glen and The Aird.
 - Public consultation feedback raised concerns about the proximity of the OHL to the settlements of Maud and Stuartfield and also to the Hill of Dens in relation to the presence of geese. A number of respondents also proposed that it would be more appropriate to keep the new infrastructure together with the existing OHL. The Preferred Route was extended to the south where feasible to do so, to enable alignment options to be developed further to the south and alongside the existing OHL where feasible.
 - At the time, the Proposed Development needed to connect into the proposed Blackhillock 2 (Coachford) substation, which was a separate project. Following public and stakeholder consultation on the location of the proposed substation site, the location was moved from a site to the east of Keith, to an alternative site to the southeast of Keith. Therefore, route options were reviewed and the potential to route the OHL to the south of Keith as well as to the north was identified. Impacted routes were therefore extended on the approach to and around Keith so that alignments options could be developed to both the north and south of Keith for the upcoming alignment selection stage.
- 4.5.4 The resultant 'Proposed Route' was taken forward to the alignment stage. Further detail can be found in the Route Stage Report on Consultation²⁶, which details the consultation process for route stage, consultation feedback received, and clearly outlines the changes that were made to the corridors as a result of the consultation feedback.
- 4.5.5 A further step was included at route stage, which included the development of a 'refined route', that further narrowed the route corridor. The purpose of this stage was to keep stakeholders and the public up to date with route and alignment development, and a suite of information events was carried out across locations close to the refined route study area.

4.6 Alignment Selection (Stage 3)

- 4.6.1 The alignment stage is the final step before the EIA, involving the establishment of 29 sections with section breaks at locations where there was an opportunity to switch between alignment options. An indicative 100 m LoD was applied to the alignment options. Most sections had two to seven options for comparative appraisal based on environmental, technical, and cost parameters. The outcome of the alignment stage comparative appraisal was a Potential Alignment²⁷, comprised of the preferred alignment option in each of the 29 sections, which was taken forward to consultation.

²⁶ SSEN Transmission (2024) Report on Consultation – Route. Available at: <https://www.ssen-transmission.co.uk/projects/project-map/beauly-blackhillock-new-deer-peterhead-400kv/>

²⁷ The term 'Potential' was used at alignment stage to describe the alignment option considered best on balance following the comparative appraisal ahead of public consultation. For the corridor and route stages, the equivalent term used was 'Preferred'.

4.6.2 Following feedback received at consultation, there were a number of key decisions made. In the majority of sections, a number of small deviations less than 100 m from the alignment centreline were made. In addition, further deviations of greater than 100 m from the alignment centreline were made. These can be found in greater detail in the Alignment Stage Report on Consultation²⁸. A summary of the reasons for making the changes is as follows:

- landowner requests to reduce impacts on farming, forestry operations, wetlands, river dredging and future land use;
- engineering considerations such as moving slightly closer to existing OHLs, maintaining offsets from below ground infrastructure and private water supplies, reducing impacts on peat, reducing the number of larger angle towers, and to accommodate telecommunications fixed links and consented residential properties;
- design team refinements resulting from feedback to reduce impacts on landscape, visual amenity, historic settings and assets, and avoid notable trees;
- collaboration with stakeholders to minimise impacts on the Torvean Landforms Site of Special Scientific Interest and Geological Conservation Review site through careful alignment to reduce impacts on the notable features of this site;
- collaboration with stakeholders to minimise the potential for impacts on drinking water supplies, notably at the River Spey; and
- following feedback from local residents, an alternative alignment option was taken forward for the diversion of the existing Blackhillock to Rothienorman 400 kV OHL to help to reduce landscape and visual impacts to the east of Keith and reduce the potential for 'wirescaping'.

4.6.3 Detailed consideration at alignment selection stage was also given to the diversion of the existing Blackhillock to Rothienorman 400 kV OHL which was associated with the proposed Blackhillock 2 (Coachford) substation development. Alignment options for this diversion were considered alongside options for the proposed 400 kV OHL to ensure potential cumulative effects were considered. Subsequent to completion of the formal alignment selection stage a decision was taken to no longer proceed with the Blackhillock 2 (Coachford) substation development and therefore the requirement for the Blackhillock to Rothienorman 400 kV OHL diversion was removed. The alignment selection was re-considered in light of the above and three alternative alignment options were identified. A comparative appraisal was carried out and final Proposed Alignment concluded.

4.6.4 The final Proposed Alignment was taken forward to the design stage, with further details in the Alignment Stage Report on Consultation²⁹.

4.7 Further Consideration of Alternatives during the EIA Process

4.7.1 During this EIA process, the Applicant has continued to reflect upon: (i) the use of alternative technology types for the Proposed Development; and (ii) the means by which effects of the selected technology type, OHL, could be further minimised.

²⁸ SSEN Transmission (2025) Report on Consultation – Alignment. Available at: <https://www.ssen-transmission.co.uk/projects/project-map/beauly-blackhillock-new-deer-peterhead-400kv/>

²⁹ SSEN Transmission (2025). Report on Consultation – Alignment. Available at: <https://www.ssen-transmission.co.uk/projects/project-map/beauly-blackhillock-new-deer-peterhead-400kv/>

Alternative technology types: whole/partial use of UGC

Technical and Environmental Considerations of HVDC Subsea Cable

- 4.7.2 Subsea High Voltage Direct Current (HVDC) cable systems offer the benefit of transmitting electricity over long distances without needing intermediate substations and can bypass onshore routing challenges. However, current proven technology options operate at lower capacity compared to 400 kV OHL, requiring three HVDC systems to match one OHL, which leads to more infrastructure, including multiple large converter stations and continued reliance on AC substations. HVDC systems are also much more expensive – up to five times the cost of OHL – and introduce technical inefficiencies and network constraints. While HVDC cables have a smaller footprint individually, the need for multiple systems negates this advantage, especially for landowners. Additionally, subsea installations face environmental and logistical challenges due to marine infrastructure and protected areas. Overall, HVDC was not considered a practical alternative for the Proposed Development.

Technical and Environmental Considerations of HVAC Underground Cable

- 4.7.3 Using High Voltage Alternating Current (HVAC) UGC can reduce visual impacts but introduces significant technical, environmental, and cost challenges. While UGC is used at lower voltages, scaling to 400 kV requires extensive infrastructure, including wide trenches, joint bays, and continuous access routes. It is less efficient than OHL, more expensive, and harder to maintain. UGC also poses risks to peatlands, groundwater systems, and watercourses, and is more disruptive to repair when faults occur. Though it offers some benefits in agricultural settings, its installation and long-term operation present substantial challenges, making it a less viable alternative for the Proposed Development.

Further Economic Considerations

- 4.7.4 The 2025 Institute of Engineering and Technology Report confirms that OHL technology remains the most cost-effective method for electricity transmission compared to UGC and subsea options³⁰. It estimates UGC to be 4–5 times more expensive than OHL over its lifetime. Since transmission network costs are ultimately paid by consumers, SSEN Transmission is obliged by the Electricity Act to prioritise economical solutions. After evaluating the costs and challenges of UGC, SSEN Transmission concluded that a continuous OHL route is the most appropriate and efficient option for the Proposed Development, with no further detailed study of UGC alternatives required.

4.8 Design Solutions

Design of the Proposed Development

- 4.8.1 Following the alignment selection stage, the type and location of infrastructure was designed, including tower types and positions, access tracks; working areas and other temporary infrastructure. Environmental factors including landscape and visual receptors, peat presence / depth; presence of heritage assets; and ecological and ornithological features were considered to reduce potential impacts to the environment. Discussions were held with landowners to seek to minimise impact on agricultural and forestry management practices and further discussions were also held with NatureScot to ensure that the design minimised impacts on the sensitive features of the Torvean Landforms and Dalroy and Clava Landforms SSSI / GCR sites.
- 4.8.2 Further design solutions have been considered that could mitigate likely significant environmental effects or provide another benefit.

³⁰ Institute of Engineering and Technology (2025) A comparison of electricity transmission technologies: Costs and characteristics. Available at: https://www.theiet.org/media/axwkktkb/100110238_001-rev-j-electricity-transmission-costs-and-characteristics_final-full.pdf

Existing Transmission OHL Crossings

- 4.8.3 The Proposed Development would cross a number of existing OHLs and there are a variety of different technologies that can be used to facilitate this. For the Proposed Development 'diamond crossing' or 'duck-under' tower arrangements are proposed which enable the existing OHL to pass underneath the Proposed Development. This avoids the need to underground existing OHL at the crossing which requires the construction of Cable Sealing End compounds which are visually obtrusive.

Floating Tracks

- 4.8.4 In peatland areas, floating tracks would be used to minimise damage associated with temporary construction access tracks. These tracks involve placing a geotextile membrane on topsoil and vegetation, followed by aggregate layers, avoiding peat excavation.

Piled Foundations

- 4.8.5 In areas with deep peat, piling is preferred for tower foundations as it displaces peat rather than requiring excavation, therefore reducing irreversible damage to these habitats.

