Scottish & Southern Electricity Networks

TRANSMISSION

Netherton Hub 400kV OHL Connection to New Deer and Peterhead: Tie-In

Environmental Appraisal Report

Volume 3 Appendix 1.1: EIA Screening Request

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Scottish & Southern Electricity Networks

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Dear Sir / Madam

New Deer 1 to Peterhead Overhead Line Diversion

THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 |
REQUEST FOR AN EIA SCREENING OPINION (REGULATION 8)

Please find enclosed a formal request for an Environmental Impact Assessment (EIA) Screening Opinion under Regulation 8 of The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017, hereafter referred to as the 'EIA Regulations'.

Scottish and Southern Electricity Networks Transmission (hereafter referred to as 'SSEN Transmission'), operating under licence held by Scottish Hydro Electric (SHE) Transmission plc, owns, operates and develops the high voltage electricity transmission system in the north of Scotland and remote islands. Scottish Hydro Electric Transmission plc (the Applicant) intends to submit an application seeking consent under section 37 (s37) of the Electricity Act 1989 to facilitate a tie-in of the existing New Deer – Peterhead overhead line (OHL) to the separately proposed Netherton Hub to the west of Peterhead. This tie-in to the Hub is hereafter referred to as the 'Proposed Development', and comprises the following:

- a permanent diversion of the existing New Deer to Peterhead 400 kV OHL into a new 400 kV substation proposed as part of the Netherton Hub and removal of the associated length of the existing OHL. The diversion, referred to as the 'Tie-In' is split into an 'In' leg, stemming from the existing New Deer – Peterhead OHL to the Hub substation, and an 'Out' leg, connecting the substation back out to the existing OHL.

These works, together with associated works described in **Section 1.3** below, comprise the 'Proposed Development'.

In order to assist the request, this letter includes:

- a plan identifying the location of the Proposed Development (**Figure 1**);
- a description of the nature and purpose of the Proposed Development;
- factual information regarding the sensitivity of the site and the surrounding area (**Figure 2**);
- a description of the potential for environmental effects based on the information reviewed and knowledge held at this time; and
- a summary of the proposed mitigation measures.

By way of summary, it can be demonstrated that, with appropriate mitigation, the Proposed Development is unlikely to lead to any significant effects, as explained further in this request for a screening opinion.

1.1 The Purpose of the Proposed Development

SSEN Transmission has a statutory duty under Schedule 9 of the Electricity Act 1989 to develop and maintain an efficient, coordinated and economical electrical transmission system in its licensed areas. Where there is a requirement to extend, upgrade or reinforce its transmission network, SSEN Transmission's aim is to achieve an environmentally aware, technically feasible and economically viable route which would cause the least disturbance to the environment and the people who use the area.

The diversion of the existing New Deer to Peterhead 400 kV OHL into a 400kV alternating current (AC) substation within the Netherton Hub is required to integrate the new substation site into the existing network and maximise the transfer capability between the new Hub substation and the wider transmission network to increase network security.

The 'In' leg of the Proposed Development would be located between a point on the existing OHL approximately 8.6 km west of Peterhead Substation and the Netherton Hub approximately 2.6 km south east of Longside. The 'Out' leg would be located between the Netherton Hub and a point on the existing OHL approximately 5 km west of Peterhead Substation.

The Proposed Development sits adjacent to a second connection considered in parallel to this one, comprising a rebuild of the last 5.2 km (approximately) of the existing OHL as it approaches the existing Peterhead Substation, referred to as the Netherton Hub 400kV OHL Connection to New Deer and Peterhead: Rebuild (hereafter referred to as 'the Rebuild').

1.2 EIA Screening

The Proposed Development is not covered under the developments listed within Schedule 1 of the EIA Regulations. It is, however, considered that the Proposed Development can be classified as Schedule 2 under Regulation 2(1) and paragraph 2 (a) by virtue of it being; *"an electric line installed above ground with a voltage of 132 kilovolts or more".*

Assuming the Proposed Development is classified as Schedule 2, it must be determined whether or not the Proposed Development will require to be supported by an EIA Report.

Regulation 3(3)(b) of the EIA Regulations requires that the criteria set out in Schedule 3 (matters to be taken into account under Regulation 3(3) and (4)) be taken into account during EIA Screening. These are:

- characteristics of the development;
- location of the development; and
- characteristics of the potential impact.

The following sections of this letter aim to fulfil the remaining requirements of Schedule 3 and assist the Scottish Ministers in reaching a decision on whether the planning application should be accompanied by an EIA.

1.3 The Characteristics of the Proposed Development

Design Components

Design is at an early stage but currently comprises:

- diversion of the existing 400 kV OHL from a point approximately 8.6 km west of the Peterhead Substation into Netherton Hub via a new 400 kV OHL approximately 3.3 km in length;
- connection from Netherton Hub back out to a point on the existing OHL approximately 5.0 km west of Peterhead Substation via a new 400 kV OHL approximately 2.0 km in length;
- removal of approximately 3.7 km of existing OHL between the diversion points into and out of Netherton Hub; and
- installation of a temporary OHL circuit to facilitate the transfer of the connection between the existing OHL and Netherton Hub.

A Site Location Plan for the Proposed Development is provided in **Figure 1**. The figure displays the potential alignments for the 'In' leg and 'Out' leg of the Tie-In. The characteristics of potential impacts, given in **Table 1** later in this letter, are based on these potential alignments.

Permanent OHL Diversion

The Proposed Development will include installation of new steel lattice towers to divert the existing alignment connecting the Netherton Hub Substation with Peterhead 400kV Substation. These would likely comprise steel lattice towers from the SSEN Transmission ASTI SSE400 tower suite. The typical height for the ASTI SSE400 tower suite is approximately 57 m, with a maximum standard height of up to 70 m.

In total, approximately to 5.3 km of new 400kV OHL is anticipated to be installed, and approximately 3.7 km of existing OHL is anticipated to be removed.

