VOLUME 2: CHAPTER 3 – DESCRIPTION OF THE PROPOSED DEVELOPMENT

Figures (Volume 3 of this EIA Report)

Appendices (Volume 5 of this EIA Report)

3. DESCRIPTION OF THE PROPOSED DEVELOPMENT

3.1 Introduction

3.1.1 The Proposed Development consists of the proposed 400 Kilovolt (kV) overhead line (OHL) transmission connection between proposed Banniskirk, Carnaig and Fanellan Substations. This chapter describes the infrastructure and activities required for the construction and operation of the Proposed Development. These form the basis for the assessments reported within the technical chapters of **Volume 2** of this EIA Report.

3.1.2 Additional detail supporting this chapter is presented in the following figures and appendices:

- **Volume 3, Figure 3.1: The Proposed Development;**
- **Volume 5, Appendix 3.1: Indicative Tower Schedule;**
- **Volume 5, Appendix 3.2: Further Engineering Design Information;**
- **Volume 5, Appendix 3.3: General Environmental Management Plans (GEMPs);**
- **Volume 5, Appendix 3.4: Species Protection Plans (SPPs);**
- **Volume 5, Appendix 3.5: Outline Site Restoration Plan;**
- **Volume 5, Appendix 3.6: Outline Construction Environment Management Plan (CEMP); and**
- **Volume 5, Appendix 3.7: Public Road Improvement Environmental Appraisal.**

3.2 Development for which Section 37 Consent and Deemed Planning Permission is Sought

3.2.1 The Proposed Development would include the following works, for which Section 37 consent under the 1989 Act and deemed planning permission under the Town and Country Planning (Scotland) Act 1997 ('the Planning Act') is sought to install, operate and keep installed:

- Approximately 96 km of new double circuit 400 kV OHL on steel lattice towers, including downleads, between the proposed Banniskirk (ND 15905 56823) and Carnaig (NH 65053 97458) 400 kV substations;
- Approximately 77 km of new double circuit 400 kV OHL on steel lattice towers, including downleads, between the proposed Carnaig and Fanellan (NH 48534 43208) 400 kV substations; and
- Permanent diversion works required to existing 132 kV and 275 kV OHLs (referred to within this EIA Report as special arrangements), of approximately 18 km in total, to enable the construction of the Proposed Development including the temporary diversion works required to construct the permanent diversions.

3.2.2 In total, the Proposed Development would comprise approximately 191km of new OHL.

3.2.3 The Proposed Development is shown in **Volume 3, Figure 3.1: The Proposed Development**. Tower numbers are labelled as North (N) 1 to 297 for towers between the proposed substations at Banniskirk and Carnaig (Sections A and B) and South (S) 1 to 232 for towers between the proposed substations at Carnaig and Fanellan (Section C, D and E).

3.3 Ancillary Development for which Deemed Planning Permission is Sought

3.3.1 The following works would be required as part of the Proposed Development, or to facilitate its construction and operation:

- The formation of access tracks (permanent, temporary, and upgrades to existing tracks) and the installation of structures, for example, bridges and culverts to facilitate access;
- Public road improvements (PRI) which would be required in some areas to facilitate construction traffic;
- The upgrade of existing, or creation of new, 'bellmouths' (i.e. junctions with curved entry and exit points) at public road access points;

- Other temporary measures required during construction, such as measures to protect existing infrastructure and water crossings during construction (scaffolding etc.);
- Formation of flat areas from which the conductor will be pulled during construction, which will contain earthed metal working surfaces referred to as Equipotential Zones (EPZs);
- Working areas around infrastructure to facilitate construction;
- Removal of redundant sections of the existing OHLs, following construction and energisation of the permanent diversion works; and
- Tree felling and vegetation clearance to facilitate construction and operation of the Proposed Development, to comply with the Electricity Safety, Quality and Continuity Regulations (ESQCR) 2002[1].

3.3.2 These different forms of ancillary development are described in further detail in this chapter.

3.4 Associated Works

3.4.1 Other associated works are required to facilitate construction of the Proposed Development, or would occur as a consequence of its construction and operation. These works, listed below, do not form part of the description of the Proposed Development and are therefore not included in the application for statutory consents. On that basis they are not assessed in detail in this EIA Report. However, further detail on some of these elements is provided where available, as noted within the relevant appendices to this chapter, and also considered as part of the cumulative assessment within the technical chapters as appropriate. The associated works are:

- Borrow pits will be required to source stone for the construction of access tracks. As there is insufficient information on the location, number and scale of borrow pits at the time of submission, separate planning applications for these works will be sought by the Principal Contractors;
- Temporary construction compounds will be required along the route of the Proposed Development to facilitate its construction. The final location and design of temporary site compounds will be confirmed by the Principal Contractors and separate planning permissions will be sought as required;
- New 400 kV substations and High Voltage Direct Current (HVDC) Converter Stations at Banniskirk (ND 15905 56823) and Fanellan (NH 48534 43208), and a new 400 kV substation at Carnaig (NH 65053 97458). Separate applications for planning permission under the Town and County Planning (Scotland) Act 1997 have been submitted by the Applicant for these developments; and
- Modification of the existing distribution network in some areas to accommodate the Proposed Development. These works are likely to comprise short sections of the existing distribution network being diverted or undergrounded within the vicinity of the Proposed Development and would be undertaken by Scottish Hydro Electric Power Distribution (SHEPD). Consent would be sought by SHEPD as required.