Kellas Alternative Alignment

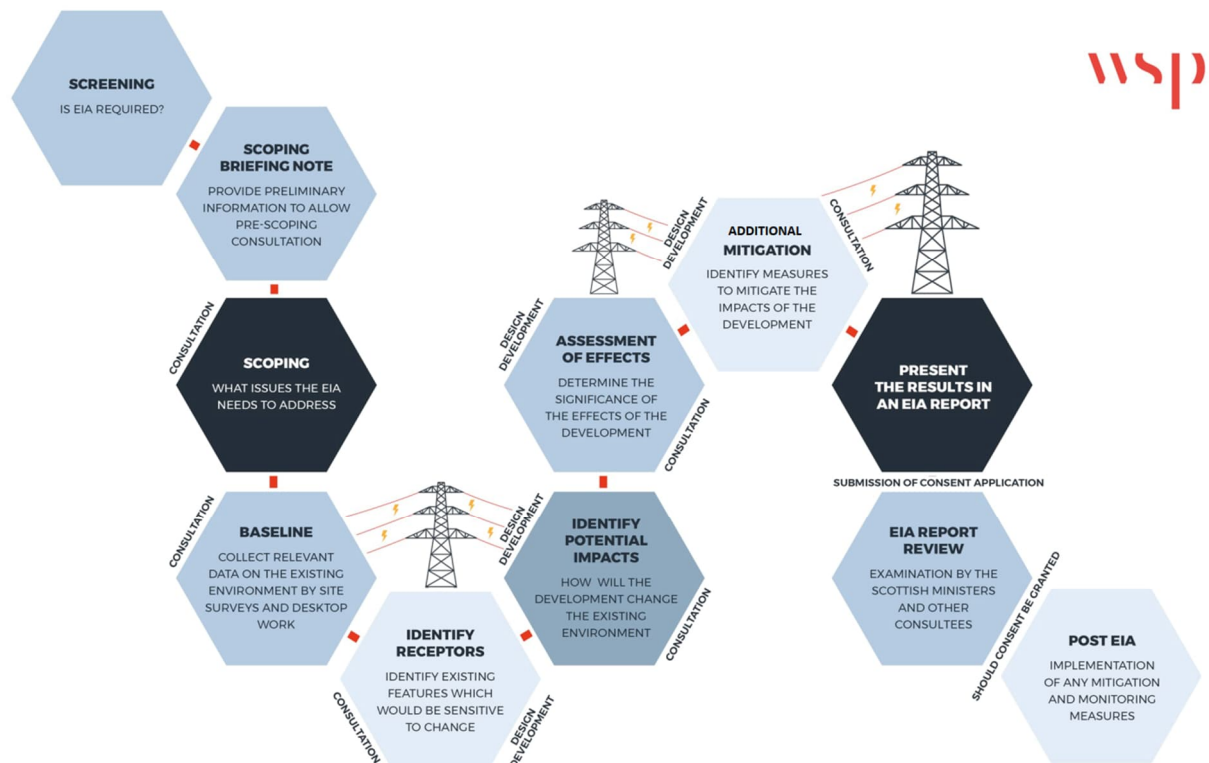
- 4.8.6 The application also seeks consent under section 37 of the 1989 Act for the Kellas Alternative Alignment. The Kellas Alternative Alignment would be assessed as part of the EIA but would only be constructed if Kellas Drum Wind Farm application is consented. Should the windfarm application be refused by the Scottish Government, the proposed alignment would be constructed. The Proposed OHL Alignment is preferred as it takes a more direct and shorter route which is preferable from a technical and cost perspective.

5 EIA PROCESS, SCOPE AND CONSULTATION

5.1 EIA Process and Assessment

5.1.1 EIA is a process that considers how a Proposed Development would change existing environmental conditions and what the consequences of such changes would be. Mitigation measures are recommended to prevent, reduce or remedy any potentially significant adverse environmental effects identified. Following the implementation of mitigation measures, an assessment of the significance of any remaining (or residual) effects is undertaken. The EIA process, summarised in **Chart 5.1**, informs both the project design and planning decision making processes.

Chart 5.1: EIA Process



- 5.1.2 The EIA Report contains the information specified in the EIA Regulations and the approach to the assessment has been informed by current best practice guidance.
- 5.1.3 The applicable assessment periods of the Proposed Development lifecycle are 'Construction period' and the 'Operational period'. As the Proposed Development concerns construction of permanent infrastructure required for the continuing safe supply of electricity to the wider community, with a view to maintain/ repair/ upgrade for perpetuity, decommissioning of the Proposed Development is not considered applicable and is scoped out of the EIA.
- 5.1.4 Embedded mitigation, which comprises both design features and construction good practice (includes the Applicant's GEMPs and SPPs), is assumed to be in place prior to impact assessment and effectively forms part of the Proposed Development. Following the initial assessment, additional mitigation measures have been recommended to prevent, reduce or remedy potentially significant environmental effects identified.

Cumulative Effects

- 5.1.5 The assessment of cumulative effects is a key part of the EIA process and is concerned with identifying circumstances in which potential and / or predicted effects from separate existing or future development projects could combine to cause a significant effect on a particular sensitive receptor.
- 5.1.6 The Proposed Development has been considered 'in-combination' with other reasonably foreseeable future developments and to ensure the combined impact is considered, this is referred to as an in-combination cumulative impact. A two-stage approach has been taken:
- Stage 1 is an assessment of how the Proposed Development interacts with other SSEN Transmission projects that are part of a larger network upgrade; specifically Beaulieu (Fanellan 400 kV substation), New Deer (Greens 400 kV substation) and Peterhead (Netherton Hub). This helps understand the overall impact of SSEN Transmission's work in the area.
 - Stage 2 includes how the Proposed Development might combine with other developments in the area (listed in the EIA Report) to see if there could be any additional cumulative effects.
- 5.1.7 Additionally, an assessment of the combined effects from individual assessment topics on a single common sensitive receptor, such as residents or roads, has been included. This is another form of cumulative impact known as an 'effect-interaction'. The Stage 1 developments have been included in this assessment to understand the combined impact of the Proposed Development and the three proposed substations on common sensitive receptors.

5.2 Stakeholder Consultation

- 5.2.1 An important part of the EIA process involves consulting with a variety of organisations and individuals. This process is important both for allowing interested parties to express their views or concerns about a proposal, but also to highlight any specific issues to be assessed or reviewed through the EIA. This stakeholder consultation takes place throughout the design and assessment process.
- 5.2.2 Public consultation on the alignment was held from 20 May to 20 June 2024 which comprised a series of public exhibition events over the length of the Proposed Development and a longer period of general consultation. Responses to the public consultation events have been recorded in a separate Report on Consultation which accompanies the s37 application and which details how the responses were taken into consideration.
- 5.2.3 Following completion of the alignment selection stage, further changes were made to the OHL alignment due to the removal of the proposed Coachford substation as SSEN Transmission were no longer proceeding with the Coachford substation project. Engagement events were held with members of the public in Cairnie and Keith on 24 June 2025 and 26 June 2025 respectively and the consultation period ended on 18 July 2025.
- 5.2.4 SSEN Transmission also maintained ongoing dialogue with community and ward councillors along the route, keeping members updated on project progress and upcoming consultation events. They held regular update meetings with MPs and MSPs and hosted several meetings with local elected members and community forums.

5.3 EIA Scoping

- 5.3.1 Scoping an EIA is the process used to agree the EIA approach and assessment methodology with key consultees before the EIA Report is produced. An EIA Scoping request was issued to the Energy Consents Unit (ECU) of the Scottish Government on 26 June 2024. A Scoping Opinion was provided by ECU on 2 October 2024 and the responses contained within the Scoping Opinion were considered in detail during the EIA process.

5.3.2 Through EIA Scoping consultation and subsequent further stakeholder consultation it was agreed that the following environmental topics were considered likely to have significant effects resulting from the Proposed Development or required additional information. These topics are therefore addressed in the EIA and discussed in the EIA Report:

- Landscape and Visual;
- Ecology;
- Ornithology;
- Water and Geological Environment;
- Cultural Heritage;
- Forestry;
- Transport;
- Recreation and Tourism; and
- Noise and Vibration.

5.3.3 For the following topics, significant effects were not considered to be likely and therefore it was agreed that they did not require further assessment within the EIA process. Justification for this approach is detailed in the EIA Scoping Report and subsequent scoping consultations, details of which are included within the EIA Report:

- Land Use;
- Air Quality;
- Climate Change;
- Material Assets and Waste;
- Major Accidents and Disasters;
- Electric and Magnetic Fields (EMF) (although a separate EMF study accompanies the application for consent);
- Radio and TV Interference;
- Population and Human Health; and
- Socio-economics (although a separate socio-economic study accompanies the application for consent).