Temporary Diversion

To facilitate the permanent diversion of the existing alignment, temporary diversion works would be required.

The temporary diversion is required to move one circuit a safe distance away from each tower forming the stretch of existing OHL to be dismantled; this circuit is then re-energised, and the other circuit is then taken under outage to allow the dismantling works to take place. This maintains the network with at least one circuit in operation.

The temporary diversions would use steel lattice towers on a temporary basis and are anticipated to be in place for longer than six months. The exact route of the temporary diversion is not yet finalised. Factors including ground conditions and environmental constraints will be considered when completing the design.

Embedded Mitigation

The layout and design of the Proposed Development has specifically considered the potential effects on nearby sensitive receptors and features of the surrounding environment, seeking to minimise cumulative landscape and visual impacts with similar nearby developments. The potential alignments have been defined through consideration of existing or proposed transmission infrastructure, separation distance from residential properties, and opportunity to avoid known sensitive environmental receptors, such as Class 1 Peatland and Drinking Water Protect Areas, as shown on **Figure 2**.

The potential for ecological, heritage, noise and landscape and visual impacts will be considered further as part of the design development process. The Proposed Development is being designed collaboratively with nearby similar developments to minimise cumulative impacts.

General Mitigation

A Construction Environmental Management Plan (CEMP) will be implemented during the construction of the Proposed Development. This will include best practice construction management measures to manage potential risks to the environment.

Construction good practice includes tried and tested mitigation measures, which would be implemented. The CEMP will specifically include SSEN Transmission's set of General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs) that are applied as a standard requirement to all SSEN Transmission construction sites and practices. The GEMPs set out a range of topic specific best practice measures which must be complied with by the Contractor. The SPPs have been developed in conjunction with NatureScot to ensure construction activities do not have adverse effects on key protected species.

Cumulative Development

The cumulative effects of the Proposed Development will be considered in two ways:

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

1.4 The Location of the Proposed Development

Site Context

The Proposed Development is located mostly within a rural area west of the settlement of Peterhead, Aberdeenshire. The Proposed Development sits within the NatureScot LCT 17 Coastal Agricultural Plain Landscape Character Type, which is characterised by low-lying and very gently undulating landform, arable farming and a well-settled landscape of dispersed farms. The location is provided in **Figure 1**.

The Site is overlapping agricultural land, class 3.1 and 3.2 (which comprises modified agricultural grassland and woodland). The land on which the Proposed Development would be situated varies between approximately 55 m and 90 m Above Ordnance Datum (AOD). There are multiple Private Water Supplies in close proximity to the Proposed Development.

There are several residential receptors within the vicinity of the Proposed Development, as well as public roads and paths. Key sensitivities include landscape character and visual amenity relating to local residents and visitors (including outdoor enthusiasts and walkers) using the minor roads located between Netherton Hub and Peterhead Substation.

Environmental Context

The following designated heritage assets are located within 250 m of the study areas:

- Blackhill House (Ref: LB16395) A grade B Listed Building located approximately 120 m south;

As shown on **Figure 2**, other designated heritage assets are present in the wider area.

The following statutory and non-statutory ecology and cultural heritage designated sites have been identified within 5 km of the study areas, as shown in **Figure 2:**

- Hill of Longhaven Site of Special Scientific Interest (SSSI) is located approximately 1.75 km south east;
- Moss of Cruden SSSI is approximately 2.9 km south;
- The 'Out' leg lies partially within Skelmuir Hill, Stirling Hill, Dudwick Local Natural Conservation Site;
- Several woodlands recorded as 'ancient and native woodland of semi-natural origin' on the Ancient Woodland Inventory (AWI).

Hill of Longhaven Quarry a Geological Conservation Review site (GCR) is located approximately 1.8 km south east of the Proposed Development. There are no internationally or nationally important designated sites relevant to hydrology, geology and hydrogeology within 1 km. The development site is underlain by mineral gleys, and peatland habitats are not typically found on such soils. In addition, the Scottish Environment Protection Agency's (SEPA's) indicative flood risk mapping suggests that the alignments lie partially under areas of high and medium surface flood risk.

The closest noise sensitive receptors include residential dwellings situated near the Proposed Development.

There are no landscape designations located within 5 km of the Proposed Development.

Programme

It is anticipated that construction of the Proposed Development would take place over approximately 24 months, following the granting of consents, although a detailed programme of works would be the responsibility of the Principal Contractor in agreement with SSEN Transmission.

Construction is currently estimated to start in July 2027 with completion in July 2029 however this is subject to formalisation by the Principal Contractor.

Use of Natural Resources

The Proposed Development would not result in any significant natural resource use during construction. No borrow pits are likely to be needed, and soil arisings from excavations would be reused as the main backfill material in conjunction with the associated proposed OHL diversion works.

Waste

Engineering cut for tower foundations would likely generate an insignificant amount of soils and spoil and SSEN Transmission aim to achieve a cut / fill balance as far as possible. As such, no significant waste is anticipated to arise during the construction of the Proposed Development. Litter and general construction waste would be managed in accordance with the current waste regulations. No operational waste generation is anticipated. Therefore, no significant effects would be likely to arise as a result of waste generation during construction or operation.

1.5 Characteristics of the Potential Impact

Table 1 provides a summary of the baseline information relevant to each environmental aspect and considers the potential for the Proposed Development to give rise to significant environmental effects. As noted earlier in **Section 1.3**, the summary is based on the potential alignments for the Proposed Development.

