2. DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Introduction

2.1.1 This chapter provides a description of the Proposed Development for the purposes of identifying and assessing likely significant effects. The chapter provides:

- A description of the location of the Proposed Development;
- A description of the physical characteristics of the Proposed Development, including the land-use requirements during construction and operational phases;
- A description of the main characteristics of the operational phase of the development; and
- An estimate, by type and quantity of the expected residues and emissions produced during the construction and operational phases.

2.1.2 The description of the main characteristics, including expected residues and emissions of the operational phase is made by reference to the typical activities associated with the operation of the Proposed Development. It is noted that there are no 'production processes' associated with this type of development and therefore there would be no ongoing operational use of energy, materials or natural resources.

2.1.3 The expected residues and emissions associated with the construction phase are described through reference to the typical activities associated with the construction and commissioning of the Proposed Development, as well as reinstatement of construction sites. **Table 2.5** provides a summary of the anticipated residues and emissions from the construction and operational stages of the Proposed Development.

2.1.4 This chapter is supported by the following Technical Appendices and Figures**:**

- **Technical Appendix 2.1: Detailed Tower Schedule**
- **Technical Appendix 2.2: Outline Construction Environmental Management Plan (OCEMP);**
- **Technical Appendix 2.3 SSEN Transmission General Environmental Management Plans (GEMP); and**
- **Technical Appendix 2.4: SSEN Transmission Species Protection Plans (SPP).**
- **Figure 1.1: Location Plan and Overview**
- **Figure 2.1a-2.1j: Overhead Line Route and Access Tracks**
- **Figure 2.2a-2.2j: Land Take and Forestry Removal**

2.1.5 Details of the project need are provided in Section 1.1.1 of **Chapter 1: Introduction (EIAR Volume 2),** and discussion of the routing and alignment process can be found within **Chapter 3: Consideration of Alternatives (EIAR Volume 2).**

2.2 The Location of the Proposed Development

2.2.1 The Proposed Development is located between the proposed Creag Dhubh substation and the existing Scottish Power Energy Networks (SPEN) 275 kV Overhead Line (OHL) from Dalmally to Inverarnan, near Glen Lochy(Succoth Glen), in Argyll (**Figure 1.1, EIAR Volume 3a**).

2.2.2 Starting at the proposed Creagh Dhubh substation (moving south to north), the Indicative Proposed Alignment starting with Tower (T)1 runs north through commercial forestry (**Plate 2.1**).

Plate 2.1:Drone view between T1-T6

2.2.3 T6A is immediately to the north of the commercial forestry boundary, where the Indicative Proposed Alignment then traverses northeast, crossing the A819 and Cladich River. T10 is positioned to the north east of Cladich River. From T10, the Indicative Proposed Alignment then runs on a sharp north east trajectory passing through commercial forestry between Millside and Creag Bracha (**Plate 2.2**).

Plate 2.2: Drone view between T10-T13

2.2.4 From T18 the proposed OHL bisects a small area of Ancient Woodland and then runs parallel to the north border of the Glen Etive and Glen Fyne Special Protection Area[1] (SPA) (**Figure 7.1 EIAR Volume 3a**). The proposed OHL then traverses east through another small section of Ancient Woodland to T28 (**Plate 2.3 and 2.4**).

Plate 2.3: Drone view between T16-T20

Plate 2.4: Drone view between T25-T29

2.2.5 T28 is approximately 200 m south west of Tom a'Chaisteal, Dun (SAM4209) and 200 m north of Dychlie Deserted Crofts (SAM5149). The Indicative Proposed Alignment then runs on a sharp north east trajectory until T33, (**Plate 2.5**) intersecting a small area of Ancient Woodland and an approximate 1.2 km section of commercial plantation (between T29 and T30). Blarchaorain property is situated approximately 600 m south-east of T29 and T30.

[1] Designated for supporting a population of Annex 1 species (list of the EC Birds Directive) golden eagle *Aquila chrysaetos*.

Plate 2.5: Drone view between T31-T33

2.2.6 From T33 (**Plate 2.6**) the alignment follows a straight trajectory, angled slightly to the north east for approximately 2.5 km until connecting to T41. The central portion (between T38-T39) of the proposed OHL goes through wet modified bog and clips the edge of Annex 1 Blanket bog habitat (**Figure 6.2 and 6.3, EIAR Volume 3a).** T40 is approximately 300 m north west of Auchtermally or Uachdar Mhaluidh, Deserted Township (SAM4019).

Plate 2.6: Drone view between T33-T36

2.2.7 From T41 to T44B the proposed OHL follows a straight easterly trajectory through a mosaic of habitats, predominantly unimproved acid grassland and wet modified bog (**Plate 2.7**).

Plate 2.7: Drone view between T41-T44

2.2.8 The Proposed OHL then runs parallel to broadleaf plantation woodland until T47A, which is encompassed by a small area of Ancient Woodland (**Plate 2.8**).

2.2.9 The Proposed Development passes through two river catchments. Most watercourses drain to the River Orchy, except for the Teatle Water and Cladich River, which discharge to Loch Awe. Watercourses found in the southern most section of the OHL flow into the River Aray, which drains southwards to Loch Fyne.

2.2.10 Dalmally is the main settlement within the study area and contains a railway station, post office, community centre and livestock mart. The village is separated into two discrete built up areas, with more recent development at Glenview (including a school, a village store and the Dalmally Post Office and Community Centre). Cladich is a small, scattered settlement which lies to the north west of the proposed alignment (approximately 1 km north west of T12), alongside the B840. All properties identified within the Study Area[2] are situated more than 200 m away. Brackley Farm is the closest property to the OHL and is situated approximately 396 m north of T44.

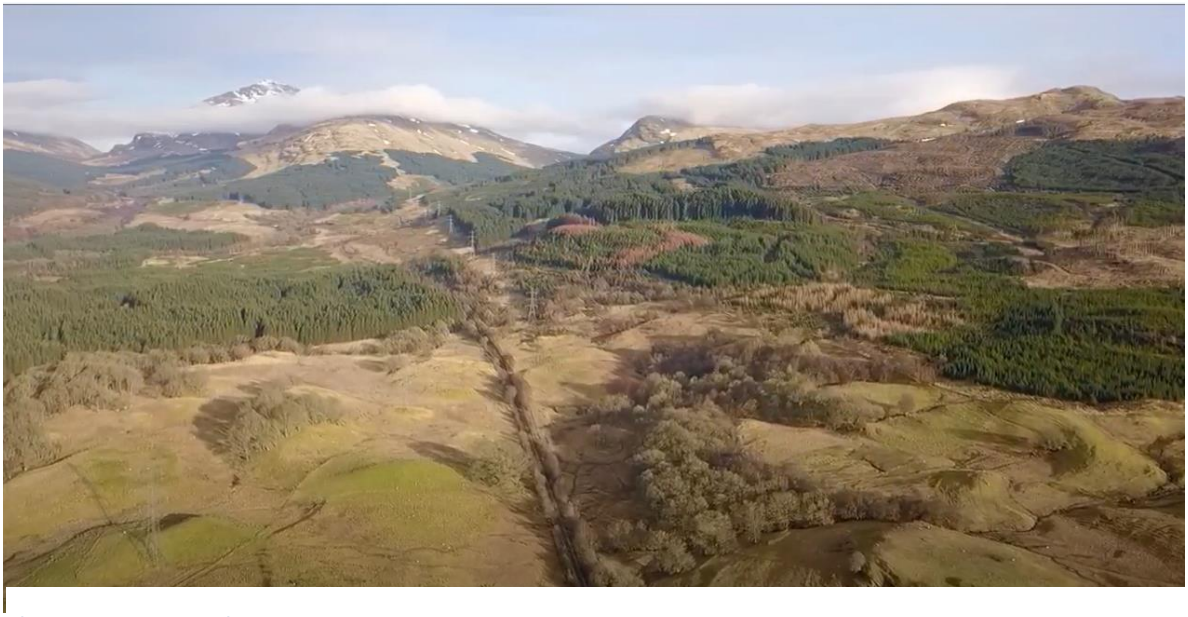


Plate 2.8: Drone view between T44-T47

[2] Refers to the 500 m Residential Visual Amenity Assessment Study Area (Chapter 8).

2.2.11 The A85, the A819 and the West Highland Railway line are the primary transportation routes through the study area.