6 ENVIRONMENTAL EFFECTS OF THE PROPOSED DEVELOPMENT

6.1 Landscape and Visual

Designated Landscapes

- 6.1.1 The assessment of designated landscapes considered the potential effects on four Special Landscape Areas (SLA), which are Regionally assigned designations. There are no National Scenic Areas within the Study Area, and whilst the Cairngorms National Park and Central Highlands Wild Land Area are within the 10 km Study Area, both were excluded from the assessment due to the intervening distance from the Proposed Development and limited intervisibility. The location of the Proposed Development in relation to these designated areas is shown in **Figure 3: Environmental Constraints**.
- 6.1.2 Gardens and Designed Landscapes (GDLs) are a Heritage designation, and therefore consideration of them is included within the Heritage assessment.
- 6.1.3 The Proposed Development passes directly through two regionally designated SLAs and within close proximity to two others. It crosses directly through The Spey Valley SLA for approximately 4.5 km, and through the Deveron Valley SLA for approximately 8 km, resulting in direct effects. The Proposed Development passes close to the Drynahan, Lochindorb and Dava Moors SLA and the Findhorn Valley and the Wooded Estates SLA but the resulting indirect effects are not considered to be significant. The assessment, however, identified **Significant adverse** effects locally on both The Spey Valley SLA and the Deveron Valley SLA.
- 6.1.4 Significant adverse effects on a localised portion of The Spey Valley SLA have been identified as a result of open visibility across the River Spey valley around Ordiequish, due to substantial felling through Ordiequish Wood, and the introduction of taller vertical features across the valley to the west of the river and the steep wooded slope to the east of the river. Effects in this localised portion are assessed as **Major Adverse** during construction and the early years of operation, reducing to **Moderate to Major Adverse** by year 15 of operation. The slight reduction in impact was due to the replanting of surrounding felled coniferous woodland, and deciduous planting to the edges of the Proposed Development through Ordiequish Wood, all of which would restore some of the existing wooded character of the SLA and soften the appearance of the Proposed Development in this portion of the SLA.
- 6.1.5 The assessment also identified **Significant adverse effects** on a localised portion of the Deveron Valley SLA. The Proposed Development would be seen as a new, detracting built feature through a localised portion of the landscape, although surrounding undulating landform and large areas of forestry broadly contain its presence. Changes to land cover would be minimal, with effects assessed as **Moderate Adverse (Significant)** on the localised portion during both construction and operation phases.

Landscape Character

- 6.1.6 The Proposed Development crosses through 22 different Landscape Character areas (LCTs), as well as passing adjacent to (but not through) three more. The Proposed Development would result in **Significant adverse** effects on 17 of the LCTs (although 15 of those are very localised portions of the LCT only) during construction.
- 6.1.7 The completion of the construction works would remove the uncharacteristic height and movement (associated with the use of cranes, potential use of helicopters, and movement of plant and people), resulting in slightly lower impacts during operation for one LCT more widely (but remaining significant locally), and for one LCT more locally, reducing to **Not Significant**. Effects would remain **Significant** on the remaining 15 LCTs during operation year of opening.
- 6.1.8 Replanting of surrounding felled coniferous woodland, as well as deciduous planting to the edges of the Proposed Development in a few locations would help to mitigate adverse effects on local landscape character and would further reduce the effect on six LCTs to **Not Significant** in the long term (by Year 15). This would result in **Significant adverse** effects remaining for nine LCTs in the long term (by year 15 of operation).

Visual Impacts

- 6.1.9 The visual assessment identifies the people within the Study Area whose views and visual amenity are potentially affected by the Proposed Development. These people are referred to as visual receptors and include people living in the area (residential receptors); people passing through on road, rail or other forms of transport (transport receptors); and people visiting designated landscapes, attractions or viewpoints, or engaged in other forms of recreation (recreational receptors).
- 6.1.10 The visual amenity assessment identified potentially significant adverse effects on a range of these visual receptors during both construction and operational phases throughout the Study Area. The assessment found that the level of significance is directly affected by the proximity of visual receptors to the Proposed Development along the full length of the Proposed OHL Alignment.

Residential receptors

- 6.1.11 Significant adverse effects on residential receptors were identified for the following groups:
- A total of 77 identified groups of residential receptors (from a total of 189 receptor groups) would potentially be significantly impacted during the construction stage, of which 43 receptor groups were assessed as **Major Adverse**.
 - A total of 72 identified groups of residential receptors (from a total of 189 receptor groups) would potentially be significantly impacted during operation year of opening (winter), of which 40 receptor groups were assessed as **Major Adverse**. This slight reduction in significance of effect was due to the removal of uncharacteristic machinery and activity, including height and movement of cranes and potential helicopters, associated with tower construction, access track construction and tree felling.
 - A total of 70 identified groups of residential receptors (from a total of 189 receptor groups) would potentially be significantly impacted during operation year of opening (summer), of which 37 receptor groups were assessed as **Major Adverse**. This further reduction in the number of groups was due to the presence of deciduous trees in the local landscape providing some additional screening or filtering of views during summer months.
 - A total of 68 identified groups of residential receptors (from a total of 189 receptor groups) would potentially be significantly impacted during operation year 15 (summer), of which 33 receptor groups were assessed as **Major Adverse**. This further reduction of some impacts in the longer terms was due to the replanting of surrounding felled coniferous woodland, as well as deciduous planting to the edges of the Proposed Development, which would mature over time (by year 15) to help screen the appearance of the Proposed Development and lower portions of towers.

Recreational receptors

- 6.1.12 Significant adverse effects on recreational receptors were identified for the following groups:
- A total of 31 identified recreational receptors (from a total of 71 receptors, such as users of long-distance footpaths, users of core paths, or visitors to designated viewing points) would potentially be significantly impacted during construction, of which five receptors were assessed as **Major Adverse**.
 - A total of 31 identified recreational receptors (from a total of 71 receptors) would potentially be significantly impacted during operation year of opening (winter), of which three receptors were assessed as **Major Adverse**. The slight reduction in effect was due to the removal, post construction, of cranes, potential helicopters, and the uncharacteristic movement and activity associated with tower construction, access track construction and tree felling.
 - A total of 29 identified recreational receptors (from a total of 71 receptors) would potentially be significantly impacted during operation year of opening (summer), of which two receptors were assessed as **Major Adverse**. This further slight reduction in effect was due to deciduous trees providing some additional screening or filtering of views during summer months.

- A total of 29 identified recreational receptors (from a total of 71 receptors) would potentially be significantly impacted during operation year 15 (summer), of which two receptors were assessed as **Major Adverse** (from a total of 71 receptors). This remains the same as operation year of opening (summer) as the limited areas of planting were not considered likely to reduce effects on recreational receptors primarily due to their transient nature (i.e. recreational receptors move - along a route, or around an attraction).

6.1.13 For many recreational receptors, significant effects would only occur along a small portion of the recreational route, with many sections of Core Paths or Long-Distance paths experiencing no change.

Transport receptors

6.1.14 Significant adverse effects were identified for transport receptors, including the following groups:

- A total of 22 identified transport receptors (from a total of 32 receptor groups) would potentially be significantly impacted during construction, all of which were assessed as **Moderate Adverse**.
- A total of 20 identified transport receptors (from a total of 32 receptor groups) would potentially be significantly impacted during operation year of opening (winter), all of which were assessed as **Moderate Adverse**. The slight reduction in effects was due to the removal, post construction, of uncharacteristic movement and activity associated with tower construction (including use of cranes and potential helicopters), access track construction and tree felling.
- A total of 20 identified transport receptors (from a total of 32 receptor groups) would potentially be significantly impacted during operation year of opening (summer), all of which were assessed as **Moderate Adverse**. This remains the same as operation year of opening (winter) as the limited areas of planting were not considered likely to reduce effects on transport receptors, primarily due to their transient nature (i.e. transport receptors move along a route).
- A total of 20 identified groups of transport receptors (from a total of 32 receptor groups) would potentially be significantly impacted during operation year 15 (summer), all of which are assessed as **Moderate Adverse**. This remains the same as operation year of opening (summer) as the limited areas of planting were not considered likely to reduce effects on transport receptors, primarily due to their transient nature (i.e. transport receptors move along a route).

6.1.15 Transport receptors have a slightly lower sensitivity than residential receptors, and with views being transient and changing, often at high speed, the magnitude of change is lessened. For most of the transport receptors, these significant effects would only occur along a small portion of the route. As a result, there were no Major Adverse or Moderate to Major Adverse effects identified for transport receptors.

Mitigation

6.1.16 Embedded Mitigation is mitigation through design, whereby an intent to minimise landscape and visual effects has been instrumental in the development of the alignment design and planting design for the Proposed Development.

OHL Alignment selection process

6.1.17 Given the height and visual prominence of an OHL, the key method for mitigation of landscape and visual effects is through determination of the most suitable alignment across the landscape. As discussed in Section 4 of the NTS, a corridor, routing and alignment process was carried out by SSEN Transmission. The selection process weighing up various factors including the risk of adverse landscape and visual effects at each stage was a driving force in the selection process. Following desktop study and fieldwork, landscape and visual effects were a key consideration of the iterative design process to help inform the corridor, routing, and alignment options for the Proposed Development.