3.5 Limits of Deviation

3.5.1 In general terms a Limit of Deviation (LoD) defines the maximum extent within which a development can be built. In the case of the Proposed Development, an LoD is required for each of the key components of the Proposed Development, i.e. each of the new steel lattice towers being installed and access track routes.

3.5.2 The design of the Proposed Development has been established following the identification of detailed environmental, technical and economic factors. The design process has included the appointment by SSEN Transmission of two separate OHL Contractors to inform the design process and the constructability of the Proposed Development. This will involve carrying out ground investigation works along the majority of the route to determine ground conditions. It is possible that micro-siting may be required during the construction process to reflect localised land, engineering and environmental constraints, and therefore the LoD provides some flexibility in this regard.

[1] The Electricity Safety, Quality and Continuity Regulations (2002), available at https://www.legislation.gov.uk/uksi/2002/2665/contents/made

3.5.3 The horizontal LoD, for which consent is sought (as shown on **Volume 3, Figure 3.1: The Proposed Development**) is typically as follows:

- OHL (steel lattice) – 200 m total LoD (100 m either side of the centre line); and
- Access tracks – 200 m total LoD (100 m either side of the centre line) for new access tracks. A 20 m total LoD (10 m either side of the centre line) for upgrades to existing tracks.

3.5.4 In some areas, the LoD is increased or decreased to account for local constraints or known engineering challenges and environmental sensitivities. This is of particular importance at the crossing of existing transmission infrastructure where modification of 132 kV or 275 kV OHLs are needed to facilitate safe crossing of the proposed 400 kV infrastructure. Each of these crossing points present unique challenges which lead to variations on the size of LoD required, particularly where the nearest appropriate tension tower on the existing infrastructure is located at distance from the crossing point.

3.5.5 EPZ pulling positions are temporary working areas for the installation of the conductors onto the towers. The area required EPZ is specific to both the line angle (or turning angles) of the conductors at the tower, as well as the height of the proposed tower at that location. To accommodate this, each proposed pulling position and its LoD has been defined individually. The LoD required is indicatively 1.5 times the height of the proposed tower (m), but is dependent on topography and other local constraints.

3.5.6 The areas where the LoD has been increased or decreased are illustrated on **Volume 3, Figure 3.1: The Proposed Development** and summarised in **Table 3.1**.

Table 3.1: Summary of Significant LoD Variations

No.	Section / Area	LoD Variation	Rationale
1	Section A: Tower N3 to Tower N10	Extended up to 285 m on eastern side and reduced to 50 m on western side of alignment.	Potential Ouglassy Wind Farm near Tower N6. LoD was extended to have additional space for an alternative alignment if required to accommodate wind farm.
2	Section A: Tower N11 to Tower N12	Reduced to 65 m on western side of alignment.	Residential property.
3	Section A: Tower N18 to Tower N24	Extended up to 247 m on eastern side and reduced to 50 m on western side of alignment.	Potential for Watten Wind Farm to not get planning approval. The alignment between Towers N18 and N25 can be straightened out in the east. Western LoD limited due to Loch Toftingall and existing Halsary Wind Farm. To accommodate EPZ pulling positions.
4	Section A: Tower N25 to Tower N28	Reduced to 65 m on eastern and western sides of alignment.	To keep the LoD to a minimum in environmentally sensitive area (multiple designations).
5	Section A: Tower N33 to Tower N38	Reduced to 65 m on eastern and western sides of alignment.	To keep the LoD to a minimum in environmentally sensitive area (multiple designations).
6	Section A: Tower N42 to Tower N43	Reduced to 57 m on western side of alignment.	Moved out of the fence line of a third-party landowner.
7	Section A: Tower N43 to Tower N44	Reduced to 65 m on eastern side of alignment.	Ecology – blanket bog (Scottish Biodiversity List (SBL) Priority Habitat)