2.3 Characteristics of the Proposed Development

2.3.1 Scottish Hydro Electric Transmission plc (the Applicant) who, operating and known as Scottish and Southern Electricity Networks Transmission (SSEN Transmission), own, operate and develop the high voltage electricity transmission system in the north of Scotland and remote islands, are seeking consent to construct and operate a 275 kV OHL connection between the proposed Creag Dhubh substation and the existing SPEN 275 kV OHL from Dalmally to Inverarnan, near Glen Lochy (Succoth Glen) (the Proposed Development) comprising:

1. a 13.3 kilometre (km) double circuit 275 kV OHL, supported by lattice steel towers between a proposed substation at Creag Dhubh to the existing SPEN 275 kV OHL that runs from Dalmally to Inverarnan, near Glen Lochy (Succoth Glen);

2. a Tie-In connection involving the proposed OHL being connected to the existing SPEN 275 kV OHL, known as the YW route, via a new terminal tower YW17R (referred to as T48 throughout the EIAR) located between existing SPEN Towers YW17 and YW18, from the proposed T47;

3. Ancillary works for the construction and maintenance of the OHL, including:
   - vegetation management including tree felling to create a safe operational corridor for construction and operation;
   - temporary OHL diversions to reduce circuit outages during the works;
   - undergrounding of existing LV line crossings with the proposed OHL ;
   - the formation of bellmouths at public road access points;
   - construction of new temporary and permanent construction (stone) access tracks and the upgrade of existing tracks;
   - tower working areas, crane pads and winching positions;
   - a satellite dish is required for protection communications this would be mounted on one of the OHL terminal towers. The typical dish dimensions are 750 x 750 x 440 mm; and
   - road and other infrastructure (bridges, culverts etc.) alterations.

Adjacent SSEN Developments

Creag Dhubh Substation

2.3.2 The proposed Creag Dhubh substation will be the subject of a separate application for planning consent **(Section 1.3, Chapter 1: Introduction, EIAR Volume 2),** to be supported by stand-alone environmental information, and therefore does not form part of the Proposed Development being assessed for the purposes of this EIA. The proposed Creag Dhubh substation will be considered as part of the cumulative assessment (**Chapter 14: Cumulative Assessment, EIAR Volume 2**).

Creag Dhubh Substation Temporary Diversion and Tie-In

2.3.3 A single circuit temporary diversion for the ITE/ITW[3] circuit is required to build new towers to tie-in to the proposed Creag Dhubh substation. The temporary diversion will have approximately eight wood poles (max height 16 m) to the south of the existing 132 kV OHL from Taynuilt to Inveraray and is expected to be in place for approximately 18 months. The construction and removal of these wood poles would require temporary trackways and bog mats.

2.3.4 As part of the ITE/ITW works two existing towers may need to be raised in height. The current plans indicate the increase would not extend to greater than 20% of the existing height and as such the Applicant would undertake these changes under the Overhead Lines (Exemption) (Scotland) Regulations 2013. The ITE/ITW works are undergoing survey and design as part of the Applicants development process and will be the subject of a separate s37 application. They do not form part

[3] Inveraray to Taynuilt East and Inveraray to Taynuilt West.

of the Proposed Development being assessed for the purposes of this EIA. These works will be considered as part of the cumulative assessment (**Chapter 14: Cumulative Assessment, EIAR Volume 2**).

Indicative OHL Design

2.3.5 The Proposed Development would include the following key components:

- 48 self-supporting fabricated galvanised steel lattice towers, L8(C) series (**Plate 2.9**), that are on average 50 m high and separated by an average distance of 280 m. The spacing (span length) between towers and the tower height would vary depending on environment and engineering constraints with maximum height of approximately 60 m and maximum span length of 350 m. Specifications for all towers are presented in **Technical Appendix** (**TA) 2.1: Detailed Tower Schedule** (**EIAR Volume 4**).
- A 13.3 km double circuit 275 kV OHL supported by the towers. Each tower would carry two circuits, with three horizontal cross arms on each side of the tower, each carrying an insulator string and two conductors. An earth wire, containing an optical fibre ground wire (OPGW), would be strung between the tower peaks;

2.3.6 The Proposed Development would use 107.5 ha[4] land as stated in **Table 2.1** and presented in **Figure 2.2a-j (EIAR Volume 3a**).

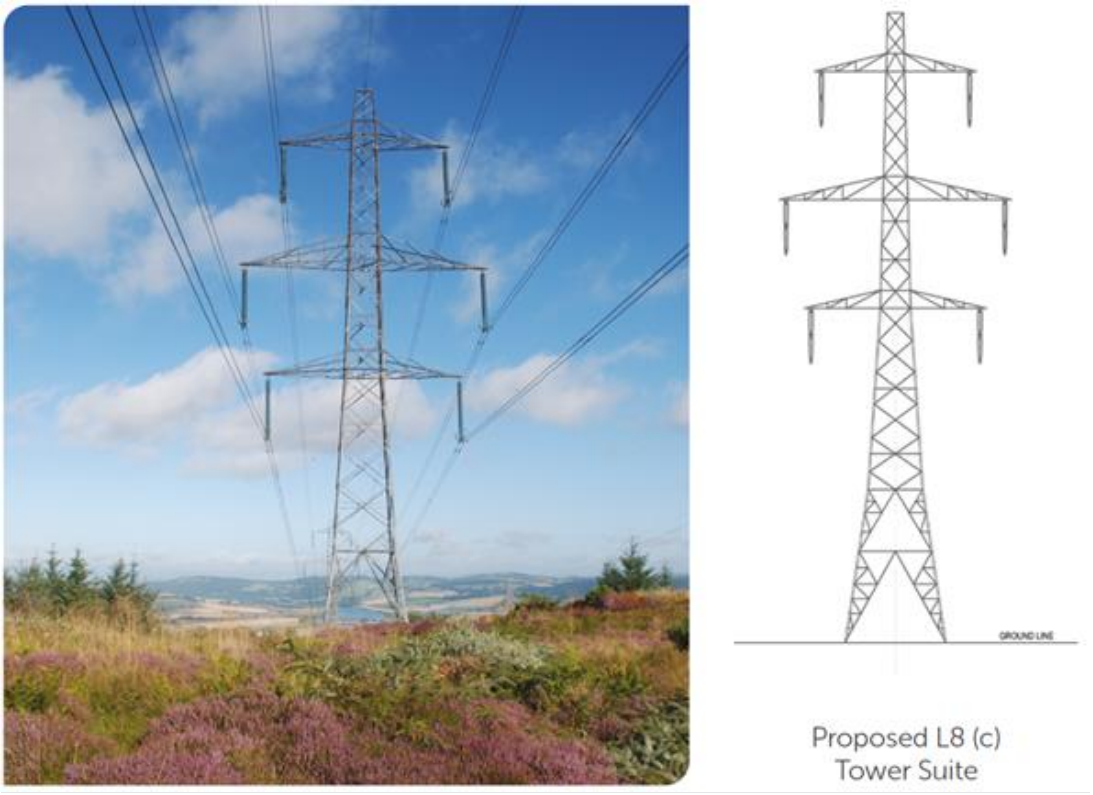


Plate 2.9: Transmission Tower Design

2.3.7 The Indicative Proposed Alignment (**Figure 1.1** (**EIAR Volume 3a**)) has been determined based on the environmental assessments, engineering analysis, cost considerations and stakeholder consultation undertaken to date. The proposed alignment and detailed tower schedule (for the purposes of the application for consent) is in **TA 2.1** (**EIAR Volume 4**).

[4] This includes all land take within the operational corridor and the new permanent access tracks (including felling buffer).

Limit of Deviation

2.3.8 The s37 application seeks consent for the construction and operation of the proposed OHL, based on the detailed tower schedule (**TA 2.1, EIAR Volume 4**) with a prescribed horizontal and vertical Limit of Deviation[5] LOD, to allow flexibility in the final siting of individual towers to reflect localised land, engineering, and environmental constraints.

2.3.9 Following consent, the investigation of sub-surface and geotechnical conditions at proposed tower locations would be undertaken and may result in the requirement for additional adjustments (micro siting) in the tower locations or heights. Hence, the Proposed Development for the purpose of this EIA is based on the Indicative Proposed Alignment and detailed tower schedule discussed above to allow for flexibility in the final siting of individual towers and access tracks.

2.3.10 The EIA has undertaken a worst-case assessment based on the agreed limits of deviation (LOD), as follows:

- The horizontal LOD parameter specified, allows towers to be relocated up to 100 m either side of the proposed alignment. A 50 m LOD applies to proposed access tracks[6]. The horizontal LOD for towers and access tracks is illustrated in **Figure 2.1a-j and Figure 2.2 a-j EIAR Volume 3a.**
- Vertical LOD: The vertical LOD is up to 20% variation of the tower heights provided in the tower schedule (**TA 2.1 EIAR Volume 4**).

Land take

Permanent Land Take

2.3.11 The Site area is approximately 107.5 ha (**EIAR Volume 3a: Figures 2.1a-i: Overhead Line Route and Access Tracks**). Within this area the permanent land take would be limited to the operational corridor, and the new permanent access tracks (plus 20 m felling buffer).

2.3.12 For the purposes of the EIA it has been assumed that individual tower foundations and associated construction activities would require a working area of approximately 2500 m^2 (50 m x 50 m) for section towers and 6400 m^2 (80 m x 80 m) for angle towers. The exact dimensions of the working area around each tower would/will be confirmed following micrositing.