Table 1: Review of Proposed Development against Environmental Sensitivities as identified within Schedule 3 of the Regulations

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
Landscape Character and Visual Amenity	<u>Landscape Designations</u> The Aberdeenshire Council Special Landscape Area (SLA), the North East Aberdeenshire Coast, lies 5.9 km to the north east and 7.4 km to the south east of the tie-in alignments.	Any effects would be in relation to inter-visibility between the Special Landscape Area and the OHL. It is likely that, due to the distance, topography and intervening built form and vegetation, there would be limited potential for any significant effects upon the attributes and key characteristics of these designations. Any inter-visibility would be localised and seen in the context of existing OHL infrastructure and would not be likely to compromise any of the key qualities, attributes or characteristics of the designated landscapes. Consequently, **significant effects are unlikely**.
	<u>Landscape Character</u> The tie-in alignments lie within the NatureScot Landscape Character Type (LCT) 017[1] Coastal Agricultural Plain, a low lying gently undulating landscape. The area is used primarily for mixed agriculture, arable and grazing by livestock, with fairly extensive areas of moss and wetland. There are large open geometric fields with hedge and fencing as boundaries. There is occasional coniferous forest with limited broadleaf woodland often used as shelter belts and tree belts alongside highways and surrounding farmsteads or individual residential properties. The landscape is well settled with farms, residential properties and small settlements. Communication masts and wind turbines are present. Several transmission OHLs are present within the local landscape radiating from the Peterhead Substation. Major roads cross the area.	The Proposed Development is a permanent diversion of the existing New Deer 400 kV OHL on steel lattice towers, through the new 400kV substation at Netherton Hub, 4.2 km west of Peterhead. The tie-in connection is anticipated to include a diversion from the existing line near to Newton of Ludquharn, to the north east. Two terminal towers would take the diverted line into and out of the proposed new substation. The new terminal towers would be bulkier in appearance (taller, wider body and longer arms) than the existing OHL towers. A section of existing OHL between Newton of Ludquharn and Toddlehills would be demolished and removed permanently. The diversion of the New Deer OHL would necessitate the felling of some trees and hedgerow; however, this potential removal would be minimised where possible. The new OHLs and terminal towers would result in a change to the landscape character, in a localised area surrounding Netherton Hub with the **potential for significant effects.** There would be adverse effects due to introduction of the new overhead line but also beneficial effects arising from the removal of existing OHL on a ridgeline and the siting of the new OHL at a lower elevation. The loss of some vegetation would alter the local character in some locations of the LCT, however the potential loss is considered to be minimal with few areas of woodland affected.

[1] NatureScot Landscape Character Types, descriptions available at

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	Visual Amenity The key sensitive visual receptors for the Proposed Development would include the following: • Residential receptors on the outskirts and from within nearby settlements, isolated farmsteads and groups of individual properties; • Users of the nearby highways such as A950, minor lanes and unclassified roads; • Aberdeenshire Council Core Paths; • Recreational routes such as the regional the Formantine to Buchan Cycle Trail. The extent of study areas, methodology and location of representative viewpoints would be agreed with Aberdeenshire Council before fieldwork commenced.	The introduction of the new OHL would give rise to potential visual effects, and the requirement for larger towers (including bulky terminal towers) has the potential to increase their visual prominence. Topography and vegetation would provide some screening of lower portions of the towers however the open gently undulating landscape allows long distance views of tall structures. For existing visual receptors of the New Deer OHL, the permanent OHL would contain taller and bulkier infrastructure making them potentially more prominent in wider views. Considering the substation location, the local topography, limited vegetation present and the proximity of sensitive receptors the Proposed Development has the potential to create significant effects. Effects would be adverse for some visual receptors and beneficial for others with the removal of the existing OHL. It is anticipated that there is **potential for significant effects on visual amenity**. Avoidance / Mitigation / Compensation: Mitigation in the form of carefully considered tower placement and potentially tree and shrub planting (reinstatement and screening) would help limit the prominence of the OHL. Careful alignment design would help to minimise visual impacts, whilst planting would help minimise the opening up of views and screen the lower portions of the towers. Collaboration with the Netherton Hub design team would ensure a coordinated approach to screening to help reduce the potential prominence of the OHL diversion and its effect on visual amenity.
Ecology and Ornithology	Designated Sites: The following protected areas for biodiversity (ecology and ornithology interests) which have been designated at a European or International level were identified within a provisional search area of 10 km beyond the Proposed	There is **no potential** for effect pathways on Buchan Ness to Collieston SAC due to a lack of structural and / or hydrological connectivity, and no anticipated impacts to air quality. For the designated site with qualifying ornithological interests other than geese (Buchan Ness to Collieston Coast SPA), most qualifying interests are specialist marine species nesting on cliffs and foraging at sea. Therefore, the Proposed Development and surrounding comprises wholly unsuitable habitat for these species.