No.	Section / Area	LoD Variation	Rationale
8	Section A: Tower N46	Reduced to 85 m on western side of alignment.	Residential property.
9	Section A: Tower N56 to Tower N57	Reduced to 85 m on western side of alignment.	Residential property.
10	Section A: Tower N61	Extended to 137 m on south eastern side of alignment.	To accommodate EPZ pulling positions.
11	Section A: Tower N62	Reduced to 70 m on south eastern side of alignment.	Residential property.
12	Section A: Tower N64	Extended up to 1.4 km on northern side of alignment.	To accommodate special arrangement construction works[2] but has been adjusted to stay out of environmentally sensitive regions.
13	Section A: Tower N64 to Tower N71	Extended up to 200 m on eastern side of alignment.	To accommodate special arrangement construction works[2].
14	Section A: Tower N67 to Tower N69	Reduced to 65 m on the western side of the alignment	To keep the LoD to a minimum in environmentally sensitive area (multiple designations).
15	Section A: Tower N71	Extended up to 950 m on southern side of alignment.	To accommodate special arrangement construction works[2].
16	Section A: Tower N77	Reduced to 50 m on western side of alignment.	Scheduled Monument.
17	Section A: Tower N82 to Tower N83	Reduced to 80 m on eastern side and western sides of alignment.	Ancient Woodland, Scheduled Monument.
18	Section A: Tower N83 to Tower N84	Reduced to 50 m on eastern and western sides of alignment.	Ancient Woodland, Scheduled Monument and Site of Special Scientific Interest (SSSI).
19	Section A: Tower N86 to Tower N87	Reduced to 60 m on eastern side and reduced to 85 m on western side of alignment.	Scheduled Monument to the east, riparian corridor to the west.
20	Section A: Tower N96 to Tower N97	Reduced to 65 m on eastern side of alignment.	Ecology – blanket bog (SBL Priority Habitat).
21	Section A: Tower N98	Extended to 135 m on south eastern side of alignment.	To accommodate EPZ pulling positions.
22	Section A: Tower N108	Reduced to 30 m on eastern side of alignment.	Scheduled Monument.
23	Section A: Tower N109 to Tower N110	Reduced to 30 m on eastern and western sides of alignment.	Ancient Woodland.
24	Section A: Tower N114	Reduced to 35 m on eastern side and westerns side of alignment.	Ancient Woodland, SSSI and Scheduled Monument.

[2] Special Arrangement works are defined in Section 3.9.

No.	Section / Area	LoD Variation	Rationale
	to Tower N115		
25	Section A: Tower N121	Extended up to 115 m on south eastern side of alignment.	To accommodate EPZ pulling positions.
26	Section A: Tower N125 to Tower N139	Reduced to 65 m on northern and southern side of alignment.	World Heritage Site and residential property.
27	Section A: Tower N146 to Tower N149	Extended up to 280 m on eastern side of alignment.	Scheduled Monument.
28	Section A: Tower N146 to Tower N147	Reduced to 20 m on western side of alignment.	Scheduled Monument.
29	Section A: Tower N147 to Tower N148	Reduced to 65 m on western side of alignment.	Scheduled Monument.
30	Section A: Tower N152	Extended to 135 m on south eastern side of alignment.	To accommodate EPZ pulling positions.
31	Section A: Tower N171	Extended up to 120 m on north western side of alignment.	To accommodate EPZ pulling positions.
32	Section A: Tower N179 to Tower N181	Extended up to 140 m on north western side and reduced to 65 m on eastern side of alignment.	Loth Burn on eastern side.
33	Section A: Tower N181 to Tower N182	Reduced to 45 m on north western side of alignment.	Scheduled Monument.
34	Section A: Tower N182 to Tower N183	Reduced to 50 m on eastern side of alignment.	Ancient Woodland.
35	Section A: Tower N184 to Tower N188	Reduced to 30 m on southern side and extended up to 170 m on northern side of alignment.	Riparian corridor.
36	Section A/B: Tower N198 to Tower N205	Access LoD extended up to 415 m on southern side of access.	Steep topography.
37	Section B: Tower N202	Extended up to 125 m on south eastern side of alignment.	To accommodate EPZ pulling positions.

No.	Section / Area	LoD Variation	Rationale
38	Section B: Tower N206 to Tower N207	Access LoD extended up to 150 m on southern side of access.	Steep topography.
39	Section B: Tower 219 to Tower 222	Reduced to 60 m on the northern side and 45 m on the southern side of alignment.	Ancient Woodland, residential property and riparian corridor.
40	Section B: Tower N230 to Tower N237	Extended up to 315 m on eastern side and reduced to 65 m on western side of alignment.	Alternative alignment as well as access may be required due to steep side slopes with evidence of existing peat slides that could pose substantial safety risks to people and plant during construction.
41	Section B: Tower N237	Extended up to 180 m on north western side of alignment.	To accommodate EPZ pulling positions.
42	Section B: Tower N261	Extended up to 125 m on north western side of alignment.	To accommodate EPZ pulling positions.
43	Section B: Tower N262 to Tower N264	Reduced to 65 m on eastern and western sides of alignment.	Scheduled Monument and SSSI.
44	Section B: Tower N265 to Tower N266	Reduced to 75 m on eastern side of alignment.	Ecology – SBL Priority Habitat – wet woodland, Ancient Woodland.
45	Section B: Tower N268 to Tower N297	Reduced to 65 m on northern and southern sides of alignment.	SSSI and Special Protection Area (SPA).
46	Section B: Tower N275	Extended up to 430 m on eastern side and 2 km on western side of alignment.	To accommodate special arrangement construction works[2].
47	Section B: Tower N276 to Tower N277	Reduced to 30 m on eastern and western sides of alignment.	Ancient Woodland and riparian corridor.
48	Section B: Tower N278 to Tower N279	Reduced to 70 m on northern side of alignment.	Loch Buidhe Road.
49	Section B: Tower N282 to Tower N291	Extended to 150 m on northern side of alignment.	To accommodate special arrangement construction works[2].
50	Section C: Tower S2	Extended up to 600 m on northern side of the alignment and 1.1 km on southern side of alignment.	To accommodate special arrangement construction works[2]
51	Section C: Tower S3 to Tower S6	Extended up to 120 m on northern and southern sides of alignment.	Increased as the alignment is in close vicinity of the special arrangement construction works