2.3.13 The Proposed Development would result in the construction of approximately 5.5 km of new permanent track. A minimum running width[7] of 3.5 m is required for all access tracks. The total permanent land take area for the new tracks would be approximately 1.9 ha, including running distance and felling buffer.

2.3.14 The Proposed Development also includes for the upgrade of 25 km of existing forestry track.

2.3.15 Further details on construction of the above elements are located in Section 2.4.1.

Temporary Land Take

2.3.16 The Proposed Development would result in the construction of approximately 9.3 km of new temporary track. A minimum running distance of 3.5 m is required for all access tracks (plus 20 m felling buffer). The total temporary land take area for the new tracks would be approximately 3.2 ha which includes running distance and felling buffer.

2.3.17 A temporary 0.6 km diversion between existing SPEN 275 kV OHL towers YW17 and YW19 and two temporary towers, are required as part of the construction works for the Tie-In connection. The total temporary land take required for these diversion works would be 3.8 ha.

2.3.18 Diversions would also be required to the existing distribution network infrastructure which are crossed by the OHL (between T9 – T10 and T31-T32). These distribution network assets would be undergrounded to make way for the Proposed

[5] Limit of Deviation, an area which defines the practical limits within which micro-siting of the OHL infrastructure can occur within the terms of the s37 consent and deemed planning permission which are to be sought. The purpose of Limits of Deviation is to allow flexibility within a s37 consent for the final micro-siting and heights of individual towers to respond to localised ground conditions, topography, engineering, and environmental constraints.

[6] This will incorporate a 20 m felling buffer.

[7] The useable road surface, clear of signs, drains and safety barriers.

Development and would be carried out under Permitted Development. The total temporary land take required for these diversion would be 1.9 ha.

2.3.19 Further details on construction of the above elements are located in Section 2.4.1 and 2.4.2.

2.3.20 The area of temporary and permanent land take associated with the Proposed Development is presented in **Table 2.1: Summary of Temporary and Permanent Land Take.**

Table 2.1: Summary of Temporary and Permanent Land Take

Project Construction Element	Temporary (ha)	Permanent (ha)
Tower Platform working areas (either 50 m x 50 m or 80 m x 80 m dependent on tower type)	17	-
On-site Access Tracks (New) – based on 3.5 m	3.2	1.9
On-site Access Tracks (New), based on 3.5 m and including 20 m felling buffer	100.1 ha	38.9
Operational corridor (80 or 60 m corridor dependent on nature of woodland)	-	96.1
Existing OHL diversions – based on 40 m working corridor	2.5	-
Temporary tower working areas (for temp diversions) – working area of 80 m x 80 m	1.3	-
Undergrounding of existing LV line crossings – Estimated working area for undergrounding between T9-10 is 200 m x 40 m and between T31-32 is 250 m x 50 m (temporary)	1.9	-
Pulling/tensioner working platforms - typical 275 kV has EPZ centre is located 2.5 times the tower height with EPZ zones of 30 m x 60 m. P/T platforms are shown on access track drawings (30 m x 60 m)	1.1 (x 6 locations)	-
Total Land Take	**129.4 ha**	**107.5 ha[8]**

[8] This total includes the operational corridor plus the land required for new permanent access tracks (including 20 m buffer). As the operational corridor encompasses some section of access track the total area is less than the sum of the individual areas stated in the table.

Construction Programme

2.3.21 It is anticipated that the construction of the Proposed Development would commence in 2023 (subject to consents and approvals being granted). A provisional construction period of 30 months is anticipated, with energisation of the project scheduled for 2025.

2.3.22 The construction programme would comprise four key phases as shown in the indicative construction programme in **Table 2.2** and discussed in the sections below.

Table 2.1: Indicative 30-Month Construction Programme (Nov 2023 – June 2025)

	Month																													
Task*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1																														
2																														
3																														
4																														
5																														
6																														

*Task:
1. Forestry, enabling works and site mobilisation – **Phase 1**

2. Access track/laydown areas- Construction
3. Tower Foundations concrete
4. Tower Assembly
5. Tower erection
6. Access track/ laydown areas – Removal

} **Phase 2**

Commissioning (June -Aug 2026) – **Phase 3**
Re-instatement (Sept 26-March 27) – **Phase 4**

The detailed construction phasing and programme would be subject to change as the design progresses and also following the grant of the necessary consents, and wayleaves being obtained.