Commercial forestry fringe planting

6.1.18 Opportunities for mitigation tree planting through commercial forestry areas have been explored. Deciduous planting is intended to soften the appearance and artificial linear edge of the following particularly visually prominent sections of felling:

- The Aird;
- Ordiequish Hill;
- Meall Mor;
- the A9 at Drummosie; and
- Altonside

6.1.19 The principles of this mitigation planting and an example layout is detailed in the EIA Report.

Best practice construction and reinstatement methods: reinstatement measures for tracks in SLAs

6.1.20 Mitigation through the use of best practice construction and reinstatement methods during the construction phase could also enhance the local landscape character or visual amenity but is not specifically required to reduce adverse landscape or visual effects. For example, where permanent access tracks are required for maintenance purposes within SLAs, the following measures would be considered:

- narrow the track after completion of construction works; and
- where possible surface the tracks using locally sourced stone, with a colour and tone to match existing locally exposed bedrock or stone.

6.1.21 These measures would help ensure that any permanent access tracks within the SLAs would not appear substantially more robust in character than existing similar tracks within these, or other nearby, parts of the landscape. Whilst these measures would not alter the assessment findings, they would locally be of benefit.

Cumulative Effects

6.1.22 The cumulative assessment identified potential additional cumulative effects in combination with three other substation projects associated with the SSEN Transmission Network Upgrades, and with other unrelated developments. Whilst cumulative landscape and visual effects are likely throughout the 10 km Study Area, significant cumulative effects are only anticipated for those receptors in close proximity to both the Proposed Development and the cumulative site.

Designated Landscapes

6.1.23 Cumulatively, the Proposed Development, with the three other proposed substations associated with the SSEN Transmission Network Upgrades (Fanellan, Greens and Netherton) would not result in any change to the assessment.

6.1.24 The Proposed Development, however, would result in a change from non-significant to significant effects on the Drynahan, Lochindorb and Dava Moors SLA during construction and operation, when considered cumulatively with the other unrelated developments of Cairn Duhie Wind Farm Redesign and Ourack Wind Farm.

Landscape Character

6.1.25 The Proposed Development would result in cumulative landscape effects with Fanellan substation on localised portions of LCT 227 and LCT 229 during both construction and operation, all of which would remain **Significant**.

- 6.1.26 The Proposed Development would result in cumulative landscape effects with Greens substation and Nethererton Hub on two LCTs. Cumulative effects with Greens substation include intensification of effects on a localised portion of LCT 20 at construction and operation (remaining significant) and remaining non-significant for the wider LCT at both construction and operation. Cumulative effects with Nethererton Hub include intensification of effects on a localised portion of LCT 17 at construction and operation, increasing from **Not Significant** to **Significant**.
- 6.1.27 Cumulative effects with other unrelated developments would result in a change from non-significant to significant during construction and operation on a localised portion only of 7 LCTs and on the wider character of one LCT. A further two LCTs would change from non-significant to significant during construction only. It was also noted that, whilst many individual developments around Keith would not result in cumulative effects individually with the Proposed Development, when considered all together, there would be a likely **Significant** cumulative effect on LCT 288.

Visual Amenity

- 6.1.28 The Proposed Development when considered with Fanellan, Greens and Nethererton Hub substations would result in cumulative visual effects on five residential receptor groups, one recreational receptor group and one transport receptor group during both construction and operation. The cumulative effect on two of these groups would result in a likely change from **Not Significant** to **Significant** effects.
- 6.1.29 Cumulative effects with other developments would result in an anticipated change from non-significant to significant visual effects for 29 residential receptor groups and three recreational receptor groups during construction, reducing slightly to 23 residential receptor groups and two recreational receptor groups during operation. Effects are likely to decrease slightly at operation as a result of the removal of uncharacteristic cumulative construction works within the view.

Kellas Alternative Alignment

- 6.1.30 The Kellas Alternative Alignment is not located within or likely to impact any designated landscape.
- 6.1.31 There would be a change to the assessment of significant effects as a result of the Kellas Alternative Alignment on one of the LCTs identified. Despite the Kellas Alternative Alignment being located on slightly lower ground, it would be slightly more noticeable from a localised portion of the adjacent LCT 285, due to proximity. It would therefore be likely to change from **Not Significant** to **Significant** effects. Within LCT 290, both alignments are situated on open upland moorland and would introduce a highly prominent new vertical feature through the open landscape. Although the Kellas Alternative Alignment would be marginally less intrusive due to its location on slightly lower ground, both alignments are considered to result in the same significant effects during the construction stage and at operation on LCT 290.
- 6.1.32 The Kellas Alternative Alignment would be situated closer to visual receptors to the north and would result in slightly increased impact on three residential receptor groups and one recreational receptor group. There is likely to be a considerable increase in impact for two additional residential receptor groups, where effects are anticipated to increase from **Not Significant** with the Proposed OHL Alignment to **Significant** with the Kellas Alternative Alignment due to its proximity, resulting in an increase in the perceived degree of change in views.
- 6.1.33 Effects are also anticipated to change from **Not Significant** with the Proposed OHL Alignment, to **Significant** with the Kellas Alternative Alignment for one recreational receptor group and one transport receptor group due to its increased prominence and proximity within the view.
- 6.1.34 For one recreational receptor group, effects are anticipated to slightly decrease due to the Kellas Alternative Alignment being on slightly lower ground and better screened from the recreational receptor group.
- 6.1.35 The Kellas Alternative Alignment would result in no change to the predicted cumulative effects.

6.2 Ecology

- 6.2.1 An assessment has been carried out which considers the potential impacts on non-avian ecology including designated sites, terrestrial and aquatic habitats, and protected species, and reaches conclusions as to the predicted likely significance of effects. The assessment is based on best practice guidance including the Chartered Institute for Ecology and Environmental Management's (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland (2018).
- 6.2.2 A series of desk studies and field surveys were undertaken to determine the baseline natural conditions in the vicinity of the Proposed Development; ornithology is considered separately in **Section 6.3**.
- 6.2.3 The desk study included a review of designated sites and pre-existing records of protected or notable species and habitats, and consultation with statutory consultees and natural heritage data providers.
- 6.2.4 Habitat and protected species field surveys were undertaken between March and November 2024. These surveys covered the Proposed Development footprint and adjacent areas which had the potential to be disturbed or affected by the proposals. Surveys included UK Habitat Classification Surveys and an initial habitat suitability assessment. Following the results of the habitat suitability assessment, targeted protected species surveys were undertaken for areas of habitat identified as high suitability to support the following protected species: bat species; badgers; red squirrels; pine martens; otters; water voles; wild cats, great crested newt (GCN) and fish. Beaver were subsequently recorded during environmental surveys for another project.
- 6.2.5 The following were identified as Important Ecological Features (IEFs) for consideration within the EIA Report, based on their confirmed or potential presence within the Proposed Development site and its surrounding area; their geographic context; and potential construction impacts from the Proposed Development:
- Designated Sites (as shown on **Figure 3: Environmental Constraints**):
 - international sites within 10 km: Strathglass Complex Special Area of Conservation (SAC), Moniac Gorge SAC, Cawdor Wood SAC, Lower Findhorn Woods SAC, River Spey SAC, and Mortlach Moss SAC;
 - national sites within 2 km: Beaulieu Firth Site of Special Scientific Interest (SSSI), Beaulieu protected seal haul out site, Moniac Gorge SSSI, Cawdor Wood SSSI, Buinach and Glenlatterach SSSI, Coleburn Pasture SSSI, River Spey SSSI, Mill Wood SSSI, Den of Pitlurg SSSI, and Whitehill SSSI;
 - local and non-statutory sites within 1 km: Buglife B-line, Great Glen and the Beaulieu Catchment Butterfly Conservation Scottish Priority Landscape, East Invernesshire Important Invertebrate Area (IIA), Findhorn Culbin IIA, Daviot Loch Moy Red Squirrel Stronghold, Ordiequish, Whiteash, Ben Aigan Red Squirrel Stronghold, Strathbogie Wildcat Priority Area (WPA), Den of Pitlurg Local Nature Conservation Site (LNCS) and Bin Hill LNCS; and
 - other databases of relevance within the LoD: Ancient Woodland Inventory, National Woodland Survey of Scotland and Carbon and Peatland 2016 map.
 - Habitats:
 - Ancient Woodland, National Woodland Survey of Scotland (NWSS) Woodland, Blanket bog, Wetland, Acid grassland, Calcareous grassland, Neutral grassland, Heathland, Hedgerows, Scrub, Waterbodies and watercourses, Broadleaved and mixed woodland and Coniferous Woodland; and
 - Invasive Non-Native Species.
 - Species:
 - Bats, Badger, Pine Marten, Red Squirrel, Otter, Water vole, Wildcat, Fish, FWPM, GCN, Beaver, Amphibians, Reptiles, Brown Hare, Hedgehog, Water Shrew and Invertebrates.
- 6.2.6 The assessment of these IEFs concluded that, in the absence of mitigation, the Proposed Development's construction phase could have an adverse effect on them via: habitat loss; degradation and fragmentation; species mortality and injury; and the loss of, obstruction of, or disturbance to species and their resting sites.