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	Development. The search was extended to 20 km to account for the predicted maximum foraging range of greylag goose and pink-footed goose[2]: • Buchan Ness to Collieston SAC (6.5 km southeast, along the coast) – designated for vegetated sea cliffs. • Buchan Ness to Collieston Coast SPA (5.4 km south east, along the coast) – designated for breeding fulmar, guillemot, herring gull, kittiwake, shag and seabird assemblage. • Loch of Strathbeg SPA and Ramsar (12.4 km north) – designated for breeding sandwich tern, and non-breeding/overwintering goldeneye, teal, greylag goose, pink-footed goose, Svalbard barnacle goose, whooper swan and waterfowl assemblage – as well as eutrophic loch habitat under the Ramsar citation. • Ythan Estuary, Sands of Forvie and Meikle Loch SPA (12.5 km south) – designated for breeding common tern, Sandwich and little tern, and non-breeding/overwintering eider, lapwing, redshank, pink-footed goose and waterfowl assemblage. There are no protected areas for biodiversity at a national or local scale within 2 km of the Proposed Development.	One qualifying species of the European site, herring gull, could potentially forage on arable farmland within a relevant Ecological Zone of Influence (EZoI) of the Proposed Development. However, works to facilitate the Proposed Development are relatively localised in comparison to the availability of farmland in the wider surrounding area which is very extensive. Further to this, gulls are relatively tolerant of human activities, e.g., they will follow ploughing operations and scavenge discarded food items in towns and cities. Collision risk with the OHL for herring gull is unlikely considering their visual acuity and relative flight agility. **Significant effects are unlikely.** For designated sites with qualifying ornithological interests including geese (Loch of Strathbeg SPA and Ramsar and Ythan Estuary, Sands of Forvie and Meikle Loch SPA), **significant effects are unlikely**. A Habitats Regulations Appraisal (HRA) screening exercise for the adjacent, related project Netherton Hub concluded that there is occasional use of the EZoI by geese but not frequently enough to classify as Functionally Linked Land, therefore no Likely Significant Effects were identified. Surveys undertaken in 2023-2024 to inform the HRA screening for Netherton Hub and a previous iteration of the Proposed Development had near complete overlap with a relevant study areas for the Proposed Development and included goose field use surveys and Vantage Point (VP) surveys. The HRA screening for the related project did not consider collision risk, only disturbance and displacement effects, as the related project does not involve construction of an OHL. However, the baseline data is sufficient to assess the likelihood of collision risk from the Proposed Development for geese. The goose field use surveys indicate low use of the study areas by foraging geese and VP surveys recorded infrequent goose flights. Given the low use of fields by geese within and near the Proposed Development, most flight activity is predicted to involve commuting birds at significant heights above the OHL on route to and from Loch of Strathbeg SPA and Ramsar. <u>Avoidance / Mitigation / Compensation:</u> A HRA screening would be prepared to qualify there is no potential for likely significant effects on European sites.

[2] SNH (2016). Assessing connectivity with Special Protection Areas. Available at: https://www.nature.scot/doc/assessing-connectivity-special-protection-areas

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	Habitats There are no woodlands within the Proposed Development which are listed on the Ancient Woodland Inventory (AWI). There appears to be one area of Class 1 peatland[3] adjacent to the Proposed Development near Nether Kinmundy. From a review of aerial imagery and existing field data collected for the Netherton Hub project, the Proposed Development appears to predominantly comprise modified / managed habitat types such as cropland, modified grassland, plantation woodland; and developed land including residential properties, farmyards, roads, and industrial areas. There are likely to be hedgerows delineating field boundaries and minor roads; and watercourses and drainage ditches. Some areas of grassland may be relatively wetter / damp. There also appear to be pools of standing water, relatively isolated within arable fields. Overall, the habitat types appear to be typical of the North East landscape. With the exception of native woodlands and hedgerows which comprise a minor extent of the Proposed Development. The habitats are likely to have relatively low biodiversity value.	The permanent footprint would be limited tower bases, i.e., relatively minor. The temporary footprint would likely include routes for access and laydown areas; land that is subject to management as crop or grassland would be likely to recover within 2 years post-construction. The section of existing OHL to be dismantled would create opportunity for restoration of habitats in keeping with the surrounding land use. There is **low potential** for modified / managed / developed land to be significantly affected by the Proposed Development. At this early stage, there is **low potential** for the Proposed Development to adversely affect habitats of greater importance e.g., Ancient Woodland and Class 1 peatland, because preferred alignments are yet to be established. Avoidance / Mitigation / Compensation: Field-based habitat surveys will be undertaken of the study areas to gain site-specific classification and condition data. As the designs progress, the mitigation hierarchy will be applied. Avoidance / retention of Class 1 peatland will be prioritised as far as reasonably possible. If the area of Class 1 peatland is unavoidable and further surveys corroborate the land to be priority peatland, a Peat Management Plan would be prepared. A Biodiversity Net Gain (BNG) assessment will be undertaken to quantify the pre-development biodiversity value of habitats within the permanent and temporary footprint using factors such as habitat distinctiveness, condition, and strategic significance. The BNG assessment will also review the post-development biodiversity value and inform the requirement for habitat enhancement or creation to deliver a minimum 10% net gain in biodiversity units. The BNG assessment will follow prevailing guidance.
	Species Field surveys for protected species have not been undertaken at this stage; however existing data has been reviewed from surveys undertaken for the	There is **moderate potential** for disturbance to badgers from construction works, loss of setts, loss of foraging habitat, injury to individuals, and displacement of social groups.

[3] Class 1 represents nationally important carbon-rich soils, deep peat and priority peatland habitat; areas likely to be of high conservation value. As identified from the Carbon and Peatland 2016 Map, online at: https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/soils/carbon-and-peatland-2016-map

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	connected Netherton Hub project and nearby Eastern Green Link 3 underground cable project. <u>Badger</u> Badgers are known to be active within the North East region with a relatively high population density. The Proposed Development is in an area comprising primary and secondary foraging habitat for badgers. Specific information on sett locations has not been disclosed due to their ongoing persecution. <u>Bats</u> Trees and buildings within the vicinity of the Proposed Development could have potential roost features for bats. Low levels of bat activity were recorded during surveys for the Netherton Hub project, although surveys were seasonally limited. <u>Otter</u> Otter spraints were recorded during surveys for the Netherton Hub project. Otters are likely to use watercourses, drainage ditches, and riparian corridors within the Proposed Development area. <u>Water vole</u> Water voles in north east Scotland have been documented to live as metapopulations, which comprise a network of fragmented colonies with low numbers of individuals[4]. The species is able to retain genetic diversity through dispersal and movement between sites and new suitable habitat within a metapopulation[5]. Potential water vole droppings have recently been collected for DNA analysis during field surveys for a project nearby. It is plausible that water voles may be present along drainage ditches and watercourses within the Proposed Development area. <u>Salmonids</u> Atlantic salmon and migratory brown trout are known to be present within the Ugie catchment from recent engagement with the Ugie District Salmon Fishery	There is **low potential** for bats to be affected by disturbance from construction works, injury to individuals, and loss of tree roosts (if any). There is **low potential** for siltation of drainage ditches or watercourses, and other pollution events, which could affect species reliant on the watercourses (e.g., otter, water vole, salmonids). There is also **low potential** for these species to be affected by disturbance during construction, from habitat loss/ degradation, displacement, injury to individuals, and from loss of resting sites and spawning sites. There is **low potential** for collision risk, disturbance or displacement-related effects on breeding birds, considering a lack of records of sensitive species within the area of the Proposed Development. Considering the potential for collision risk to barn owl, a species that may forage within the Proposed Development footprint, this species typically hunts at low level to the ground and is unlikely to be at significant risk of collision. There are unlikely to be any effects on other protected species, given their perceived absence from the study areas. <u>Avoidance / Mitigation / Compensation:</u> Surveys for protected species will be undertaken along the preferred alignment and surrounding areas, by capable ecologists following prevailing guidelines. The results will inform the requirement for additional mitigation measures to ensure compliance with legal obligations and policy. As the designs progress, the mitigation hierarchy would be applied. If any resting sites (e.g., badger setts, water vole burrows) are identified, these would be avoided/ retained as far as reasonably possible. The CEMP, GEMPs and of particular relevance here, the SPPs would be implemented. An Environmental Clerk of Works (EnvCoW) would be appointed to monitor and report on compliance with good environmental practices and legal obligations, and