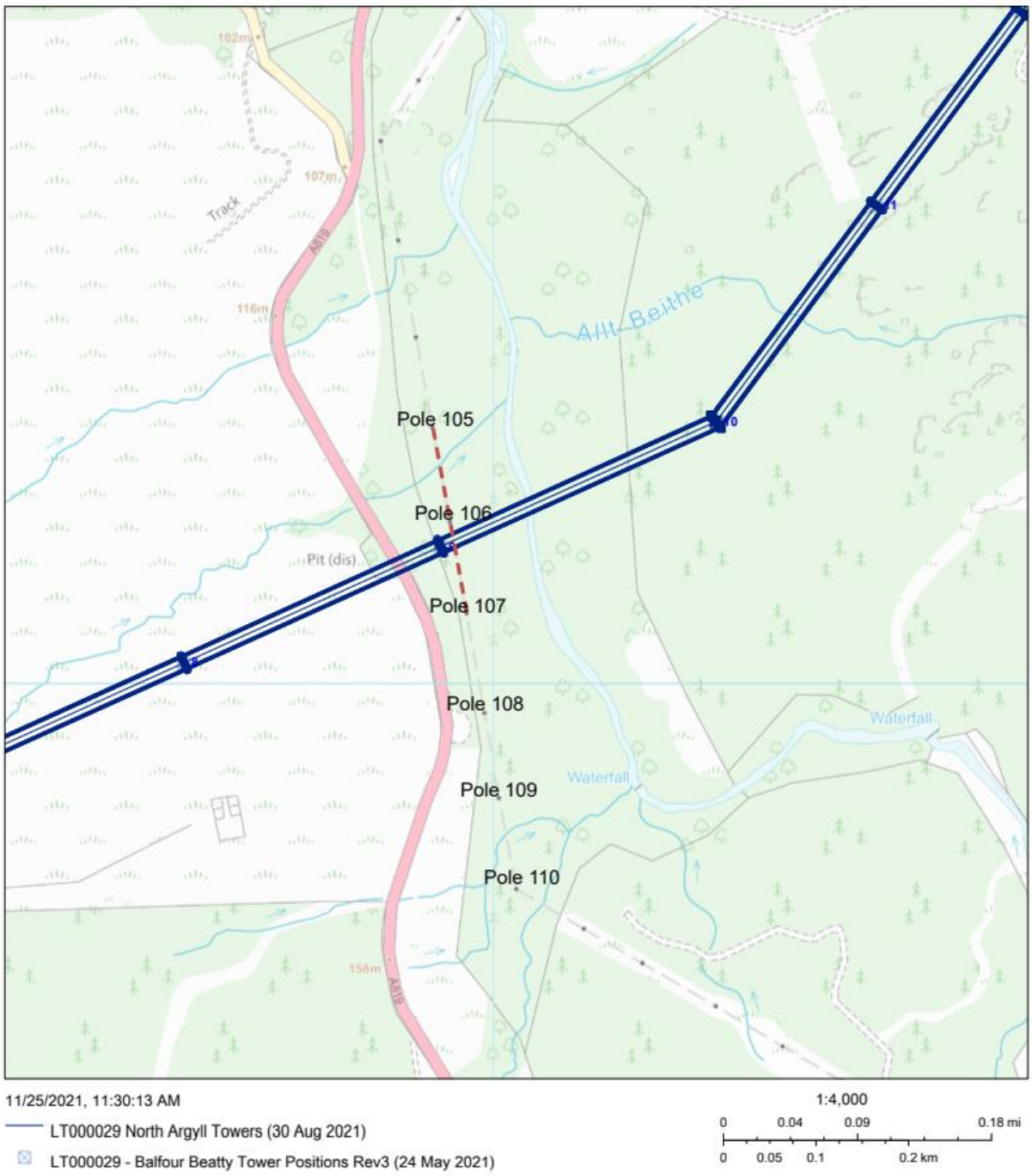
2.4 Construction Activities and Phasing

Phase 1 – Enabling Works

Existing Network Diversions

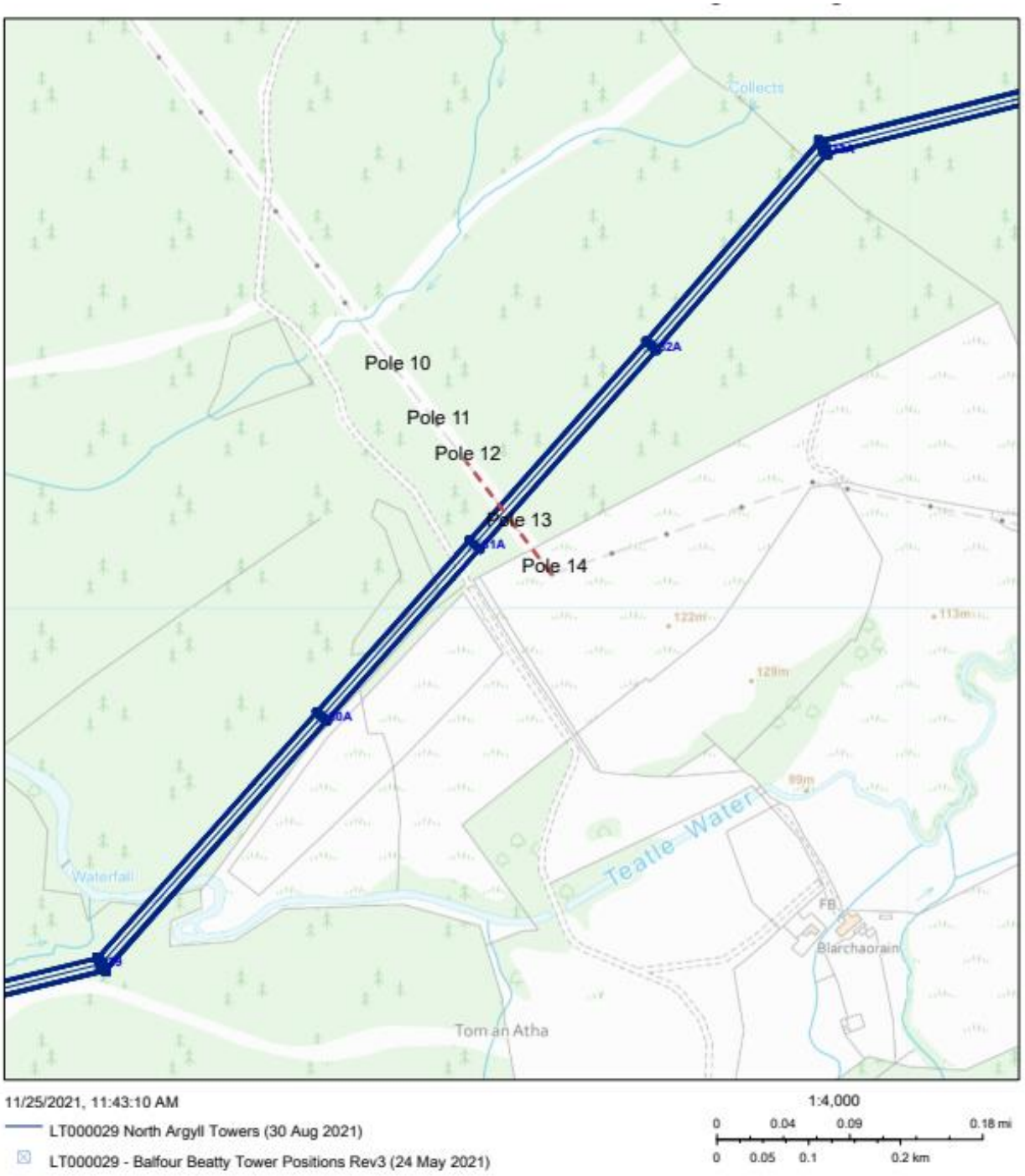
2.4.1 Works would be required to the existing distribution network infrastructure which are crossed by the OHL. These distribution network assets would be undergrounded to make way for the Proposed Development and can be carried out under Permitted Development rights. The following two areas along the Indicative Proposed Alignment cross existing services:

- Between Towers T9 and T10: the proposed OHL crosses an existing SSE overhead power line at coordinates 209956, 721154. 200 m (pole 105 – 107) of this existing powerline will require undergrounding. Location details are shown on **Plate 2.10.**
- Between Towers T31 and T32: the proposed OHL crosses another existing SSE power line at coordinates 214560, 725106. 250 m (pole 12 – 14) of this existing powerline will require undergrounding. Location details are shown on **Plate 2.11**.



The red dashed line shows the indicative location of the undergrounding section.

Plate 2.10: Undergrounding works location between Towers 9 and 10



The red dashed line shows the indicative location of the undergrounding section

Plate 2.11: Undergrounding works location between Towers 31 and 32

Vegetation Management and Forestry Clearance

2.4.2 The Proposed Development navigates areas of commercial forestry and broadleaved woodland; and in these areas an operational corridor would be required to be cleared. The width of this corridor would be variable depending on the nature of the woodland[9], with an average corridor of 85 m required (40 m either side of the tower centre line). This corridor will be reduced to 60 m (30 m either side of tower centre line) for areas of native Woodland[10]) with potential further reduction in width, where possible (**Chapter 15: Schedule of Environmental Mitigation, EIAR Volume 2**). In addition, minor vegetation management and felling (20 m corridor) would be required around the existing and proposed access track network to provide sufficient width. Based on the detailed Forestry Felling Plan, presented in **Figure 11.4 (EIAR Volume 3a),** the total area of woodland removal is 64.17 ha. Further details are provided in **Chapter 11: Forestry** and the associated appendices (**TAs 11.1 – 11.3 EIAR Volume 4). Chapter 11** also sets out the methodology that will be followed to limit the removal of Ancient and Native Woodland.

Road Improvements and Access

2.4.3 Access tracks that would service the construction and operation of the Proposed Development have been developed and are shown in **Figures 2.1a-j and 2.2 a-j (EIAR Volume 3a)**. The principal contractor may refine access tracks based on the plans provided above (micrositing within LOD, Section 2.3.2; any tracks outwith the LOD would require separate planning permission). In general, based on desk study analysis and preliminary walkover inspections, access has been established through a combination of:

- upgrades to existing tracks (25.5 km);
- installation of temporary new stone tracks (9.3 km); and
- Installation of permanent new stone tracks (5.7 km).

2.4.4 Permanent access would be required in the form of stone access tracks (**Plate 2.12**) for all angle towers[11] of the Proposed Development. Where possible, existing tracks would be used or upgraded for use. In other locations (e.g. to access suspension towers[12]), it is anticipated that new temporary tracks would be installed. A minimum running width[13] of 3.5 m is required for all access tracks. Floating stone road (**Plate 2.13**) or trackway panel construction may be installed in sensitive areas such as over peat (**Chapter 10: Hydrology, Hydrogeology, Geology and Soils, EIAR Volume 2**), depending on the sensitivity of constraints identified and the engineering feasibility of installing this type of track. All new constructed tracks would be constructed to good practice working methods [14,15,16,17,18,19] with watercourse crossings designed and constructed to comply with legislation set out in The Water Environment (Controlled Activities) (Scotland) Regulations 2011, as amended.

[9] The width of the Operational Corridor is dependent on the mature growth height of trees and topography adjacent to the OHL.

[10] This includes areas of Ancient Woodland (semi natural and plantation origin).

[11] Support structure (tower or pole) which allows a change in direction of the overhead line.

[12] These towers run the straight line routes where the angle deviation is less than 5 degrees. Like all transmission lines, the suspension towers have conductors attached to the lines. Numerous structure variations exist on suspension towers.

[13] The useable road surface, clear of signs, drains and safety barriers.

[14] Forestry Commission (2011). Forests and Water. UK Forestry Standard Guidelines. Forestry Commission, Edinburgh. i–iv + 1– pp.

[15] Forestry Commission (2014) Forest Commission Road Specification, April 2014, URL: http://www.forestry.gov.uk/forestry/infd-6emgrz.
This should be Forestry Commission Civil Engineering Handbook, 3rd Edition, Revised 2016.

[16] Scottish Natural Heritage (2015) Good Practice During Wind Farm Construction, A joint publication by Scottish Renewables, SNH, SEPA, Forestry Commission Scotland and Historic Scotland, 3rd Edition.

[17] CIRIA Publications 2006: Control of Water Pollution from Linear Construction Projects. Site Guide (C649).

[18] Scottish Natural Heritage (2013) Constructed Tracks in the Scottish Uplands, 2nd Edition.

[19] Forestry Commission Scotland and Scottish Natural Heritage (2010) Floating Roads on Peat.