- 6.2.7 The loss of Nationally Important Woodlands, including Ancient Woodland, is considered to be a **Significant** effect due to the irreplaceable nature of the habitats. However, the loss would not threaten the wider long-term integrity of the ancient woodland network. To mitigate this an area of 32.05 hectares (ha) will comprise of woodland edge planting throughout the Proposed Development. The additional planting as well as the provisions of the outline Habitat Management Plan (oHMP) (**Annex G Appendix 8.3 Biodiversity Net Gain Assessment Report**) are anticipated to offset the loss of woodland resulting from the construction of the Proposed Development.
- 6.2.8 The loss of Blanket Bog is considered to be a **Significant** effect due to the irreplaceable nature of the habitat. Mitigation will include the reuse of as much excavated peat as possible during construction, with any surplus peat being intended for restoration elsewhere. The Applicant is in consultation with NatureScot about restoration opportunities. An oHMP is included within the EIA Report (**Annex G of Appendix 8.3 Biodiversity Net Gain Assessment Report**) which includes the approach to offset the loss of priority peatland habitat resulting from the construction of the Proposed Development.
- 6.2.9 There would be **Significant** effects on the River Spey SAC and SSSI and Ordiequish, Whiteash, Ben Aigan Red Squirrel Stronghold. However, for the River Spey SAC and SSSI mitigation is set out in the Applicant's Species Protection Plans (SPPs). Also, additional woodland edge planting is considered in the oHMP for the Ordiequish, Whiteash, Ben Aigan Red Squirrel Stronghold. Following implementation of this mitigation effects are reduced to **Not Significant**. There are no further significant residual effects on any of the designated sites.
- 6.2.10 The impacts on bats during construction would be of a **Moderate effect (Significant)** due to the scale of disturbance and potential for loss of roost resources. With the additional mitigation in place (including sensitive timing of works, sensitive lighting, compensation and monitoring), and application of the Habitats Regulations for licensing works affecting bats, it is anticipated that the magnitude of impacts to bats which may be using the Proposed Development would be reduced but would remain **Significant**. However, at a district scale any residual effects would be **Minor (Not Significant)** in all three Local Planning Authority (LPA) areas, highlighting the need for continual monitoring.
- 6.2.11 For the other Habitats and Species, with the additional measures in place (including avoidance, sensitive timing of works, sensitive lighting, compensation and monitoring), it is anticipated that the magnitude of impacts to the remaining habitats and species would be reduced. Any residual effects would be **Minor Not Significant** at a local scale in all three LPA areas.
- 6.2.12 A Habitats Regulations Appraisal (HRA) has been undertaken parallel to this assessment which assesses the effects on European designated sites. The HRA concluded that the Proposed Development would not undermine the conservation objectives of any international sites, and therefore, there would be no adverse effect on the integrity of any international sites.

Kellas Alternative Alignment

- 6.2.13 Kellas Alternative Alignment is located closer to Buinach and Glenlatterach SSSI than the Proposed Development and over-sails the designated site: no towers or associated infrastructure are located within the boundary of the SSSI. Any effects to the SSSI would be **Minor Not Significant**.
- 6.2.14 The remaining construction and operational impacts are consistent within the Proposed Development for the Kellas Alternative Alignment as the habitats and suitability to support protected species is consistent throughout the area.

6.3 Ornithology

- 6.3.1 An ornithology assessment has been carried out to determine the potential effects of the construction and operation of the Proposed Development, on bird species identified during desk and field survey work.

- 6.3.2 Baseline desk studies and field surveys were undertaken to understand the sensitive bird species and designated sites present in the vicinity of the Proposed Development and surrounding area. The desk study included a review of information on designated sites and consultation with relevant raptor study groups, the Royal Society for the Protection of Birds (RSPB) Scotland and Forestry and Land Scotland for ornithology records of relevance to the Proposed Development. Field surveys focussed on key areas of potentially suitable habitat for legally protected and notable bird species of conservation concern ('Target Species'). These involved a combination of flight activity surveys; surveys for breeding raptors, capercaillie, black grouse, common crane, divers and moorland waders; and field use surveys for overwintering waterfowl, the scope of which were agreed in consultation with NatureScot.
- 6.3.3 The baseline studies helped to inform the presence of sensitive ornithological features of interest along, and in the vicinity of the Proposed Development, including ornithological designated sites and Target Species.
- 6.3.4 The key ornithological features of interest identified for inclusion in the Ornithological Impact Assessment were breeding ospreys, including those associated with Inner Moray Firth Special Protection Area (SPA), Wetlands of International Importance (Ramsar Site), Moray and Nairn Coast SPA and Ramsar Site, capercaillie associated with Darnaway and Lethan Forest SPA, red kite, goshawk, black grouse, breeding waders and common gull and overwintering pink-footed geese.
- 6.3.5 The Proposed OHL Alignment has been developed so as to avoid all designated sites of ornithological interest. Therefore, no direct impacts are predicted for Inner Moray Firth SPA and Ramsar Site, Moray and Nairn Coast SPA and Ramsar Site or Darnaway and Lethan Forest SPA. However, the assessment considers potential impacts to osprey and capercaillie associated with these designated sites (as relevant).
- 6.3.6 No known Target Species nesting or lekking sites would be lost as a result of the Proposed Development (including inland nest sites of ospreys associated with Inner Moray Firth SPA and Ramsar Site and Moray and Nairn Coast SPA and Ramsar Site) and birds are unlikely to be significantly displaced from foraging areas during construction. Meanwhile, the Applicant's Species Protection Plan for breeding birds would prevent any disturbance to nesting birds, lekking capercaillie or black grouse during the construction phase.
- 6.3.7 Consequently, no significant adverse effects are predicted on key ornithological features of interest during the construction phase. However, protection measures will be in place for capercaillie through the provision of a SPP to be implemented in areas where capercaillie have the potential to be encountered which would further reduce the risk of potential impacts on capercaillie.
- 6.3.8 Once operational, locally occurring ornithological features of interest are not anticipated to be significantly disturbed or displaced from nesting and foraging areas based on their relative habituation to / tolerance of existing OHLs throughout the wider landscape, including those in close proximity to existing nesting and foraging grounds. With regards to collision risk, most Target Species included in the assessment are considered to be at relatively low susceptibility of collision based on the presence of, and familiarity with existing OHLs throughout the wider landscape. Their susceptibility is further reduced by the fact that the Proposed Development's conductor specification and configuration would be more visible than those of the existing OHLs in the wider surrounding area.
- 6.3.9 However, bird diverters are proposed to be placed on the thinner, less visible earth wires at specific flight activity hotspots for osprey and red kite in order to minimise the risk of collision by these, and other species at these key locations. Meanwhile, habitat management measures are proposed along the Proposed OHL wayleaves of suitable capercaillie woodlands intersected by the Proposed Development in order to encourage birds to walk, rather than fly, across the Proposed OHL thereby reducing the potential collision risk for these typically low-flying birds.

- 6.3.10 Therefore, overall, no significant residual effects are predicted for key ornithological features of interest during the operational phase. Additional measures are prescribed to minimise public recreational access in areas where capercaillie are known to still exist thereby further reducing the risk of human disturbance upon this highly sensitive species.
- 6.3.11 The assessment also considers the potential effects of the Proposed Development in combination with those associated with other relevant developments in the nearby and wider surrounding area. This ultimately concludes that whilst the Proposed Development may potentially contribute some cumulative impacts, these are not predicted to give rise to significant effects on the relevant ornithological receptor populations at a regional or national level. Consequently, cumulative effects are concluded to be **Not Significant**.

Kellas Alternative Alignment

- 6.3.12 The assessment also considers the potential impacts of the Kellas Alternative Alignment on ornithological receptors. The ornithological baseline conditions for the Kellas Alternative Alignment were found to be comparable to those described for the relevant comparable sections of the Proposed Development. None of the ornithological designated sites are significantly closer to Kellas Alternative Alignment and there are no specific ornithological features which are significantly different to those described for the Proposed Development.

6.4 Water and Geological Environment

- 6.4.1 The potential for construction and operational effects on the water and geological environment have been assessed for the Proposed Development. Baseline conditions for the Proposed Development and surrounding area were established through desk study and site visits.
- 6.4.2 The following potential receptors within 1 km of the Proposed Development have been identified:
- surface watercourses;
 - peat, peatland and soils;
 - groundwater bodies;
 - water abstractions including Private Water Supplies (PWS), Controlled Activity Regulation (CAR) abstractions, and public water supplies;
 - Water Dependent Designated Sites (WDDS) and Geological Conservation Sites (GCS);
 - Groundwater Dependent Terrestrial Ecosystems (GWDTE);
 - wetlands; and
 - flood risk receptors.
- 6.4.3 The assessment considered how the Proposed Development would affect the sensitive receptors listed above through the impacts of groundwater and water supplies; changes to resource availability; loss and compaction of peat, peatland and soils; modification of groundwater levels and flows, and surface water drainage patterns, and short-term flood risk increase during the construction and operational of the Proposed Development.
- 6.4.4 Mitigation measures to protect water supplies and peat, would be implemented through:
- General Environmental Management Plans (GEMPs);
 - Construction Environmental Management Plan (CEMP);
 - Peat Management Plan (PMP);
 - Flood Risk Assessment (FRA);
 - Private Water Supply Assessment Report (PWSRA);
 - Private Water Supply Monitoring Plan (PWSMP);
 - Individual Pollution Prevention and Incident plan (PIIP); and

- Watercourse Schedule.