[4] Stewart, W. A., Dallas, J. F., and Piertney, S.B. (1999). Metapopulation Genetic Structure in the Water Vole, Arvicola terrestris, in NE Scotland, Biological Journal of the Linnean Society , 68: 159 – 171.

[5] Aars, J., Lambin, X., Denny, R. and Griffin, A. (2001). Water Vole in the Scottish Uplands: Distribution Patterns of Disturbed and Pristine Populations Ahead and Behind the American Mink Invasion Front. Animal Conservation 4, 187 – 194.

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	Board as part of the Netherton Hub project. These species are likely to use watercourses within the vicinity of Proposed Development. <u>Breeding birds</u> Habitats within and surrounding the Proposed Development mainly comprise arable farmland considered of relatively low value for ornithological interests. Species present mainly comprise farmland passerines (songbirds) which are generally not considered at risk of significant impacts from OHL developments. A Scarce Breeding Bird Survey (SBBS) was undertaken in 2023, incorporating land extending to 2 km beyond the related Netherton Hub project and therefore partially overlapped with the Proposed Development. There was no evidence of breeding by species potentially sensitive to effects from the Proposed Development e.g., Schedule 1 raptors or common crane, the latter species known to breed in small numbers in the North East region. Barn owl was recorded incidentally during surveys to inform assessment of the related Netherton Hub project, comprising a bird disturbed from a roost site. The Netherton Hub project footprint includes farm buildings which are potentially suitable for breeding barn owl. There is potential for barn owl to forage within the Proposed Development. <u>Other protected species</u> Protected species which have not been covered above are considered likely absent from the Proposed Development area and/ or the prevailing habitats/ features within are likely to be suboptimal or not of key importance for the species. This includes pine marten, red squirrel, beaver, wildcat, reptiles, great crested newt.	any additional mitigation measures identified. An Ecological Clerk of Works (ECoW) or Project Ecologist would be appointed for specialist advice where required. General mitigation measures for wildlife welfare and to minimise disturbance would include ensuring that lighting is aimed away from sensitive features and ensuring that any excavations are either left covered or with a means of egress for mammals. Vegetation clearance would be minimised as far as reasonably possible and undertaken outwith the nesting bird season wherever possible. If not possible, clearance would be preceded by a check for nesting activity by a suitably experienced ECoW / Project Ecologist. If an active nest site is identified, works would cease around the nest until it becomes inactive (e.g., chicks fledged). This is detailed further in the bird SPP. Any in-channel works at watercourses and drainage ditches (which are considered unlikely due to the type of Proposed Development) would be undertaken outside of the closed salmon season. With application of the above measures and with reference to the baseline for the majority of species and minor permanent footprint, **significant effects on breeding birds, bats, otter, water vole and salmonids are unlikely**. Whilst there is moderate potential for impacts to badgers, given the abundance of highly productive habitat in the surrounding area, high density of badgers in the North East region, and temporary and localised scale of construction works, **significant effects on badgers are unlikely**.
Cultural Heritage	There are no World Heritage Sites, Gardens and Designed Landscapes (GDLs), Conservation Areas, or Historic Battlefields within 2 km of the Proposed Development. There are no Listed Buildings, Scheduled Monuments, or Conservation Areas within the Proposed Development.	The Proposed Development is unlikely to adversely impact the Listed Buildings or Scheduled Monuments noted. The setting of the scheduled monument of Easterton of Lenabo Airship Station (SM13679) is not an important element in its cultural significance, and the Proposed Development would replace the existing OHL to the north of this monument. St John's Episcopal Church (LB9419) is at such a distance that the Proposed Development would not be a prominent feature in the landscape