Drainage for access tracks

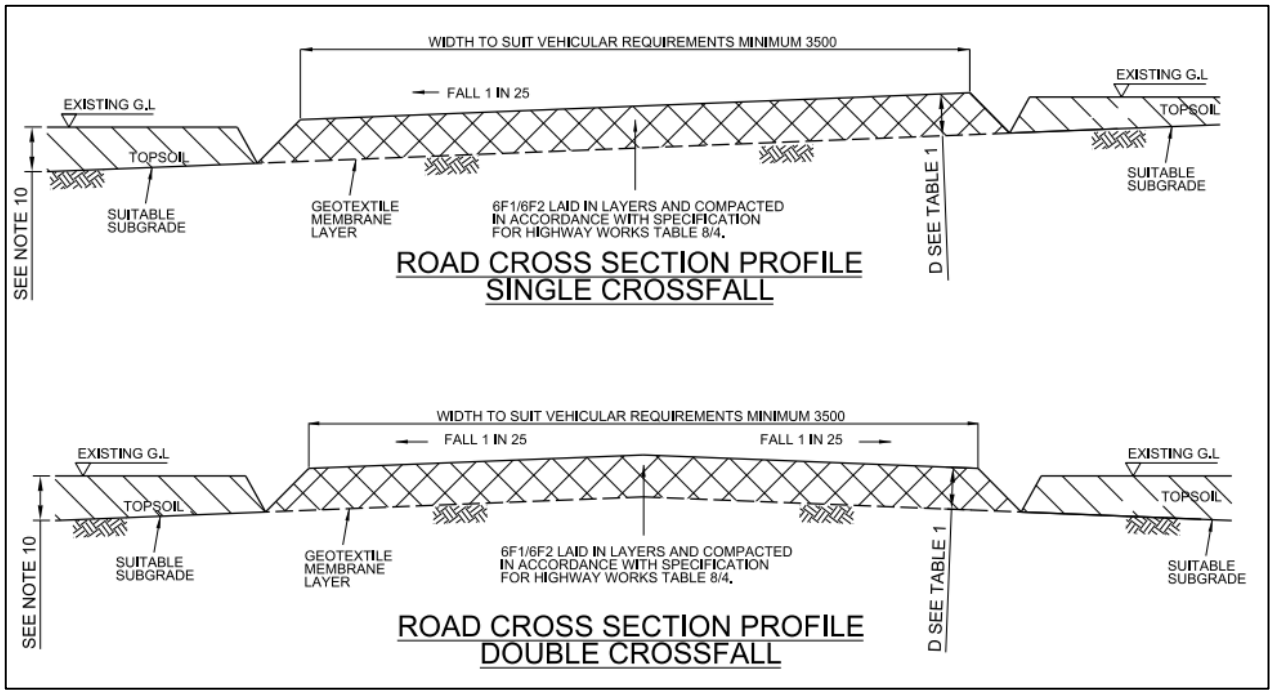


Plate 2.12: Typical Access Track Cross Section (solid ground)

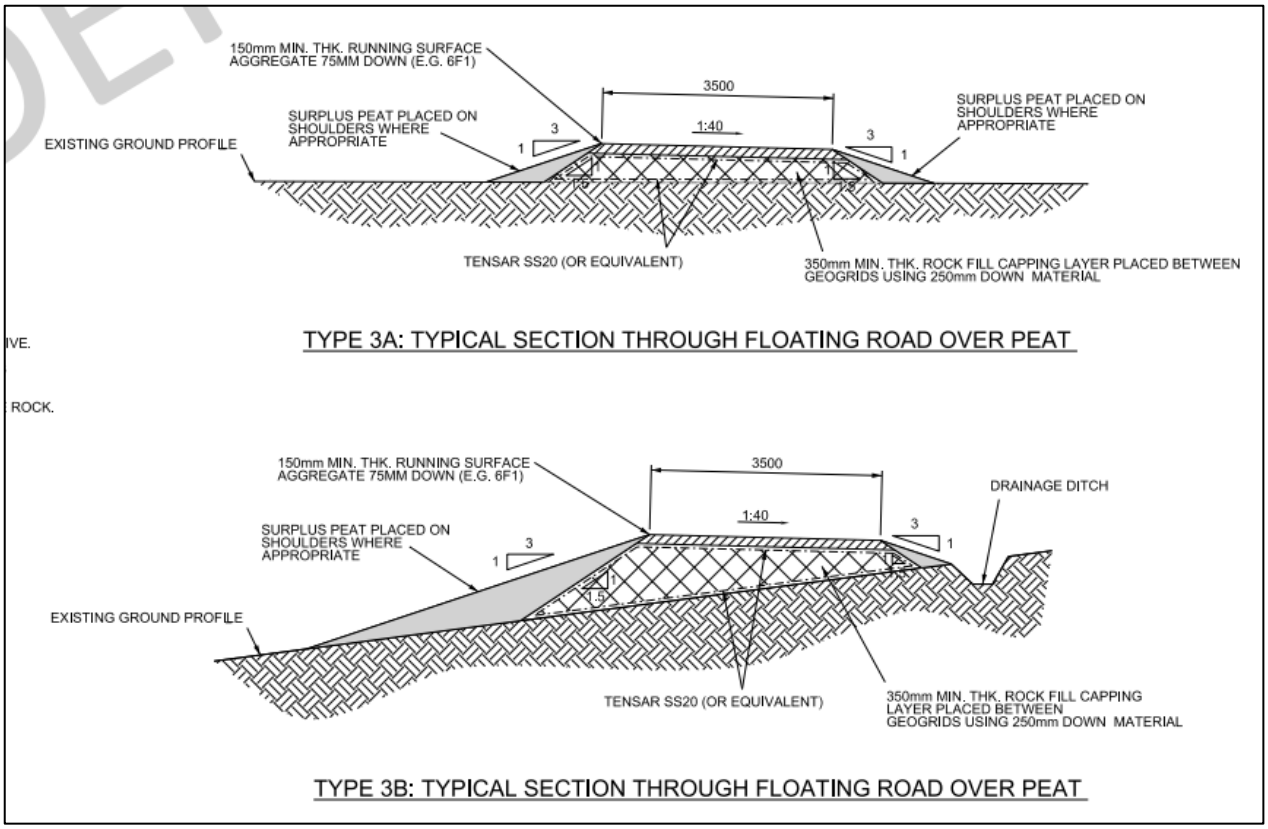


Plate 2.13: Typical Access Track Cross Section (over peat)

Borrow Pits

2.4.5 Existing, potential borrow pits have been identified and are shown on **Figures 2.1a-2.1j (EIAR Volume 3a).** Stone would be required for various purposes, primarily track and hardstanding construction. If the stone on-site (existing borrow pits) is found suitable then a proportion of this could be won from foundation excavation and the remainder will be sourced from off-site quarries. No investigation has been undertaken into their use at this stage, as this is typically done when the Principal Contractor is procured, following development consent. Borrow pits have not been considered within the assessment. This further investigation will be the responsibility of the appointed Principal contractor.

Site Compounds

2.4.6 Construction compound sites (temporary/permanent) have not been identified at this stage. This will be the responsibility of the principal contractor, who will identify suitable sites and apply for separate planning permission.

Phase 2 – OHL Construction

Tower Foundations

2.4.7 Different approaches to forming foundations may be used, subject to ground conditions at each tower location. These would/are likely to comprise:

- Pad and column: Prior to construction, a 50 m x 50 m (approximately) compound is established complete with stone access and laydown area for welfare, plant and materials. Each foundation is excavated to a typical depth of 4 m with temporary shoring installed to allow for safe working. On average, dimensions for each foundation are 4 m x 4 m x 0.5 m. Due to restricted working room, no more than two excavations are open at any time. Major items of plant required to construct the foundations include a 20 tonne excavator in order to excavate to formation and place the shoring system. Concrete is supplied via concrete wagon and placed by concrete skip with the excavator.
- Mini Pile and reinforced concrete pile cap: Prior to construction, a stone piling pad will be required, typically 625 m² in areas providing a stable working platform for the piling rig. Major items of plant required to install the piles include a 20 tonne excavator and vibrating roller for the piling pad and a 14 tonne piling rig with a supply of cement and potable water to form the piles. A 20 tonne excavator will then be required to excavate to formation for the construction of the pile cap. Concrete is supplied via concrete wagon and placed by concrete skip with the excavator.
- Rock Anchor: Rock anchors are considered if suitable hard rock is encountered up to a depth of 2.5 m and is proven to have sufficient frictional and lateral resistance. Beyond this depth, pad and column foundations are utilised. A similar working area is required to that of micro piling, however in this instance the area is excavated down to rockhead and an access ramp formed with a nominal layer of stone placed to create a level working platform. Major items of plant required to install the anchors include a 20 tonne excavator and vibrating roller for the piling pad and a 14 tonne piling rig with a supply of cement and potable water to form the piles. A 20 tonne excavator will then be required to erect formwork and place concrete for the construction of the pile cap. Concrete is supplied via concrete wagon and placed by concrete skip with the excavator.

2.4.8 Foundation types and designs for each tower would be confirmed following detailed geotechnical investigation at each tower position, although it is currently anticipated that most tower foundations are likely to be of Mini Pile & pad and column.

2.4.9 Dimensions of each foundation would be confirmed following micrositing. For the purposes of this assessment it has been assumed that each foundation would be buried to depths estimated up to 2.5 m below ground level (bgl) and extending up to 4 m depth where ground conditions require. They would extend over an area suitable to deliver the loading characteristics required (which would be a function of the underlying ground conditions and the weight of the structures to be supported). Piled foundations may be required where low strength ground conditions exist, particularly where peat is encountered at over 1 m depth.