No.	Section / Area	LoD Variation	Rationale
52	Section C: Tower S12 to Tower S14	Extended up to 120 m on northern side and reduced to 25 m on southern side of alignment.	Avoidance of Loch Leisgein.
53	Section C: Tower S19 to Tower S20	Reduced to 95 m on northern side of alignment	Scheduled Monument.
54	Section C: Tower S21 to Tower S22	Reduced to 75 m on northern side of alignment	Scheduled Monument.
55	Section C: Tower S22 to Tower S23	Extended up to 1.2 km on northern side and 1 km on southern side of alignment.	To accommodate special arrangement construction works[2] This LoD extension has also been amended to avoid a Scheduled Monument.
56	Section C: Tower S23	Reduced to 45 m on northern side of alignment	Ancient Woodland.
57	Section C: Tower S23 to Tower S27	Extended up to 120 m on eastern and western sides of alignment.	Crossing of the Kyle of Sutherland moving into unfavourable terrain where complex earthworks may be required to site the towers. Increase in LoD sought to increase micro-siting possibilities to de-risk construction.
58	Section C: Tower S27 to Tower S28	Reduced to 60 m on western side of alignment	Avoidance of Loch Carbisdale.
59	Section C: Tower S32 to Tower S34	Extended up to 150 m on western side of alignment.	To accommodate EPZ pulling positions during construction works.
60	Section D: Tower S39	Reduced to 45 m on western side of alignment	Ancient Woodland.
61	Section D: Tower S49 to Tower S51	Extended up to 150 m on western side of alignment.	To accommodate EPZ pulling positions during construction works.
62	Section D: Tower S59 to Tower S61	Extended up to 200 m on eastern side of alignment.	To accommodate EPZ pulling positions during construction works.
63	Section D: Tower S73 to Tower S75	Extended up to 125 m on eastern and western sides of alignment.	To accommodate EPZ pulling positions during construction works.
64	Section D: Tower S79 to Tower S89	Extended up to 125 m on eastern and western sides of alignment.	Lack of detailed topographical data at consents design leading to increased uncertainty on terrain. Purpose of LoD extension here is to increase flexibility of tower siting when reliable ground data is available.
65	Section D: Tower S92 to Tower S94	Extended up to 150 m on western side of alignment.	To accommodate EPZ pulling positions during construction works.
66	Section D: Tower S98 to Tower S100	Extended up to 180 m on eastern side of alignment.	To accommodate EPZ pulling positions during construction works.

No.	Section / Area	LoD Variation	Rationale
67	Section D: Tower S123 to Tower S125	Extended up to 150 m on eastern side of alignment.	To accommodate EPZ pulling positions during construction works.
68	Section D: Tower S129	Reduced to 60 m on northern side of alignment	Scheduled Monument.
69	Section D: Tower S130 to Tower S145	Extended up to 160 m on northern side of alignment.	High concentration of water crossings and challenging topography in this section. LoD extension to allow for the possibility of movement of the alignment to reduce impact on watercourses and manage topography.
70	Section D/E: Tower S148 to Tower S153	Extended up to 125 m on northern side of alignment.	To accommodate EPZ pulling positions during construction works and railway crossing.
71	Section E: Tower S161 to Tower S163	Extended up to 125 m on eastern and western sides of alignment.	To accommodate EPZ pulling positions during construction works.
72	Section E: Tower S163	Reduced to 70 m on western side of alignment	Annex 1 habitat.
73	Section E: Tower S164 to Tower S166	Reduced to 45 m on western side of alignment	Ancient Woodland.
74	Section E: Tower S169 to Tower S171	Extended up to 220 m on eastern side of alignment.	To accommodate EPZ pulling positions during construction works.
75	Section E: Tower S178 to Tower S180	Extended up to 125 m on eastern side and 140 m on western side of alignment.	Increased due to proximity to the special arrangement construction works.
76	Section E: Tower S180	Extended up to 550 m on eastern side and 700 m on western side of alignment.	To accommodate special arrangement construction works[2].
77	Section E: Tower S191 to Tower S193	Extended up to 190 m on northern side of alignment.	To accommodate EPZ pulling positions during construction works.
78	Section E: Tower S193 to Tower S198	Extended up to 210 m on southern side of alignment.	Slope stability risk is high in this section. Further assessment may recommend micro-siting of line to mitigate.
79	Section E: Tower S203 to Tower S205	Extended up to 190 m on eastern side of alignment.	To accommodate EPZ pulling positions during construction works.

No.	Section / Area	LoD Variation	Rationale
80	Section E: Tower S215 to Tower S220	Extended up to 250 m on eastern side of alignment.	To accommodate an area of non-designated assets
81	Section E: Tower S220 to Tower S223	Extended up to 220 m on western side of alignment.	To accommodate EPZ pulling positions during construction works.
82	Section E: Tower S224	Extended up to 1.1 km on eastern side and 800 m on western side of alignment.	To accommodate special arrangement construction works[2].
83	Section E: Tower S228 to Tower S232	Extended up to 125 m on eastern and western sides of alignment.	The micro-siting of the Crask of Aigas crossing tower may affect ongoing spans into the Fanellan substation.
84	All	Various	Where existing access tracks intersect with public roads, existing bellmouths may need to be upgraded or expanded at these locations. The specific bellmouth design will be assessed on a case-by-case basis to account for required visibility splays and vehicle turning radii. The LoD for new access tracks joining public roads is the same as that applied for new access tracks generally (100 m either side of the centre line).