6.4.5 Following the implementation of these measures no significant effects are predicted for the water environment and geological environment receptors in relation to the Proposed Development. No significant cumulative effects are considered to occur to hydrological or hydrogeological receptors.

Kellas Alternative Alignment

6.4.6 The Kellas Alternative Alignment is situated outside of and downstream of the Glenlatterach Reservoir Drinking Water Protected Area (DWPA). With embedded mitigation the significance of effect on Glenlatterach Reservoir DWPA is **Negligible Adverse (Not Significant)**.

6.4.7 The other construction and operational impacts which have been assessed for all other potential receptors are no greater than impacts on the Proposed Development.

6.5 Cultural Heritage

6.5.1 An assessment to consider the likely significant effects on cultural heritage assets from the construction and operation of the Proposed Development has been carried out.

6.5.2 The cultural heritage assessment involved a comprehensive desk-based review of existing information, combined with a walkover survey, highlighting the presence of 831 heritage assets within the LoD and 2 km study area, indicating human activity along the Proposed Development from the prehistoric period through to the modern day. Designated assets are illustrated **Figure 3: Environmental Constraints**.

6.5.3 There are 425 heritage assets noted within the LoD for the Proposed Development, consisting of 14 designated heritage assets and 411 non-designated heritage assets. Designated heritage assets are assets that are formally recognised by law, while non-designated assets are identified by local planning authorities as having local significance but do not have the same legal protection. Impacts during construction are anticipated on the Beaufort Castle Garden and Designed Landscape (GDL00052) due to tree felling at its northern edge. Physical impacts on 79 non-designated heritage assets are anticipated. The assessment concluded there would be a **Slight Adverse** significance of effect on the Beaufort Castle GDL (GDL00052), as well as two **Large Adverse**, 16 **Moderate Adverse**, 50 **Slight Adverse**, and 11 **Neutral** significance of effects on non-designated heritage assets, prior to mitigation. Mitigation measures to remove or reduce predicted impacts would involve demarcation and avoidance, earthwork and historic building recording, and archaeological investigations to be undertaken in line with an appropriate Archaeological Project Design. This would reduce, or not change, all effects to not significant, with the exception of the prehistoric hut circle (ND66) which would reduce from a **Large Adverse (Significant)** effect to a **Moderate Adverse (Significant)** effect within the LoD.

6.5.4 There are 393 designated heritage assets contained within the 2 km study area for the assessment, with an additional 27 designated heritage assets added to the baseline following consultation with HES. During the operational phase of the Proposed Development, impacts from changes within the setting of heritage assets would be anticipated on 26 scheduled monuments, 18 listed buildings, two GDLs, the Culloden battlefield (BTL6), and eight non-designated heritage assets. The assessment noted there would be two **Moderate Adverse**, and 52 **Slight Adverse** significance of effects on the heritage assets impacted during operation, prior to mitigation. The Moderate Adverse effects would be on the following heritage assets:

- Mains of Daviot Farm, ring cairn and stone circle 600 m NNE of (SM3085); and
- Hare Stone, stone circle 480 m NW of Feith-Hill (SM338).

- 6.5.5 Potential mitigation to reduce the impacts to Mains of Daviot Farm, ring cairn and stone circle 600 m NNE of (SM3085), would be to underground a section of the existing 275 kV OHL that lies to the north of the ring cairn and stone circle, removing the enclosing effect of the Proposed Development on the heritage asset. If this potential mitigation is implemented it will result in a residual significance of effect of **Slight Adverse (Not Significant)**. Without this mitigation the effect on Mains of Daviot Farm, ring cairn and stone circle 600 m NNE of (SM3085) would be **Moderate Adverse (Significant)**. This mitigation measure will require separate Town and Country Planning permission and therefore is considered to be a potential mitigation.
- 6.5.6 No mitigation measures are recommended for the Hare Stone, stone circle, as mitigation to reduce these impacts would require blocking or screening views of the Proposed Development using landscape planting around the scheduled monument, which itself would cause an impact through changes within the setting of the heritage asset and is not recommended as a mitigation solution.
- 6.5.7 There is an **Moderate Adverse (Significant)** effect on Hare Stone, stone circle 480 m NW of Feith-Hill (SM338), but the impacts are not significant in relation to the integrity of the setting of the stone circle, as the setting would be retained in key aspects that still allow for the stone circle to be understood, appreciated, and experienced.

Kellas Alternative Alignment

- 6.5.8 Physical impacts on four heritage assets are anticipated within the Kellas Alternative Alignment. For Mill Our – trackway (Heritage Asset Ref: ND148) there would be a **Moderate Adverse (Significant)** prior to mitigation due to loss of the heritage asset. With mitigation measures, including earthwork survey and historic building recording, the significant effect would reduce to **Slight Adverse (Not Significant)**.

6.6 Forestry

- 6.6.1 The forestry assessment examines the impact of constructing and operating the Proposed Development on forests and woodlands. The study considers the current condition of these woodlands, their species, management practices, and future management plans. The Proposed Development requires the creation and maintenance of an OC for safe construction and operation, which involves tree removal. However, measures have been designed in collaboration with landowners and forest managers to ensure long-term forest sustainability. The study is supported by a series of Woodland Reports (one for each woodland landholding), which provide detailed information on the type, condition, and management of the affected woodlands. These reports also assess the potential effects of the project and propose mitigation measures.
- 6.6.2 The affected woodlands include commercial plantations, native woodlands, broadleaved woodlands and Ancient Woodland. The total woodland cover in the surrounding regions is extensive, with Highland, Moray, and Aberdeenshire Council areas containing significant forest resources. They are managed by a mix of private and public landowners. **Table 6.1** shows the woodland type impacted by LPA Area.

Table 6.1 Woodland Removal Proposed Development by LPA Area

LPA Area	Area of Woodland Removal by Woodland Type (ha)				Total
	Commercial	Native	Broadleaved	Ancient*	
Highland	154.45	60.28	0.87	2.16	217.76
Moray	176.13	12	0.00	1.45	189.58
Aberdeenshire	45.58	14.47	3.66	0.00	63.71
Total	376.16	86.75	4.53	3.61	471.05

* ancient woodland of semi-natural origin

- 6.6.3 The Proposed Development is expected to result in the removal of approximately 376.16 ha of commercial forestry, 3.61 ha of ancient woodland, 86.75 ha of native woodland, and 4.53 ha of broadleaved woodland. This is necessary to create a safe corridor for the construction and operation of the OHL and associated access tracks.

- 6.6.4 The assessment found that the removal of ancient and native woodland would have a **Significant** adverse effect, even though efforts would be made during detailed design to minimise tree loss. However, the removal of commercial forestry is not expected to have a significant impact. The Applicant is committed to planting new woodland off-site as Compensatory Planting to replace the area of woodland lost due to the Proposed Development. This aligns with the Scottish Government's Control of Woodland Removal Policy (CoWRP), which aims to ensure no net loss of woodland.
- 6.6.5 Additionally, in accordance with National Planning Framework 4 (NPF4) Policy 6, which requires that more woodland be planted than is removed when native or ancient woodland is affected, the Applicant will go beyond a like-for-like replacement. The Compensatory Planting Plan will exceed the total area of woodland removed, ensuring a net positive effect by enhancing biodiversity, carbon sequestration, and ecological connectivity.
- 6.6.6 The clearing of trees for the OC may increase the risk of wind damage to nearby trees. To mitigate this, the Woodland Reports identify areas where Management Felling³¹ would be beneficial in creating stable forest edges and reducing windblow risk. However, any felling beyond the OC would be the responsibility of landowners as part of their ongoing forest management practices.
- 6.6.7 The project may require forest managers to adjust their long-term plans to accommodate the OC. To address this, the Applicant has developed 127 Woodland Reports to help integrate the project into existing forestry management. This approach would reduce the residual effects to a non-significant level.
- 6.6.8 The assessment found that the Proposed Development would not significantly impact forest operations access.
- 6.6.9 Additional mitigation measures include micro-siting (adjusting the development layout to reduce tree loss), selective trimming instead of full tree removal, and linking felling activities with existing long-term forest plans. A CEMP will ensure best practices are followed throughout the process. While some permanent woodland loss is unavoidable, mitigation measures such as compensatory planting, refined felling plans, and forest management integration aim to minimise long-term environmental impacts.