2.4.10 For the purposes of the EIA it has been assumed that individual tower foundations and associated construction activities would require a working area of approximately 2500 m^2 (50 m x 50 m) for section towers and 6400 m^2 (80 m x 80 m) for angle towers. The exact dimensions of the working area around each tower would be confirmed following micrositing.

2.4.11 Where encountered, top soil (including peat, vegetation, and turves) would be stripped from the tower working area to allow installation of tower erection pad(s) as necessary to accommodate construction plant and stored in accordance with good practice as per the Outline CEMP (**TA 2.2 EIAR Volume 4**) and the SSEN GEMPS (**TA 2.3 EIAR Volume 4**). Concrete would to be brought to site ready-mixed with no requirement for concrete batching at individual tower locations. Once the concrete has been cast and set, the excavation would be backfilled, using the original excavated material where possible.

2.4.12 It is anticipated that formation of each tower foundation would take approximately four weeks.

OHL Construction

2.4.13 Tower construction can commence two 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.

2.4.14 Each tower would be assembled on site into panels by a team of up to eight people. The lower tower panels may be erected using a telehandler, but upper panels would normally be erected into position using an all-terrain crane. Where access is not available for a crane, a derrick would be used. Most towers would be assembled within about five days each and erected by crane in one to two days depending on weather conditions and tower type. Large angle or terminal towers, or towers within restricted sites may take longer.

Conductor Stringing

2.4.15 The conductor would be delivered to site on wooden drums in pre-determined pulling section lengths. Typical drum lengths for conductors are up to a maximum 2,400 m (approximate weight of 4 tonnes) but would depend on the specific length of section to be strung.

2.4.16 Prior to stringing the conductors, temporary protection measures, (e.g. netted scaffolds) would be erected across public roads and existing access tracks.

2.4.17 Conductor stringing equipment including winches, tensioners and ancillary equipment would be set out at either end of pre-selected sections of the OHL (location shown **Figure 2.1a-j, EIAR Volume 3a**). Pilot wires would be pulled through the section to be strung. These would be hung in blocks (wheels) at each suspension tower in the section and connected to a winch and tensioner at the respective end of the section. The winch, in conjunction with the tensioner would be used to pull the pilot wires which would be connected to the conductor at the tensioner end. The conductor would be pulled via the pilot wires through the section and under controlled tension to avoid contact with the ground and any under-running obstacles including protection scaffolds. Once the conductor has been strung between the ends of the section it would then be tensioned to provide the necessary sag and then permanently clamped at each tower.

2.4.18 Dependent on terrain or site constraints pilot wires can be pulled through either with the use of all-terrain vehicles, tractors, or helicopters.

Phase 3 – OHL Commissioning

2.4.19 The OHL and support towers would then be subject to an inspection and snagging process. This allows the Contractor and SSEN Transmission to check that the works have been built to specification and are fit to energise. The Proposed Development would also go through a commissioning procedure for the switchgear, communications, and protection controls through the proposed substation at Creag Dhubh. The circuits would then be energised.

Phase 4 – Reinstatement

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

tracks, all work sites around the tower locations and the re-vegetation of all construction compounds. The Principal Contractor would be required to provide a Reinstatement plan prior to reinstatement works commencing.

2.5 Construction Employment and Hours of Work

2.5.1 The Applicant considers it important to act as a responsible developer with regards to the communities which host the construction works. The delivery of a major programme of capital investment provides the opportunity to maximise the support of local communities. Employment of construction staff would be the responsibility of the successful Principal Contractor(s); however, the Applicant encourages the successful Principal Contractor(s) to make use of suitable labour and resources from areas local to the Proposed Development.

2.5.2 It is envisaged that there will be a number of separate teams working at the same time at different locations within the Proposed Development site. The resource levels will be dependent on the final construction sequence and will be determined by the successful Principal Contractor(s).

2.5.3 Construction activities would be undertaken during daytime periods where possible. For weekdays, this would involve work between approximately 07:00 to 19:00 in the summer and 07:30 to 17:00 (or as daylight allows) in the winter. At weekends, the working hours would be approximately 07:00 to 17:00 in the summer and 07:30 to 17:00 (or as daylight allows) in the winter.

2.5.4 Any variation in these working hours would be agreed in advance with Argyll and Bute Council (ABC).

2.6 Construction Traffic and Plant

2.6.1 Construction of the Proposed Development will give rise to regular numbers of staff transport movements, with small work crews travelling to work sites. It is anticipated that the Principal Contractor(s) will identify a main compound, with a safe area for parking.

2.6.2 Vehicle movements will be required to construct new permanent and temporary access tracks, upgrade existing access tracks, deliver the foundation, and tower components and conductor materials to site and deliver and collect materials and construction plant from the main site compound and to individual tower locations.

2.6.3 The successful Principal Contractor(s) would determine where access is required, and for which items of plant, and prepare Construction Traffic Management Plans (CTMP) in consultation with the Applicant and the Local Authority. The CTMP would describe all mitigation and signage measures that are proposed on the public road accesses based on access maps and subsequent site assessments.

2.6.4 Temporary traffic management may be required at some locations (e.g. to facilitate construction material deliveries). For minor tracks and other crossings, the installation of appropriate warning signs and provision of staff with stop / go boards to control any passing traffic may be adequate. Traffic Management requirements will be identified within the CTMP and agreed with the Local Authority.

2.6.5 Construction traffic would comprise construction staff in private cars, and HGVs/LGVs carrying construction materials, personnel and plant equipment. The source of construction materials is unconfirmed at this stage; however, based on the layout of the local road network it can be assumed that construction traffic (HGVs and staff) would approach the sites from both north and south via the A85 (T) and A83 (T) respectively. A small proportion of staff may utilise the B840, but no HGVs would use this route as it is considered unsuitable.

2.6.6 An indicative 24[20] month construction programme established that the Proposed Development would generate at most, 82 two-way HGV trip and 150 two-way staff car trips per day during the peak traffic generating month of the construction phase (months 20 and 21). It is noted that the number of HGV trips during the other 22 months of the construction period

[20] Forestry felling and peat removal from the sites will occur in the six months prior to the 24-month construction stage and monthly vehicle movements associated with these activities will not exceed the peak levels assessed within this chapter (months 11 and 12 of the construction phase).

are significantly lower, particularly months 13 to 18 where HGV trips would average around 5 to 14 per day. Further details on vehicle movements are provided in **Chapter 13: Traffic and Transport (EIAR Volume 2**).

2.7 Standard Mitigation and Working Methods during Construction

Outline Construction Environmental Management

2.7.1 An Outline Construction Environmental Management Plan (CEMP) has been prepared to set out the approach towards, and framework for, environmental management during the construction phase (including site preparation) and to provide mitigation against potentially adverse construction impacts on environmental resources, and local residents. This Outline CEMP will be developed and implemented by the Principal Contractor. This document would detail how the Principal Contractor would manage the site in accordance with all commitments and mitigation detailed in this EIA Report, statutory consents and authorisations, and industry best practise and guidance. **Chapter 15: Schedule of Environmental Mitigation** (**EIAR Volume 2**) states all mitigation measures included in this report.

2.7.2 The Outline CEMP would also reference SSEN Transmissions General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs). The implementation of the CEMP would be managed on-site by a suitably qualified and experienced Environmental Clerk of Works (ECoW), with support from other environmental professionals as required.

General Environmental Management Plans

2.7.3 GEMPs have been developed by the Applicant. Details of the relevant GEMPs are provided in Technical **TA 2.3 – SSEN Transmission GEMPs**.

Species Protection Plans

2.7.4 Species Protection Plans (SPPs) have been developed by the Applicant and have been agreed with NatureScot. Details of the relevant SPPs are provided in **TA 2.4 – SSEN Transmission SPPs**.

Water Crossings

2.7.5 **TA 10.4: Water Crossings and Private Water Supplies** also includes information on the management of construction work where there will be interaction with watercourses or private water supplies. A total of 64 watercourse crossings, (**TA 10.4, Figure 10.1.2**) have been identified for the proposed access tracks, of which 44 are existing crossings. One crossing falls within the Cladich Water Drinking Water Protection Area (DWPA). some of which are existing crossings.

Peat Management

2.7.6 **TA 10.2: Outline Peat Management Plan** outlines the proposed working methods where the excavation of peat would be required and provides further details on potential volumes of peat excavated and the likely requirements for reinstatement.

2.7.7 **TA 10.3: Peat Landslide Hazard Risk Assessment** provides further technical information on the likely risk and hazards associated with peat instability, and the proposed standard mitigation and working methods that would be implemented during construction to seek to avoid adverse effects associated with peat instability.