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	There are four non-designated heritage assets within the Proposed Development boundary. These are post-medieval and relate to agricultural and settlement activity within the area. There is one Scheduled Monument located within 2 km of the Proposed Development, Easterton of Lenabo, airship station (SM13679) located 1 km to the south west. There is one Listed Building within 2 km of the Proposed Development, St. John's Episcopal Church, Longside (Category B) (LB9419) located 1.9 km to the north of the Proposed Development.	and would be added to a landscape with other transmission and distribution infrastructure. There is potential for direct, physical impacts to non-designated heritage assets within the Proposed Development. However, these can be mitigated through demarcation and avoidance and preservation by record. There is potential for impacts to unknown sub-surface archaeological remains given the presence of known archaeological remains within the Proposed Development. The potential adverse impacts on known non-designated and designated heritage assets are **not considered likely to result in significant effects.**
Hydrology, Geology and Hydrogeology	<u>Designated Sites</u> NatureScot SiteLink[6] shows that there is one nationally important designated site relevant to hydrology, geology and hydrogeology within 1 km of the Proposed Development, Hill of Longhaven SSSI & GCR. The Hill of Longhaven is of considerable geomorphological interest for a classic exposure of the deeply weathered granite of north east Scotland. The exposure shows one of the best examples of the granular disintegration of granite to a poorly coherent 'grus', which is the product of long-continued weathering processes under humid-temperate conditions beginning in the Neogene and continuing through the Quaternary interglacial periods <u>Geology and Soils</u> British Geological Survey (BGS) GeoIndex Onshore map viewer[7] indicates the Proposed Development is underlain by Forest of Deer Pluton (Melagranite and Biotite), Collieston Formation (Pelite, Semipelite and Psammite), and Peterhead Pluton (Granite) bedrock formations and Banchory Till (Diamicton), Glaciofluvial Sheet Deposits (Gravel, Sand and Silt), and Head, 1 (Gravel, Flinty) superficial deposits.	**Impacts to PWS are the only likely potential significant adverse effects that are anticipated** during construction, subject to good layout design, adoption of construction good practice, compliance with SSEN Transmission GEMPs, and an approved Pollution Prevention Plan as part of the CEMP. Although there is a designated site present within 1 km of the Proposed Development (Hill of Longhaven), impacts to the geology (of which is the basis for the designation) are unlikely and therefore no likely significant adverse effects are anticipated for designated sites or geology. Peat and carbon rich soils are mapped within the 1km of the Proposed Development and will be confirmed through peat probing surveys. Although the Proposed Development has the potential to have an adverse effect on peat, the design will seek to avoid construction within deep peat as well as priority peatland of national importance and will minimise peat disturbance. The implementation of soil and peat management plan would mitigate any adverse effects on peat soils within the Proposed Development. There is the potential for adverse effects on water quality and / or quantity on PWS during construction and as such **there exists potential for significant adverse effects**.

[6] NatureScot Sitelink mapping [online]. Available at: https://sitelink.nature.scot/map [Accessed August 2024].
[7] BGS GeoIndex Onshore Map Viewer [online]. Available at: https://www.bgs.ac.uk/map-viewers/geoindex-onshore/ [Accessed: April 2025].

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	The National Soil Map of Scotland and the Carbon and Peatland 2016 map[8] indicates the Proposed Development is underlain by Humus-iron podzols, Noncalcareous gleys with peaty gleys, and Brown earths. The majority of the Proposed Development is underlain by noncalcareous gleys with peaty gleys. Areas of Class 1 *(Nationally important carbon-rich soils, deep peat and priority peatland habita*t typically present in these areas) are also present in small, localised areas within 1km of the Proposed Development. Hydrogeology and Hydrology According to BGS Hydrogeological Mapping[9], the Proposed Developments is underlain an unnamed igneous intrusion, (Ordovician to Silurian period) low productive aquifer, where small amounts of groundwater will be available in near surface weathered zone and secondary fractures as well as rare springs. The SEPA Water Classification Hub[10] indicates the Proposed Development is underlain by the Mintlaw groundwater body (ID: 150655), which was classified by SEPA under the Water Framework Directive (WFD) as having a 'Good' status in 2022. OS 1:50,000 scale mapping indicates that there are several unnamed watercourses, and field drains within 1 km Proposed Development. The SEPA Water Classification Hub indicates that there are two WFD classified watercourses within 1 km of the Proposed Development: The Faichfield Burn (ID: 23217) and the Burn of Ludquharn (ID: 23225). Both these watercourses were classified by SEPA under the WFD in 2022 as having an overall status of Moderate. UK habitat surveys (UKHab) and targeted national vegetation classifications (NVC) surveys will be carried out to inform the design prior to consents to identify habitats within 250 m of the Proposed Development which may have the potential to support Groundwater Dependent Terrestrial Ecosystems (GWDTE).	Habitat surveys will be carried out to identify any potential GWDTE habitats present within 250 m of the Proposed Development. These will be used to inform additional assessments to establish if groundwater or surface water runoff are likely to be the dominant soil water factors. Areas of high and medium flood risk are generally constrained to riparian zones. Any adverse effects associated with flooding would be mitigated by avoiding the placement of infrastructure within flood zones (where possible). All temporary surface water drainage arrangements would be designed in accordance with GEMPs and further details on drainage design will be presented in the CEMP therefore no likely significant adverse effects are anticipated for flood risk. **Operational significant effects are not anticipated** with the type of development. However, appropriate mitigation has been identified to alleviate this risk. Avoidance / Mitigation / Compensation: Any potential adverse effects on PWS would be mitigated prior to construction through careful tower placement and alignment design. Pollution prevention would be delivered through GEMPs, the CEMP, and a PWS Protection Plan where any excavation falls within 250 m of a PWS. Specific measures would be dependent on the nature and duration of the impact. PWS abstraction and source would be subjected to further investigation prior to construction.

[8] National soil map of Scotland [online]. Available at: https://map.environment.gov.scot/Soil_maps/?layer=10 [Accessed: April 2025]

[9] BGS GeoIndex Onshore Map Viewer [online]. Available at: https://www.bgs.ac.uk/map-viewers/geoindex-onshore/ [Accessed: April 2025].