Kellas Alternative Alignment

- 6.6.10 For the Kellas Alternative Alignment, the estimated woodland loss includes 11.84 ha of commercial forestry and 2.41 ha of native woodland to accommodate the OHL and access tracks.
- 6.6.11 The scale and nature of these impacts are comparable to those of the Proposed Development, with no significant difference in the extent or type of woodland affected. Consequently, the anticipated effects on the woodland are not considered to differ materially between the Alternative Alignment and the Proposed Development.

6.7 Transport

- 6.7.1 The EIA Report considers the likely significant effects on receptors along the transport routes resulting from vehicle movements associated with the construction of the Proposed Development.
- 6.7.2 To gain construction access to the Proposed Development site from the classified road network a number of new bellmouths and upgraded existing junctions are proposed. The most suitable and preferred routes to access the site would use the classified road network prioritising trunk roads, followed by A roads, B Roads, and then the minor road network to access the Proposed Development site locations. Access to the tower installation sites is to be achieved through the upgrading of existing access tracks or installing new permanent stone access tracks.

³¹ Management felling refers to the removal of additional trees out with the Operational Corridor up to a wind firm edge, carried out to prevent windthrow damage. This removal does not form part of the Proposed Development.

- 6.7.3 During the construction phase of the Proposed Development, the traffic which would be required to access the Site would be: staff transports; deliveries of construction equipment, materials (including stone assumed from the nearest quarry), machinery and heavy lift cranes.
- 6.7.4 The peak construction phase is expected to generate a maximum of 264 two-way vehicle movements and 158 two-way HGV movements within an 11-hour working day across the Study Area which spans three LPA area boundaries. The Applicant is actively consulting with The Highland, Moray, and Aberdeenshire Councils to understand which routes construction traffic could take. The Study Area has been divided up into three geographically defined assessments which all include multiple potential construction traffic routes, these assessment areas are described as follows:
- Assessment 1 – Highland Council Area: Beauly to Ferness;
 - Assessment 2 – Moray Council Area: Ferness to Coachford;
 - Assessment 3 – Aberdeenshire Council: Coachford to Greens.
- 6.7.5 There are a number of embedded mitigation measures proposed to reduce the impact of construction traffic on the surround road network. These measures are either physical (those that require specific works to be undertaken whether on the existing road network or as part of the Proposed Development) or management used to ensure correct contractor behaviours.
- 6.7.6 The management measures include the preparation of a Construction Traffic Management Plan (CTMP) to manage the general construction traffic and specialised deliveries. The content of the detailed CTMP would be agreed with the LPAs. Traffic management measures will be implemented prior to, and during, the construction phase in consultation with the relevant Road Authorities and the Police to ensure road safety.
- 6.7.7 The CTMP will identify measures to reduce the number of construction vehicles, as well as considering ways to reduce or avoid the impact of vehicles through construction programming / routing and identification of an individual with responsibilities for managing transport and access effects. This could include the setup of community liaison groups to ensure mitigation measures are discussed with the local population and are fit for purpose. Other mitigation could include access route signage, pedestrian path signage and timing restrictions for deliveries. A Framework CTMP is included within the EIA Report.
- 6.7.8 Prior to the commencement of any onsite activities, a finalised Outdoor Access Management Plan (OAMP) would be prepared and agreed with the Local Authorities. The OAMP would include a number of measures to reduce the effects of the construction of the listed public rights of way and core paths, crossing points and management of access locations. A draft OAMP is included in the EIA Report.
- 6.7.9 The physical measures include Public Road Improvements proposed within the study area to enable larger construction vehicles to access the site via the public highway for the construction phase. Other measures include site access, route signage, plant and vehicle cleaning and parking and rest bays. The Proposed Development would lead to increased traffic volumes on a number of roads in the vicinity of the Proposed Development site during the construction phase. Prior to mitigation the potential impact of construction related traffic on the local road network would be **Minor Adverse (Not Significant)** when compared to the current capacity and usage of the roads. There would be a **Minor Adverse (Not Significant)** effect upon severance and walking and pedestrian routes within and near the site working areas that would be crossed by the construction traffic access routes. There would also be a **Minor Adverse (Not Significant)** effect on the risk to road user and pedestrian safety due to the temporary increase in the number of HGVs using the local road network. Due to the construction traffic being temporary, all of the minor adverse effects would be of a temporary timescale and transitory in nature. As no mitigation, beyond embedded mitigation, is proposed, the residual effects would be the same as the pre-mitigation effects.

Kellas Alternative Alignment

- 6.7.10 Should the Kellas Alternative Alignment be taken forward, there would be no change to the proposed access points and therefore no change to the assessment. Therefore, the effects of predicted construction traffic impact regarding the Kellas Alternative Alignment remain the same as the Proposed Development.

6.8 Recreation and Tourism

- 6.8.1 The recreation and tourism assessment considers the potential impact of the Proposed Development upon recreation and tourism receptors within a 5 km study area. This study area encompasses three LPAs: The Highland Council; Moray Council; and Aberdeenshire Council. The assessment considered potential impacts upon the following categories of receptor and their likely significance: public access; recreational and tourist facilities and activities; tourist events; and tourist accommodation.
- 6.8.2 Five tourists events were identified in The Highland Council, nine events in Moray Council and four events in the Aberdeenshire Council study areas. Due to the nature of these events as short-term, temporary and not necessarily dependent upon a fixed location, the assessment concludes that construction and operation of the Proposed Development are not expected to impact upon the events identified nor access to the venues.
- 6.8.3 Within The Highland Council study area, a total of 71 recreational and tourist facilities and activities were identified; with 62 and 65 in Moray and Aberdeenshire Council study areas respectively. The following amenities were assigned high sensitivity, all of which lie within The Highland Council study area:
- Caledonian Canal;
 - Loch Ness; and
 - North Coast 500 Tourist Route.
- 6.8.4 Various Heritage Paths, Scottish Hill Tracks, Core Paths and National Cycle Networks routes fall within the study area and provide public access, including four long distance routes (the Great Glen Way, the Caledonia Way, the Dava Way and the Speyside Way).
- 6.8.5 The approach to construction would be consistent across the different LPA study areas and is not expected to lead to the loss of any recreation and / or tourist facilities or land associated with recreational and tourist resources. The finalised CEMP will include various measures to minimise any adverse environmental impacts arising as a result of the Proposed Development and will include an OAMP, prepared in collaboration with The Highland Council, Moray Council and Aberdeenshire Council. The OAMP will outline measures which maintain public safety during construction and operation of the Proposed Development, such as manning certain public access routes and installing signage and diversions where necessary. A draft OAMP is included within the EIA Report.
- 6.8.6 All public access routes will be maintained throughout the construction of the Proposed Development. To ensure continued safe access, certain routes will be supervised and / or clearly signposted. In the event of unforeseen circumstances necessitating a temporary diversion of public access, such measures will be coordinated and agreed upon with the relevant LPA and its Access Officer. Construction workers would give priority to recreational users on the water, therefore maintaining public access to recreational activities on waterways, such as kayaking and canoeing.
- 6.8.7 Whilst it is expected that the construction and operation of the Proposed Development may impact upon the access, availability and amenity experienced by users of recreational and tourist facilities in a worst-case scenario, residual impacts are expected to be **Not Significant** for the majority of receptors across all LPA study areas. When considering the impact of the Proposed Development in the context of the whole length of the public access routes, the impact upon public access to these routes, including long distance routes, within the study area is assessed to be **Minor Adverse (Not Significant)**.

- 6.8.8 The exception being some woodlands which are used as recreational areas within the study area. They are anticipated to experience tree removal and the presence of construction activities. Users who visit these woodlands may be affected by reduced tranquillity and visual changes in these areas. As a result, a **Moderate Adverse (Significant)** effect is anticipated for these woodlands during construction.
- 6.8.9 Impacts upon the local road network are anticipated as a result of the Proposed Development's construction have been assessed. A CTMP will be prepared and will include traffic management measures which aim to minimise the impacts of construction traffic upon the local road network and users. From a recreation and tourism perspective, the Proposed Development would not lead to any discernible changes to vehicular and public access for recreation and tourism resources, and therefore effects are considered to be **Not Significant**.
- 6.8.10 An accommodation strategy is being prepared by the Principal Contractor to minimise impact of temporary worker accommodation on the availability of tourist accommodation in line with the SSEN Transmission 'Housing our Workers Strategy 2024'32 strategy and using a blended approach to workers' accommodation using hotels, private lets, caravans, temporary modular accommodation and the provision of permanent housing. When the workforce is at its peak, it is expected that workers would occupy 2.3% of the hotel capacity in The Highland Council, Moray Council and Aberdeenshire Council areas. Due to the availability of alternative tourist accommodation across these LPA areas, a **Not Significant** impact is anticipated.

Kellas Alternative Alignment

- 6.8.11 The Kellas Alternative Alignment would pass along the northern extent of Glenlatterach Reservoir, which is used for hiking, rather than the southern extent. However, as neither the Proposed Development or Kellas Alternative Alignment would affect the availability of the resource, there would be no difference in the assessment outcomes.