2.8 Mitigation through Design

2.8.1 The Indicative Proposed Alignment of the Proposed Development has responded where possible, to comments and concerns raised during the consultation process (**Chapter 4: Consultation and Scoping, EIAR Volume 2**) and is considered to represent a balance between environment, engineering, and cost factors.

2.8.2 As described in **Chapter 3: Consideration of Alternatives (EIAR Volume 2**) the routeing process has facilitated the effective mitigation of many potentially significant environmental effects through the design. A summary of the potential effects addressed through the routeing process and the issues remaining following the selection of the Proposed Indicative Alignment is provided in **Table 2.2** .

Table 2.2: Mitigation Achieved Through Design

Topic	Mitigation	Further Assessment
LVIA and RVAA	The Proposed Development is not routed through any nationally designated landscape. It is not located within an Area of Wild Land. The Proposed Alignment has been designed to sit low in the landscape, while maintaining separation from scenic road corridors, the edge of Loch Awe, and areas of settlement. By locating the Proposed Development on lower elevations, the alignment would be backclothed by topography in views from most publicly accessible locations, reducing the visual impact of the overhead line. Additionally local topography, woodland and areas of forestry would provide localised screening of some towers, tower bases and access tracks. The Proposed Development has avoided passing through or in proximity to main settlements, such as Dalmally and Stronmilchan. When viewed from scattered properties in the vicinity, the Proposed Development would be seen at varying distances, and with varying levels of screening. The majority of properties would be located at distances of over 1 km from the Proposed Development, with the closest property located within approx. 400 m of the alignment. Residential Visual Amenity was a primary consideration throughout the alignment selection process. Visualisations were prepared to provide the project team with understanding of the visual impacts at the Blarchaorain and Brackley properties, and towers were microsited where possible (within the restrictions of other environmental constraints) to seek to reduce visual impacts on the amenity of these properties.	**Chapter 8**: **Landscape and Visual Amenity** provides an assessment of potential effects of the Proposed Development on landscape character and visual amenity.
Biodiversity	The Proposed Development avoids direct or indirect effects on any designated nature conservation sites for ecological value.	**Chapter 6**: **Biodiversity** assesses the potential effects on terrestrial habitats and protected species, including nearby protected sites, Annex 1 habitats, such as blanket bog and wet heath, and protected species, such as badger and bats. The likely direct and indirect potential impacts of the Proposed Development on

Table 2.2: Mitigation Achieved Through Design		
	The alignment selection process has sought to avoid or minimise loss of Ancient Woodland, where possible. Blanket bog (Annex 1 habitat) has been avoided or loss minimised where possible. The Proposed Development would minimise potential effects on peat forming habitats and Ground Water Dependent Terrestrial Ecosystems (GWDTEs), through the use of good practice construction methods. Suitable habitat for otter *Lutra lutra*, water vole *Arvicola amphibius*, bat, badger *Meles meles,* red squirrel *Sciurus Vulgaris*, pine marten *Martes martes*, reptiles and marshy fritillary *Euphydryas aurinia* has been identified within the Site. Further pre-construction surveys will be completed where identified through the EIA process, informing appropriate mitigation prior to construction. Consideration of aquatic ecology was scoped out of the EIA Report at the scoping stage given the lack of interaction with the water environment and the proposed implementation of good practice pollution prevention measures.	these features would be assessed and mitigation measures, where appropriate, would be proposed to prevent, reduce, or offset any likely significant adverse effects identified. As stated in **Chapter 1**, a full Biodiversity Net Gain (BNG) report will be prepared, detailing the biodiversity baseline, along with the biodiversity impacts and changes due to the construction works and permanent development. The report will state whether the development will result in a net loss, no net loss, or a net gain in biodiversity, with recommendations to further minimise biodiversity impacts and maximise biodiversity outcomes. The final BNG report will be submitted after the submission of the final EIAR. The BNG assessment is based on definitive numbers and takes approximately 3 weeks to complete. Therefore, submitting the assessment after the EIAR submission reduces the likelihood of any further changes being made to the design and the need to re-run the assessment process.
Ornithology	Glen Etive and Glen Fyne Special Protection Area (SPA). The SPA is classified for breeding golden eagle *Aquila chrysaetos*, with 19 active territories in 2003, more than 4.2% of the British population. The SPA is split into a northern (Glen Etive) and southern (Glen Fyne) section, either side of the A85. Throughout the routing process amendments were made to the alignment to avoid the SPA. The Proposed Development runs adjacent to the southern section for approximately 1 km near Achlian Farm and there is considered to be potential connectivity between this designated site and the Proposed Development. Field surveys (breeding raptor and vantage point) were undertaken in two phases, with surveys undertaken in 2016-17 and 2019-20. The 2016-17 surveys were designed and undertaken by WSP ornithologists, with survey methodologies	**Chapter 7**: **Ornithology** assesses the potential for significant effects on ornithological features within 20 km of the Proposed Development, including Schedule 1 species, such as golden eagle, and birds of conservation concern, such as black grouse. The likely direct, indirect, and cumulative effects of the Proposed Development on these features have been assessed and mitigation measures, where appropriate, are proposed to prevent, reduce, or offset any likely significant adverse effects identified. Potential disturbance of golden eagle territories within the Glen Etive and Glen Fyne SPA is assessed in more detail in **Technical TA 7.3: Habitat Regulations' Appraisal**.

Table 2.2: Mitigation Achieved Through Design		
	approved by NatureScot at that time. These surveys focussed on the preferred route as it was in 2016-17, with survey coverage designed to identify potential ornithological constraints in this area. Of the Preferred Alignment surveys in 2016-17 covered Towers 1 to 33. The 2019-20 surveys were designed to cover the rest of the Proposed Development from Tower 33 to 47 and to provide an update for Tower 1 to 33 to confirm baseline conditions using Breeding Raptor Surveys. Alignment decisions have been taken to avoid (where possible), and minimise the potential for disturbance related effects, for example, on Black Grouse *Tetrao tetrix*. Construction will take place outside of the main lekking period to reduce disturbance on a Black Grouse lek within proximity of the Proposed Indicative Alignment.	
Archaeology and Cultural Heritage	The Proposed Development was designed to avoid direct effects on all known designated cultural heritage assets. Visualisations were produced to review various alignments and tower positions in relation to the following Scheduled Monuments, within 300 m of the Proposed Indicative Alignment: - Tom a'Chaisteal, Dun (SAM4209) - Dychlie Deserted Crofts (SAM5419) - Auchtermally or Uachdar Mhaluidh Deserted Township (SAM4019) Alignment decisions were made with reference to minimising the potential for significant setting effects on designated heritage assets.	**Chapter 9**: **Cultural Heritage** provides an assessment focussed on identifying the likely significant indirect (setting) effects on cultural heritage assets.
Hydrology, Hydrogeology, Geology and Soils	Stage 1 and 2 peat probing surveys have been undertaken, to understand peat depths along the Proposed Indicative Alignment. This has informed the access track design and identified areas were micrositing may be required.	The following information is provided as part of this EIA Report: • Outline Peat Management Plan (**TA 10.2, EIAR Volume 4**) outlines the proposed working methods where the excavation of peat would be

Table 2.2: Mitigation Achieved Through Design		
	Except for some short sections of proposed access track, there would be no development within 30 m of watercourses, avoiding direct effects on surface watercourses. The Proposed Development would incorporate good practice drainage design during construction and operation, using multi-tiered sustainable drainage system (SUDS) approach to control the rate, volume, and quality of run-off from the Proposed Development. Foundation works and constructed tracks would be constructed to standard good practice working methods and would comply with legislation such as The Water Environment (Miscellaneous) (Scotland) Regulations 2017. The potential for effects on hydrological features during construction will be strictly controlled in accordance with a detailed Construction Environmental Management Plan (CEMP). No private water supply (PWS) abstractions have been identified within 250 m of any proposed tower locations, or 100 m of any proposed access track.	required and provides further details on potential volumes of peat excavated and the likely requirements for reinstatement. • Peat Landslide Hazard Risk Assessment (**TA 10.3, EIAR Volume 4**) provides further technical information on the likely risk and hazards associated with peat instability, and the proposed standard mitigation and working methods that would be implemented during construction to seek to avoid adverse effects associated with peat instability. • Watercourse Crossing Assessment (**TA 10.4, EIAR Volume 4**): A site survey of existing water features has been undertaken and a map of the location of all proposed engineering activities in the water environment provided. A systematic table detailing the justification for the activity; possible crossing types and level of CAR authorisation; and how any adverse impact will be mitigated will be included, accompanied by photography and dimensions. This will be presented as an appendix to the Proposed Development Chapter. The crossings for this project are anticipated to be related to temporary access tracks. • PWSs identified within the survey area are presented within **TA 10.5. EIAR Volume 4).** • Where GWDTEs are identified within 250 m of the tower foundations or borrow pits, or 100 m of temporary access tracks, a technical report has been prepared to accompany the EIA Report to demonstrate how the GWDTE would be protected (i.e. prevention of the development of preferential pathways for groundwater and significant drying of GWDTE), in accordance with SEPA Guidance Note 31 (LUPS-GU31). This is present in **TA 10.8, EIAR Volume 4**. • Hydrology and Forestry Report (**TA 10.6, EIAR Volume 4**) provides an assessment of the potential impacts of forest felling as a result of the Proposed Development on downstream hydrological receptors.
Forestry	Alignment decisions have been made to seek to minimise direct effects on all woodland, and semi-natural and Ancient Woodland in particular, where possible. The Proposed Development will have a direct impact on 10.36 ha of Ancient semi-natural woodland removal (mixed native broad-leaved woodland) including	**Chapter 11: Forestry** provides an assessment of the proposed area of felling required to facilitate the creation of an operational corridor for the OHL and implications for forest/land-use management.