[10] SEPA Water Classification Hub [online]. Available at: https://www.sepa.org.uk/data-visualisation/water-classification-hub/ [Accessed: April 2025]

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	The Scottish Government Drinking Water Protected Areas (DWPAs) – Scotland River basin district map[11] indicates that Proposed Development is located within 1km of a DWPA for surface water and DWPA for groundwater. According to Aberdeenshire Council private water supply (PWS) data, there are numerous PWS within 1 km of the Proposed Development. SEPA Flood Risk Management Mapping[12] indicates a potential for high-risk river flooding for the Faichfield Burn and Burn of Ludquharn, and their tributaries. There are small pockets of high-risk surface water flooding across the Proposed Development.	
Land Use and Forestry	The Proposed Development crosses the edge of a woodland block approximately 0.9 km north of the existing OHL. This woodland does not have any associated environmental designations. The Proposed Development is located within two areas classified by Scotland Soil's National Scale Land Capability for Agriculture[13]: • 3.1 – 'Land capable of producing a moderate range of crops with high yields of cereals and grass; and • 3.2 – 'Land capable of average production though high yields of barley, oats and grass can be obtained. Grass leys are common'.	A small area of trees may require to be felled in order to facilitate construction and maintain operational clearance distances. Any removal of trees / vegetation will be assessed and where required a programme of replanting and / or replacement would be implemented. Due to the small amount of tree removal and potential for future felling, **no significant effects are likely.** As the Proposed Development is located in high-quality agricultural land classification (Class 3.1, 3.2), there would be a minor potential for impact given the linear nature of the Proposed Development. Land use impacts associated with the tower foundations and access tracks are anticipated to be of low magnitude and localised. **No significant effects are likely**.
Noise	The closest noise sensitive receptors include residential dwellings situated near the Proposed Development. The closest settlement is Longside, which is located approximately 1.9 km north of the Proposed Development. The surrounding area is otherwise sparsely populated so baseline noise levels are expected to be generally low. Road traffic on local road network are sources of noise in the area.	There are Noise Sensitive Receptors (NSRs) near to the Proposed Development, and therefore there is potential for construction noise impacts. These would be temporary in nature and controlled through a Construction Environmental Management Plan (CEMP), and it is therefore considered that **significant effects are unlikely**. However, a cumulative construction noise assessment will be undertaken to determine the potential for impacts and, where necessary, identity appropriate mitigation measures in line with the guidance of BS 5228-1:2009+A1:2014.

[11] Scottish Government Drinking water protected areas maps [online]. Available at: https://www.gov.scot/publications/drinking-water-protected-areas-scotland-river-basin-district-maps/ [Accessed: April 2025].

12 SEPA (2022) Flood Maps [online]. Available at: https://map.sepa.org.uk/floodmap/map.htm [Accessed: August 2024]

[13] The James Hutton Institute: Land Capability for Agriculture in Scotland Land Capability for Agriculture in Scotland | Exploring Scotland | The James Hutton Institute

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
		A cumulative operational noise assessment will also be undertaken to determine the potential operational noise impacts and, where necessary, identify appropriate mitigation measures. At this stage, **significant effects are considered unlikely**. There are vibration-sensitive receptors near to the Proposed Development. Impacts would be limited to the construction phase and again controlled through the CEMP, and it is therefore considered that **significant effects are unlikely**. However, should design dictate that rock blasting is required a construction vibration assessment would be undertaken to determine the potential impact and, where necessary, identity appropriate mitigation measures in line with the guidance of BS 5228-2:2009+A1:2014.
Air Quality and Climate	There are no Air Quality Management Areas (AQMAs) within or adjacent to the Proposed Development. The Proposed Development passes through sparsely populated, rural area. Background air quality in the area is assumed to be good.	Emissions as a result of traffic and construction activities are likely during the construction phase of the Proposed Development. Any increase in emissions would be localised and temporary with air quality expected to remain within local air quality objectives. **No significant effects** on air quality are considered likely. The Proposed Development is part of the Pathway to 2030 series of projects. These projects have been identified as required to help achieve the UK and Scottish Government Net Zero targets to combat climate change and guarantee a secure and reliable supply of energy by delivering the vital infrastructure required. **No significant adverse effects are likely** to arise with respect to climate.
Population and Human Health	The area surrounding the Proposed Development is largely a rural, sparsely populated landscape, with multiple residential properties within the vicinity. The settlement of Peterhead is situated approximately 4.3 km east of the Proposed Development. There are no historic paths within 100 m of the Proposed Development. The surrounding area comprises mostly open fields and agricultural spaces. The existing tower structures and OHL operate and are maintained in accordance with all relevant health and safety legislation and guidelines.	The impacts on population and human health for a development of this nature and scale are limited and therefore **no significant effects during either the construction or operation phases are considered likely** in relation to population and human health.
Material Assets	Communication masts and wind turbines are present. Several transmission OHLs are present within the local landscape radiating from the Peterhead Substation.	The Proposed Development is not anticipated to impact any of the material assets identified. **No significant effects are likely** to arise in relation to material assets.

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
Major Accidents and Disaster	The potential for the risk of a major accident and disaster affecting the vulnerability of the existing OHL is likely to be limited to those associated with unplanned power outages, due to extreme weather or structural damage. Crisis management and continuity plans are in place across the SSE Group. These are tested regularly and are designed for the management of, and recovery from, significant energy infrastructure failure events.	The Proposed Development does not pose a greater risk to a major accident and disaster events than the existing OHL. Minimal clearance distances are set for construction of lines in order to minimise risk of contact from moving plant or vehicles. Vegetation below active lines is cleared and maintained so as to prevent contact with conductors. Warning signs are placed on all towers to warn of risk of electrocution and, where necessary, fencing or other barriers are installed around the base as a safeguard. Towers and their accessory components, such as insulators and brackets, undergo regular inspection and maintenance to prevent both structural and electrical failure. Towers are also positioned at a safe distance from residences and other properties so that the risk of damage or injury is minimal in the unlikely event of structural failure. As such, **no likely significant effects** are predicted due to the vulnerability of the Proposed Development to major accidents and disasters.
Cumulative Effects	A search was conducted for similar developments in close proximity to the Proposed Development submitted within the last 2 years. Some of the principal developments are listed below: • ENQ/2024/0106: Land at Netherton of Invereddie Longside Peterhead – National Development for Energy Hub • ENQ/2024/0486: Marram Wind Offshore Windfarm – Installation of Onshore Infrastructure • ENQ/2024/0953: Land North, North West and West of Peterhead – Onshore Transmission Infrastructure for Muir Mhòr Offshore Wind Farm • ENQ/2023/1286: Land North, North West And West Of Peterhead Aberdeenshire - Formation of Onshore Landfall Point, Laying of Underground Cable and Erection of Substation • ENQ/2022/1845: Substation Near New Deer Peterhead Aberdeenshire – Installation of Underground Cable	Cumulative effects from a noise and landscape and visual perspective may occur as a result of the convergence of several transmission projects in the area. The detailed programme for the construction phase works of the Proposed Development and the Netherton Hub Substation are not known at this stage. Notwithstanding this, it is possible that the two developments would be constructed at the same time. Taking into consideration the distance between the potential common receptors, the nature of the likely construction phase works and operational noise levels proposed for each of the developments, and careful design of alignments to retain separation distance from NSRs, it is considered that the noise generated by the Proposed Development is **unlikely to contribute significantly to cumulative noise** levels at the closest common NSRs. The aforementioned construction and operational phase noise assessments will consider all appropriate similar developments in the vicinity as part of cumulative assessment. In terms of landscape and visual cumulative effects, the OHL diversion would be seen in the context of the adjacent Netherton Hub and proposed new 400kV OHLs from Spittal and Peterhead, as well as other existing OHLs present in the wider area around Peterhead. It would temporarily be viewed in combination with the existing OHL it is replacing, until the circuit is energised and the existing OHL is dismantled.