3.5.7 An Operational Corridor (OC) is required through areas of woodland and commercial forestry to ensure the safe operation of the OHL (discussed further in **Section 3.14**). The width of the OC would vary depending on the nature of the woodland or forestry but typically requires a distance of 45 m either side of the OHL.

3.5.8 A vertical LoD, i.e. the maximum height of a pole or tower above ground level, is also sought to allow a height increase of up to 9 m in general on the proposed tower height presented within **Volume 5, Appendix 3.1: Indicative Tower Schedule**. The 9 m variation is consistent with the extension panels to which steel lattice towers are designed (i.e. in 3 m lengths), and therefore any increase of steel lattice towers would be no greater than 9 m (equivalent to 3 x 3 m panel extensions). As noted within paragraph 3.5.2 with respect to the location of infrastructure, there is also a level of confidence in relation to the height of infrastructure given the engineering design work undertaken to date. The vertical LoD provides some flexibility nonetheless, to account for presently unforeseen issues.

3.5.9 Where there is a requirement to vary the location of infrastructure within the LoDs, the relevant environmental information within this EIA Report would be reviewed to establish any potential constraints or adverse change in effect. Further advice on LoD changes would be sought from environmental specialists, and, where relevant, consultation would be sought from THC (as local planning authority) and any relevant statutory consultees as required.

3.6 Proposed Development Overview

3.6.1 A summary of each of the five sections of the Proposed Development is provided below. These are shown on **Volume 3, Figure 3.1: The Proposed Development**.

Section A: Spittal to Brora

3.6.2 This section of the Proposed Development originates at the proposed new Banniskirk substation, following a southerly direction west of Dunbeath, Berriedale and Helmsdale before continuing south-west to near Kintradwell.

3.6.3 Constraints between Spittal and Brora include local settlements such as Dunbeath and Helmsdale, the Spittal Hill Wind Farm and a number of other proposed wind farms. In addition, there are numerous designated sites including Special Areas of Conservation (SACs), SPAs and SSSIs, as well as the RSPB reserve; scheduled monuments; Causeymire – Knockfin Flows Wild Land Area (WLA); and the Ben Klibreck – Armine Forest WLA. The peatlands in the area form part of The Flow Country (an intact and expansive blanket bog system that stretches across Caithness and Sutherland). The Flow Country was inscribed on the World Heritage List to the United Nations Educational, Scientific and Cultural Organisation (UNESCO) as of July 2024.

3.6.4 The terrain in the area is a mix of moderate hills with some steep slopes, and areas with more gradual undulating terrain.

Section B: Brora to Loch Buidhe

3.6.5 This section of the Proposed Development originates north of Brora, heading generally south-west towards the proposed new Carnaig substation.

3.6.6 Constraints between Brora and Loch Buidhe include existing and consented wind farms, the Strath Carnaig and Strath Fleet Moors SPA and SSSI which extends from the west of Golspie to Loch Buidhe; scheduled monuments; the Dornoch Firth and Loch Fleet Ramsar site and SPA to the south of Golspie; Mound Alderwoods SAC and SSSI; and Strathfleet SSSI.

3.6.7 The terrain in this section has a mix of high hills and steep slopes.

Section C: Loch Buidhe to Dounie

3.6.8 This section of the Proposed Development originates at the proposed new Carnaig substation, heading generally south-west towards Invershin and southwards to Dounie.

3.6.9 Constraints in this section include local settlements such as Ardgay, Bonar Bridge, Culrain, Carbisdale, Dounie and Invershin. Other constraints include the Dornoch Firth National Scenic Area (NSA); Strath Carnaig and Strath Fleet Moors SPA and SSSI; the River Oykel SAC; and Kyle of Sutherland Marshes SSSI. There are also a number of scheduled monuments and listed buildings, including the Battle of Carbisdale Registered Battlefield, and areas of ancient woodland.

Section D: Dounie to Near Strathpeffer

3.6.10 This section of the Proposed Development originates northwest of Dounie following a southerly direction towards Dingwall before continuing to the north of Strathpeffer.

3.6.11 Constraints in this section include local settlements such as Ardross, Alness, Braeantra and Boath, Fodderty and Heights of Brae. Other constraints include: commercial forestry areas and areas of ancient woodland; the Novar SPA; the Amat Wood SAC and SSSI; scheduled monuments; Category A listed buildings such as Ardross Castle; the Ardross Castle Garden and Designed Landscape (GDL); and the Rhiddoroch - Beinn Dearg - Ben Wyvis WLA. There are a number of existing OHLs within this section and the terrain varies with large sections comprising very challenging hilly terrain.

Section E: Near Strathpeffer to Beauly

3.6.12 This section of the Proposed Development originates north of Strathpeffer following a southerly direction to the proposed new Fanellan substation.

3.6.13 Constraints in this section include local settlements including Contin, Tarvie, Garve, Marybank and Strathpeffer, areas of ancient woodland; scheduled monuments; the Fairburn GDL and Category A listed Fairburn Tower; Conon Islands SAC; Lower River Conon SSSI; and the Brahan GDL. There are a number of existing OHLs in the area.