6.9 Noise and Vibration

- 6.9.1 A noise and vibration assessment has been carried out for the Proposed Development and considers the potential effects of noise and vibration during the construction phase and noise during the operational phase of the Proposed Development at noise sensitive receptors (NSRs) within the study area. NSRs include schools, hotels, residential properties and vulnerable subgroups.
- 6.9.2 Potential NSRs were processed from AddressBase data and cross-checked with satellite imagery. Additional consented but not yet build receptors were added to the assessment. All potential receptors from this combined dataset that fall within 500 m of the LoD of the Proposed OHL Alignment were considered in the construction noise and vibration assessment and operational noise assessment. This resulted in the identification of 8908 NSRs. An additional 1,403 NSRs that are greater than 500 m from the Proposed Alignment were considered for construction effects for separate works for dismantling and reinstatement.
- 6.9.3 The construction noise assessment, based on British Standard (BS) 5228, Code of Practice for Noise and Vibration Control on Construction and Open Sites³³, identified potential significant impacts at several nearby NSRs, particularly during evening and weekend hours. Activities such as forestry felling, access, foundations and tower erection works are predicted to exceed acceptable noise thresholds without mitigation.
- 6.9.4 To address this, a Construction Noise Management Plan (CNMP) will be implemented, including measures like scheduling noisy activities outside sensitive hours and reducing equipment idle time. Management of concurrent use of equipment will reduce significant impacts to 6% or less of NSRs. This does not include access work impacts as these would be extremely short-term.

³² SSEN Transmission (2024). Housing Our Workers Strategy. Available at: [ssent-housing-strategy-2024-](#)

³³ British Standards Institute (2009 and 2014): British Standard 5228-1:2009 +A1:2014 (BS5228), Code of Practice for Noise and Vibration Control on Construction and Open Sites.

- 6.9.5 With these measures in place, and further focus on remaining impacts at NSRs in a CNMP, residual impacts are expected to be **Minor (Not Significant)**. If construction extends beyond the planned schedule, a CTMP may be required to manage traffic-related noise.
- 6.9.6 The construction vibration appraisal was undertaken based on BS 5228 for the purpose of assessing the effects of the works (foundation piling) on nearby residents. The appraisal concluded that as a worst case, the low vibration activities might be just perceptible in residential environments, therefore, the significance of effect for construction vibration is **Minor (Not Significant)**. It should be noted that construction works would be short-term in nature and would be reduced further through the implementation of the CNMP.
- 6.9.7 Operational noise assessed using TGN(E)322³⁴ and BS4142³⁵ standards against receptors classified as Medium sensitivity (i.e., in the absence of high sensitivity receptors within the operational study area), is predicted to have **Negligible (Not Significant)** impact at all NSRs, requiring no mitigation.
- 6.9.8 Cumulative operational noise from nearby developments is also considered **Negligible (Not Significant)**.
- 6.9.9 Any overlapping construction schedules will be managed through updates to the CNMP to avoid significant cumulative effects.

Kellas Alternative Alignment

- 6.9.10 There are no additional NSRs associated with the Kellas Alternative Alignment and therefore no additional construction or operational noise impacts are predicted.

6.10 Cumulative Assessment

- 6.10.1 A cumulative assessment has been carried out to look at how different effects might combine and be experienced together by a sensitive receptor. When combined, these effects can sometimes be more significant than when considered on their own. This is known as effect interactions.
- 6.10.2 To identify where effects might overlap, each chapter (or topic) of the EIA Report was reviewed. Shared receptors that could be affected by more than one topic were identified, and the remaining (residual) effects from each were recorded. For these, it was then considered whether any overlapping effects could combine, and if so, whether together they would be of the same or greater importance than each effect on its own.
- 6.10.3 As explained in Section 5 of this NTS, there are three proposed substation developments that are part of the wider network transmission upgrade and are linked to the Proposed Development. These are:
- Fanellan substation (planning reference: 25/00826/FUL);
 - Greens 400 kV substation (planning reference APP/2024/1927); and
 - Netherton Hub (planning reference APP/2024/1714).
- 6.10.4 The cumulative assessment included the effects from these substations as well as the Proposed Development to ensure that all elements of the wider network transmission upgrade project were included where relevant to a particular sensitive receptor.
- 6.10.5 During the construction phase, potential overlapping effects were identified for residential receptors living in nearby homes and transport users. During the operational phase, the only group identified as being affected by multiple topics was residential receptors living in nearby homes.

³⁴ National Grid, 2021, Technical Guidance Note TGN(E)322: Operational Audible Noise Assessment Process for Overhead Lines. Available at: [https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN020024-000178-5.3.14H%20Appendix%2014H%20National%20Grid%20Technical%20Guidance%20Note%20TGN\(E\)322%20\(2021\).pdf](https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN020024-000178-5.3.14H%20Appendix%2014H%20National%20Grid%20Technical%20Guidance%20Note%20TGN(E)322%20(2021).pdf)

³⁵ UK Government (2014). British Standard 4142: Methods for rating and assessing industrial and commercial sound (BS 4142), BSI, 2014, Amended 2019.

Construction

- 6.10.6 Residential receptors living close to the Proposed Development may experience an interaction of effects due to the combination of construction noise and vibration impacts, construction traffic impacts, private water supply impacts, flood risk and changes to visual amenity. These effects would be temporary, intermittent and short-term. The predicted effect interactions would lead to a localised magnification of effects and would be **Minor Adverse (Not Significant)**.
- 6.10.7 Users of transport close to the Proposed Development may experience an interaction of effects due to the combination of construction noise and vibration impacts, construction traffic impacts, flood risk and changes to visual amenity. These effects would be temporary, intermittent and short-term. The predicted effect interactions would lead to a localised magnification of effects and would be **Minor Adverse (Not Significant)**.

Operation

- 6.10.8 Residential receptors living close to the Proposed Development and the proposed substations (Fanellan substation, Greens 400 kV substation or Netherton Hub) may experience an interaction of effects due to the combination of operational noise and vibration impacts associated with the substations, and changes to visual amenity from the Proposed Development and the proposed substations. However, the interactions are anticipated to be **Minor Adverse (Not Significant)** at all three substations.
- 6.10.9 It should be noted that the cumulative visual effects reported consider a worst case, as the assessment reports the effects at the opening year of the Proposed Development in winter. During the summer months, the screening of some views may occur due to additional leaf cover.

7 CONCLUSION

- 7.1.1 This Non-Technical Summary provides a summary of the EIA Report for the Beaulay to Blackhillock to New Deer to Peterhead 400 kV OHL Project. The main findings of the EIA are summarised for the Proposed Development, concluding that likely significant residual effects (i.e.) after mitigation are predicted for:

Landscape and Visual

- Significant landscape effects on The Spey Valley SLA and the Deveron Valley SLA at a localised level where the Proposed Development passes through the SLA during construction and operation.
- Significant effects on a number of LCT areas during construction, and operation (either short-term with mitigation planting reducing the effect to non-significant or a long-term permanent effect), and either at a local level or affecting wider LCT characteristics.
- Significant visual effects for a number of residential, recreational and transport receptors during construction and operation, some of which would reduce to non-significant over time due to maturation of mitigation planting.
- Significant cumulative landscape and visual effects have been identified when the Proposed Development is considered in combination with either other SSEN Transmission or 3rd party developments.

Ecology

- Significant effects on bats at a local level.
- Significant effects on loss of blanket bog and nationally important woodlands, including ancient woodland (of semi-natural origin).

Forestry

- Significant effects on ancient woodland (of semi-natural origin) and native woodland due to loss of an irreplaceable habitat to facilitate construction.

Heritage

- Significant effect on a non-designated asset, prehistoric hut circle, within the LoD.
- Significant effect on the setting of the scheduled monument Mains of Daviot Farm, ring cairn and stone circle 600 m NNE of (SM3085). This would be reduced to not significant subject to separate Town and Country Planning consent to enable an existing 275 kV OHL to be undergrounded.
- Significant effect on the setting of the scheduled monument Hare Stone, stone circle 480 m NW of Feith-Hill (SM338), however the impacts are not significant in relation to the integrity of the setting of the stone circle, as the setting would be retained in key aspects that still allow for the stone circle to be understood, appreciated, and experienced.

Recreation and Tourism

- Significant effect on recreational users and tourists of Woodlands including: Daviot Wood, The Aird and Clunas Wood within The Highland Council boundary due to tree removal, presence of construction activities and reduced tranquility and visual changes for users of the woodland.
- Significant effect on recreational users and tourists of Woodlands including: Speymouth Forest, Moss of Bednawinny and Badentinan Wood within Moray Council boundary due to tree removal, presence of construction activities and reduced tranquility and visual changes for users of the woodland.

Kellas Alternative Alignment

- 7.1.2 The assessment of the Kellas Alternative Alignment concluded that the likely significant residual effects would be no different from the significant effects identified for the Proposed Development for all topics except Landscape and Visual. For Landscape and Visual there would be changes from **Not Significant** to **Significant** residual effects predicted for a localised portion of one LCT, two additional residential receptors, one recreational receptor group and one transport receptor group.

Appendix A Figures