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	• APP/2022/2161: Land North West of Four Winds Buckie Farm Boddam Aberdeenshire – Formation of a Cable Sealing End Tower Compound and Access (Approved) • APP/2023/1788: Land to the South West of Peterhead Grid Electricity Substation – National for Extension and Upgrade of Existing 275kV Electricity Substation (Approved) • APP/2024/1714: Netherton Hub - Land To The West Of Parkhill Farm, Blackhills, Peterhead – National for Erection of a Strategic Electricity Transmission Hub Including 400kV AC Substation, 132kV AC Substation, 2 HVDC Converter Stations, Transmission Hall, Spares Warehouse, Operations Base and Associated Works	The overall cumulative impact of the Hub, Proposed Development and various other proposed, approved and installed transmission infrastructure **may result in significant cumulative landscape and visual effects**. <u>Avoidance / Mitigation / Compensation:</u> The final design will be sensitive to other similar development in the immediate vicinity, making best use of proposed or installed alignments to rationalise infrastructure corridors and minimise visual envelopes. Tower design and sizing would, as far as practicable, be consistent with other OHL towers. The eventual removal of the existing OHL will serve to reduce overall cumulative effects in comparison with the construction stage of the Proposed Development.

1.6 Description of Measures to Avoid or Prevent Significant Adverse Effects

Regulation 8(3) allows the developer to include a description of any measures envisaged to avoid or prevent potential significant adverse effects on the environment. SSEN Transmission is proposing the following measures to minimise the potential effects identified as part of standard working procedures:

- Undertake further environmental survey work to understand the potential for impacts and use this to develop the design and where relevant, propose suitable mitigation to minimise environmental impacts.
- The commissioned landscape architect to liaise with the design teams involved in the adjacent OHL developments to ensure a holistic approach to mitigation throughout.
- A Construction Traffic Management Plan (CTMP) would be produced that sets out the measures that will be implemented to safely manage construction related traffic and limit impacts on the public road network.
- SSEN Transmission has developed SPPs, for construction works that may negatively impact upon protected species, including birds. The SPPs outline the procedures that must be followed where there is a potential for protected species to be present. Each SPP outlines the responsibilities of SSEN Transmission and its Contractors, legislative protection for the protected species, best practice measures to follow and an approved methodology for carrying out certain mitigation activities. This suite of SPPs has been approved by NatureScot and would be adopted where relevant to the project.
- SSEN Transmission has developed GEMPs relating to construction activities and issues likely to be encountered. These plans contain both general and specific guidance and would be adopted where appropriate.
- A CEMP would be developed by the successful contractor during the pre-construction phase. The principal objective of this document is to provide information on the proposed infrastructure and to aid in avoiding, minimising and controlling adverse environmental impacts associated with the Proposed Development. Furthermore, this document will aim to define good practice as well as specific actions required to implement mitigation identified in the EIA / Environmental Appraisal (EA), the licencing and consenting process. Mitigation measures relevant to the OHL will be incorporated into the relevant CEMP for the project. The CEMP would be updated during the pre-construction phase and would form part of the contract documents between SHE Transmission and the appointed construction contractor.
- Careful selection of alignments, tower locations and designs to be consistent with other nearby infrastructure development and minimise potential landscape, visual and cumulative landscape and visual impacts.
- Tower locations would be selected to avoid PWS, as far as practicable, and a PWS Protection Plan would be implemented to minimise any potential risk of adverse effects on quality or quantity of supplies.

We trust the foregoing demonstrates that, whilst the Proposed Development does have the potential for effects in relation to landscape character, visual amenity, cumulative landscape and visual impacts and PWS, it is considered that the potential for significant effects can be avoided subject to the implementation of a GEMP, SPP, CEMP, appropriate design and mitigation measures, inclusive of a PWS Protection Plan. Design of the Proposed Development will carefully consider tower design, placement and platform level, consider opportunities for mitigation planting and include liaison with the Netherton Hub substation and other nearby OHL infrastructure design teams, so that, accordingly, the Proposed Development is considered not to be EIA development and would instead be subject to a voluntary EA. This is concluded in the knowledge that as part of further assessment, HRA, forestry and BNG assessments are proposed to provide recommendations as to what further mitigation will be necessary to address effects from the project on nearby habitats and biodiversity, respectively.

Your response to this formal request for an EIA Screening Opinion is welcomed within the three-week statutory period which would end on 21 May 2025.

Yours Faithfully,

Gavin Evans

Consents and Environment Manager – East and Argyll

Scottish and Southern Electricity Networks Transmission

Enc.

Figure 1 – Site Location

Figure 2 – Environmental Constraints