Design Overview

3.6.14 Design parameters used in the assessment are provided in **Table 3.2** below.

Table 3.2: Design Parameter Assumptions

Parameter	Assumption for EIA
Horizontal OHL LoD	Variable but generally 200 m (100 m either side of the centre line)
Vertical OHL LoD	Up to 9 m in general
Access Track LoD	Variable but generally 200 m (100 m either side of the centre line) for new access tracks. A 20 m total LoD (10 m either side of the centre line) for upgrades to existing tracks.
Tower Height	See Tower Schedule (**Volume 5, Appendix 3.1**)
Span Lengths	Approximately 350 m apart on average
Tower Temporary Compound Area	Typical size of 85 m x 85 m - Tension Tower[3] Typical size of 60 m x 60 m - Suspension Tower[4]
Tower Foundation (Dimension)	Typical pad size of 4.5 x 4.5 x 0.7 m per tower leg Current maximum pad size of 6.5 x 6.5 x 0.9 m per tower leg
New Access Tracks	Dictated by ground conditions, topography, and surrounding habitat
Upgrade of Existing Tracks	Dictated by the existing condition of the tracks
Track Dimensions (Cut / Fill or Floating)	10 m width
Operational Corridor	Up to 90 m (45 m either side of the centre line)
Forestry Removal (OHL)	Up to 90 m (45 m either side of the centre line)
Forestry Removal (Access Tracks)	Up to 20 m (10 m either side)

3.6.15 **Table 3.3** provides a summary of the main elements of the Proposed Development on a Section-by-Section basis. Reference should also be made to **Volume 3, Figure 3.1: The Proposed Development**.

Table 3.3: Summary of Main Elements of the Proposed Development

Section	Design Specification	Other Ancillary / Associated Works
Section A: Spittal to Brora	Steel lattice OHL for the entirety of this Section (approximately 67 km) from Banniskirk substation to	<u>Ancillary Works</u> • Temporary and permanent construction access via; • Public Roads (approx. 47 km);

[3] Tension towers are used where the transmission line has some angle
[4] Suspension towers are used in straight paths for power transmission

Section	Design Specification	Other Ancillary / Associated Works
	Tower N202 at approximate grid reference (290248.316 909080.69).	• Existing access tracks to be upgraded (approx. 47 km); • New permanent access tracks (approx. 25 km); • New permanent access tracks (floating construction within SPA/SAC (approx. 2.5 km); • New permanent access tracks (cut / fill construction within SPA/SAC) (approx. 2 km); • New temporary access tracks (approx. 67 km); • Temporary spurs to tower positions; • The upgrade of existing/ creation of new bellmouths at public road access points; • Establishment of temporary measures to protect road and water crossings (e.g. scaffolding); • Tree felling and vegetation clearance to facilitate construction and operation of the Proposed Development; and • PRI works as required. <u>Associated Works</u> • Temporary construction compounds; and • Banniskirk substation.
Section B: Brora to Loch Buidhe	Steel lattice OHL for the entirety of this Section (approximately 29 km in length) from Tower N202 at approximate grid reference (290146.088 908764.812) to Carnaig substation.	<u>Ancillary Works</u> • Temporary and permanent construction access via; • Public Roads (approx. 37 km) • Existing access tracks (approx. 6 km); • Existing access tracks to be upgraded (approx. 19 km); • New permanent access tracks (approx. 14 km); • New permanent access tracks (cut / fill construction within SPA/SAC) (approx. 350 m); • New temporary access tracks (approx. 30 km); • Temporary spurs to tower positions; • The upgrade of existing/ creation of new bellmouths at public road access points; • Establishment of temporary measures to protect road and water crossings (e.g. scaffolding); • Tree felling and vegetation clearance to facilitate construction and operation of the Proposed Development; and • PRI works as required. <u>Associated Works</u> • Temporary construction compounds; and • Carnaig substation.
Section C: Loch Buidhe to Dounie	Steel lattice OHL for the entirety of this Section (approximately 14 km in length) from Carnaig substation to Tower S38 at	<u>Ancillary Works</u> • Temporary and permanent construction access via; • Public Roads (approx. 34 km); • Existing access tracks to be upgraded (approx. 31 km);