Table 2.2: Mitigation Achieved Through Design		
	recently planted woodland. The loss of predominately low sensitivity coniferous woodland is 51.19 ha. The applicant has committed to working with forestry owners to agree felling proposals and develop revised forest design plans, which incorporate the proposed OHL and make provisions for long term land management.	Potential significant effects associated with woodland removal activities will also be assessed in the following EIA Chapters: Landscape and Visual, Biodiversity, Ornithology, Hydrology and Cultural Heritage respectively.

2.9 Operation Management and Maintenance

Maintenance Programme

2.9.1 In general, given the nature of the Proposed Development, there would be a negligible or no demand for energy, materials, or natural resources during the operational life of the OHL. OHLs require very little maintenance.

2.9.2 Regular inspections would be undertaken to identify any unacceptable deterioration of components, so that they can be replaced. From time to time, inclement weather, storms, or lightning can cause damage to either the insulators or the conductors. If conductors are damaged, short sections may have to be replaced. Insulators and conductors are normally replaced after about 40 years, and towers painted every 15-20 years.

Managed Operational Corridor

2.9.3 In addition to the removal of vegetation to facilitate construction it is necessary to create safe corridors for operation. The typical operational corridor required within areas of commercial forestry is 80 m (reduced to 60 m in certain areas e.g., to limit removal of ancient / native woodland habitats). The Operational Corridor is defined with reference to the distance at which a tree could fall and cause damage to the OHL, resulting in a supply outage[21]. As a result, the final corridor width would be based on the safety distance required to allow for a mature tree falling towards the OHL at the mid-point on a span between two towers, taking account of topography and tree height at maturity. Periodic vegetation management within the operational corridor will also be required throughout the operational lifetime of the Proposed Development. A felling corridor (20 m) will also be required around permanent access tracks.

2.10 Use of Natural Resources

2.10.1 The EIA Regulations require the consideration of the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources. The Proposed Development would use 107.5 ha land as presented in **Figure 2.2a-2.2j (EIAR Volume 3a**). Other than the change of land use, given the nature of the Proposed Development (i.e. there are no production processes), there would be a negligible or no demand for natural resources during the operational life of the OHL and therefore no likely significant effect on the sustainable availability of such resources.

2.11 Residues and Emissions

2.11.1 The EIA Regulations require that the EIA Report provides an estimate, by type and quantity, of expected residues and emissions (such as water, air and soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced) resulting from the construction and operation of the Proposed Development.

2.11.2 **Table 2.3** provides a summary of the anticipated residues and emissions, which have been used to inform the scope of this EIA.

Table 2.3: Residues and Emissions

Topic	Potential Residue/ Emission
Water	Construction: Surface water runoff and discharge is likely during construction. In addition, occasional discharges may arise from pumping, or over-pumping to dewater foundation excavations. Pollution sources may arise from soil erosion or oil/ fuel or chemical storage and use. All works in and around watercourses will

2.1.1 [21] As specified by the 'red zone' set out in paragraph 39 of the Forest Industry Safety Accord (2013) Electricity at work: Forestry, FISA Safety Guide 804: URL: https://www.ukfisa.com/assets/files/safetyLibrary/FISA%20804%20-%20Electricity.pdf (Accessed 08/03/2018)

Table 2.3: Residues and Emissions

Topic	Potential Residue/ Emission
	follow best practice guidance and Outline CEMP (TA 2.1, EIAR Volume 4). Further details can be found in Chapter 10: Hydrology, Hydrogeology and Geology and Soils, EIAR Volume 2). Operation: No water emissions or pollution sources have been identified for the operational phase.
Air	Construction: The construction phase would require the transport of people and materials by road and air, with associated emissions to the atmosphere. There are no air quality management areas within the vicinity of the Proposed Development. No significant air emissions are anticipated. Operation: Due to the nature of the Proposed Development no significant point source or diffuse air emissions would be produced during its operation. The Proposed Development would contribute to connecting renewable electricity generation capacity to the transmission network, in turn displacing emissions associated with fossil fuel based electricity generation elsewhere.
Soil and Subsoil	Construction: Soil and subsoil excavation, handling and storage would be required during construction. All soil and subsoil would be stored temporarily for use in reinstatement (**TA 2.3: Soil Management and Working in sensitive Habitats GEMP)** Operation: No requirement for soil or subsoil excavation or handling during the operation phase has been identified. No pollution sources have been identified for the operational phase.
Noise and Vibration	Construction: Noise sources during the construction phase would include increased traffic flows and noise from construction plant. Further detail is provided in **Chapter 12: Noise and Vibration (EIAR Volume 2)**. There would be no significant vibration emissions associated with the Proposed Development. Operation: Noise emission levels from a 275 kV OHL are unlikely to be perceptible during dry weather, however perceptible noise can arise in wet weather. Further detail on the proposed scope of operational noise assessment is provided in **Chapter 12.**
Light	Construction: The temporary construction compounds are likely to be equipped with lighting installations for use during low light conditions and passive infra-red sensor controlled security lighting. Any effect would be temporary and not expected to be significant. Operation: No light sources have been identified during normal operation of the Proposed Development.

Table 2.3: Residues and Emissions

Topic	Potential Residue/ Emission
Heat and Radiation	Construction: No heat or radiation sources have been identified during the construction phase. Operation: Electromagnetic fields (EMFs) are emitted from OHLs, with potential effects on human health.
Waste	Construction: The construction stage will require felling of woodland. As such, it is anticipated that forestry related residues (brash and mulch) would result from the felling operations. Further detail on forestry is provided in **Chapter 11: Forestry.** Construction will generate general waste in the form of domestic wastes and other materials, for example, wood, metals, plastics, and stone. Waste will be managed in accordance with good practice guidance on the use of a Site Waste and Materials Management Plan[22], to implement the waste management hierarchy[23] Operation: Electricity transmission does not produce any physical waste. However, the general maintenance of the OHL has the potential to produce a small amount of waste. This is likely to be restricted to waste associated with employees and visiting contractors.

2.12 Disaster Resilience

2.12.1 The EIA regulations require the consideration of the potential risks to human health, cultural heritage or the environment associated with the vulnerability of the Proposed Development to major accidents and disasters. This requirement is interpreted as requiring the consideration of low likelihood but high consequence events which would result in serious harm or damage to environmental receptors.

2.12.2 Given the nature of the Proposed Development, the potential for risks related to the vulnerability to major accidents and disasters are likely to be limited to those associated with unplanned power outages, due to extreme weather or structural damage.

2.12.3 Relevant types of accident/disaster, given the predominantly rural context of the Proposed Development, include:

- severe weather events, including high winds, high rainfall leading to flooding, or extreme cold leading to heavy snow and ice loading;
- wild fire;
- traffic related accidents; and
- mass movement associated with ground instability.

2.12.4 Severe weather resilience is a core component to the network design, and includes consideration of flooding resilience, overhead line design and vegetation management to reduce the risk of unplanned power cuts. Crisis management and continuity plans are in place across the SSEN Transmission network. These are tested regularly and are designed for the

[22] URL: https://www.netregs.org.uk/environmental-topics/waste/storage-handling-and-transport-of-waste/site-waste-management-plans-swmp/ [accessed 10/09/2020)][22] Sco

ttish Government (2017) Applying the waste hierarchy: guidance: URL https://www.gov.scot/publications/guidance-applying-waste-hierarchy/pages/3/#:~:text=The%20waste%20hierarchy%20ranks%20waste,the%20lifecycle%20of%20the%20material.&text=When%20waste%20is%20created%2C%20it,all%20disposal%20(i.e.%20landfill). (accessed 10/09/2020).020).

management of, and recovery from, significant energy infrastructure failure events. Where there are material changes in infrastructure (or the management of it) additional plans are developed.

2.13 Decommissioning

Life of the project

2.13.1 The Proposed Development would not have a fixed operational life. It is assumed that the Proposed Development would be operational for 50 years or more. The effects associated with the construction phase can be considered representative of worst-case decommissioning effects, and therefore no separate assessment is proposed as part of this EIA.