Section	Design Specification	Other Ancillary / Associated Works
	approximate grid reference 255612, 891302.	• New permanent access tracks (approx. 5 km); • New temporary access tracks (including trackway) (approx. 9 km); • New permanent access tracks (cut / fill construction within SPA/SAC) (approx. 1 km); • Temporary spurs to tower positions; • The upgrade of existing/ creation of new bellmouths at public road access points; • Establishment of temporary measures to protect road and water crossings (e.g. scaffolding); • Tree felling and vegetation clearance to facilitate construction and operation of the Proposed Development; and • PRI works as required. <u>Associated Works</u> • Temporary construction compounds; and • Carnaig substation.
Section D: Dounie to Near Strathpeffer	Steel lattice OHL for the entirety of this Section (approximately 37 km in length) from Tower S38 at approximate grid reference 255612, 891302 to Tower S149 at approximate grid reference 247911, 861032.	<u>Ancillary Works</u> • Temporary and permanent construction access via; • Public Roads (approx. 34 km) • Existing access tracks to be upgraded (approx. 63 km); • New permanent access tracks (approx. 27 km); • New temporary access tracks (including trackway) (approx. 11 km); • Temporary spurs to tower positions; • Emergency / maintenance access tracks (approx. 16 km); • The upgrade of existing/creation of new bellmouths at public road access points; • Establishment of temporary measures to protect road and water crossings (e.g. scaffolding); • Tree felling and vegetation clearance to facilitate construction and operation of the Proposed Development; and • PRI works as required. <u>Associated Works</u> • Temporary construction compounds.
Section E: Near Strathpeffer to Beauly	Steel lattice OHL for the entirety of this Section (approximately 26 km in length) from Tower S149 at approximate grid reference 247911, 861032 to Fanellan substation.	<u>Ancillary Works</u> • Temporary and permanent construction access via; • Public Road (approx. 23 km); • Existing access tracks to be upgraded (approx. 66 km); • New permanent access tracks (approx. 19 km); • New temporary access tracks (including trackway) (approx. 5.7 km); • Temporary spurs to tower positions;

Section	Design Specification	Other Ancillary / Associated Works
		• Emergency / maintenance access (approx. 8 km); • The upgrade of existing/ creation of new bellmouths at public road access points; • Establishment of temporary measures to protect road and water crossings (e.g. scaffolding); • Tree felling and vegetation clearance to facilitate construction and operation of the Proposed Development; and • PRI works as required. Associated Works • Temporary construction compounds; and • Fanellan substation.

3.7 Description of Overhead Line Infrastructure

Physical Characteristics of the OHL

3.7.1 The steel structures will be of lattice design from the SSEN Transmission AS4 tower suite. The tower numbers and tower design types are presented in **Volume 5, Appendix 3.1: Indicative Tower Schedule** and illustrated on **Volume 3: Figure 3.1: The Proposed Development**.

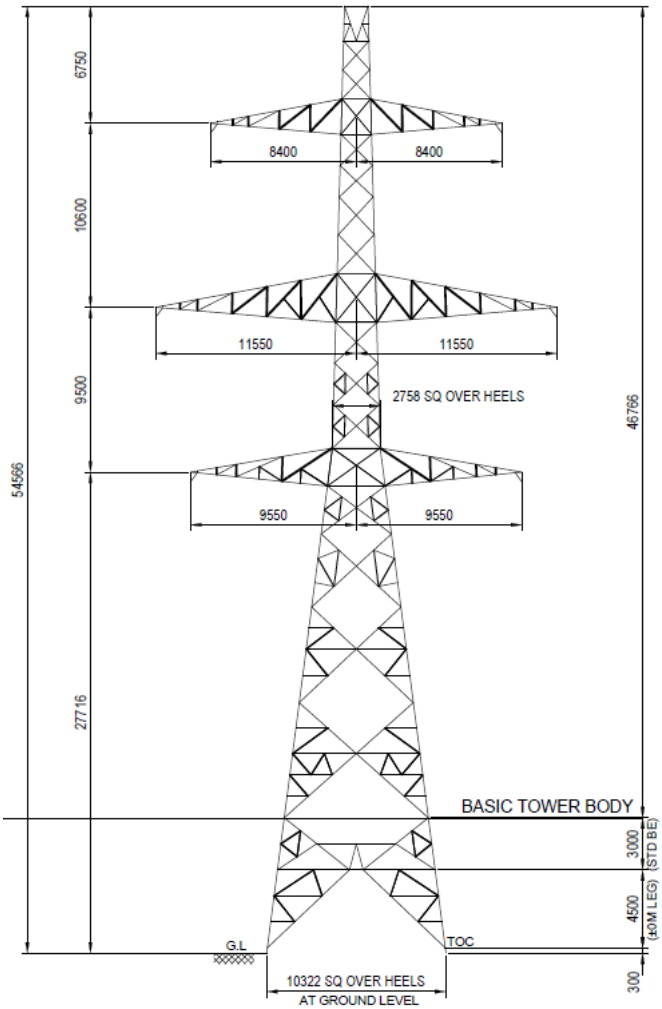
3.7.2 The proposed steel lattice towers will support six conductor bundles (three electrical wires per bundle) on six cross-arms (three on each side) and an earth wire between the peaks. The span lengths between towers will vary depending on topography and altitude but would be approximately 350 m apart on average. Exact heights and the distances between towers will be determined after a detailed line survey.

3.7.3 Typical tower designs[5] can be seen in **Plate 3.1** and a schematic of a steel lattice tower is shown in **Plate 3.2**. Four transposition towers will also be required at Towers N91 (N91A and N91B) and Tower N193 (N193A and N193B) in Section A (see **Volume 5, Appendix 3.1: Indicative Tower Schedule**). An example schematic of a transposition tower is shown **Volume 5, Appendix 3.2: Further Engineering Design Information**.

[5] The existing AS4 tower suite design is currently being modified to provide stronger tower structures. The final tower design and appearance may differ slightly from the existing AS4 tower suite shown in Plate 3.1.

Plate 3.1: Existing AS4 Steel Lattice Tower Design

Plate 3.2: Proposed AS4 Steel Lattice Tower Typical Schematic



3.8 Typical Construction Activities for Overhead Line Infrastructure

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

- Phase 1 – enabling works (as described in paragraphs 3.8.2 to 3.8.15);
- Phase 2 – OHL construction (as described in paragraphs 3.8.16 to 3.8.27);
- Phase 3 – OHL commissioning (as described in paragraph 3.2.28); and
- Phase 4 – re-instatement (as described in paragraph 3.8.29).

Phase 1 - Enabling works

Existing Distribution Lines

3.8.2 Works will be required to some existing electricity distribution network infrastructure to facilitate safe working and operating conditions given the proximity of the existing OHLs to the proposed OHL. It is anticipated that some of these network assets may be realigned or partially undergrounded in some locations to make way for the Proposed Development. Specific details are not available at this stage, but it is anticipated that any works would be carried out under Permitted Development Rights. For electricity distribution infrastructure these works do not form part of the Proposed Development.

Existing Transmission Lines

3.8.3 Special arrangement works will also be required, i.e. a permanent diversion to existing 132 kV and 275 kV transmission network infrastructure (see **Section 3.9**). These works form part of the application for Section 37 consent where required and are assessed as part of this EIA.

Public Road Improvements and Access

3.8.4 Typically, construction access would be established through a combination of:

- Existing tracks, to be upgraded where required;
- Installation of new temporary tracks; and
- Installation of new permanent tracks.

3.8.5 In general, proposed construction access would be taken via the existing public road network and would make use of existing forest and estate tracks, as far as practicable, and upgraded as required. Existing bellmouths would be utilised where possible, subject to improvements. New bellmouths would be required at a number of locations. Indicative locations are shown on **Volume 3, Figure 3.1: The Proposed Development**.

3.8.6 To enable larger construction vehicles to access the site, a limited number of PRI works would need to take place. The type of works includes short sections of road widening; junction widening; passing place lengthening and passing place creation. **Volume 5, Appendix 3.7: PRI Environmental Appraisal** presents high-level information which will be progressed further at the detailed design stage, including:

- Figures showing indicative locations;
- Construction methodology and specification; and
- High-level environmental desk study.

3.8.7 The new permanent and temporary access tracks would be a combination of 'cut and fill' and floating road. Cut and fill involves excavating material from areas where the ground is higher (cut) and using that material to fill in areas where the ground is lower (fill) to create a level surface. Floating road is when a layer of geotextile or other permeable material is laid down over sensitive areas and covered in aggregate. Temporary trackway panel for construction would also be installed in certain locations over areas of agricultural land.

3.8.8 Track widths during construction are typically expected to have a running width of 6 m, with an overall construction corridor of approximately 10 m to allow for suitable drainage and pollution prevention measures. All new tracks would be constructed in accordance with best practice construction methods, and with reference to NatureScot's good practice guide on constructing tracks in Scottish uplands[6]. Indicative access track cross sections and a matrix setting out the factors that would be considered in the type of track construction are included in **Volume 5, Appendix 3.2: Further Engineering Design Information**.

3.8.9 Operational access to the Proposed Development will be required for inspection and maintenance purposes, including in remote areas or in difficult terrains. This is to ensure SSEN Transmission comply with their legislative obligations, particularly in relation to the Health and Safety at Work Act 1974[7] and Construction (Design and Management) Regulations 2015[8]. Where operational access is required, this would likely range from use of All-Terrain Vehicle (ATV) routes with no formal track, to a stone road suitable for 4x4 vehicle access (with a running width of approximately 2.5 to 3 m). Tracks to be permanently retained would be partially reinstated on commissioning of the OHL to reduce their running width to approximately 2.5 m for use by SSEN Transmission for maintenance access. Other tracks noted as temporary would be removed and the land

[6] Constructed tracks in the Scottish Uplands (Updated September 2015), Scottish Natural Heritage.
[7] https://www.legislation.gov.uk/ukpga/1974/37/contents - accessed 08/07/2022
[8] https://www.legislation.gov.uk/ukpga/1974/37/contents - accessed 08/07/2022

reinstated. The selection of the type of track required depends on the proximity to a public road, structure type and potential maintenance activities / vehicles required in future to a given location (taking legal health and safety requirements into account). Operational access track requirements are shown on **Volume 3, Figure 3.1: The Proposed Development**.

3.8.10 Access tracks (and their related LoDs) are shown on **Volume 3, Figure 3.1: The Proposed Development**. Deemed planning permission will be sought for these access tracks and access points as part of the Section 37 consent application.

3.8.11 Where new watercourse crossings are required, the design of the crossing would be in accordance with best practice guidelines, and taking account of any engineering and / or environmental constraints. The design of watercourse crossings would be agreed with Scottish Environment Protection Agency (SEPA) prior to construction and be regulated by the Water Environment (Controlled Activities) (Scotland) Regulations 2011[9] (CAR). A watercourse crossing schedule for permanent watercourse crossings is provided in **Volume 5, Appendix 10.1: Schedule of Permanent Watercourse Crossings.**

3.8.12 Borrow pits or quarries would be required to source stone for the construction of access tracks. These are associated works and do not form part of the consent application (see **Section 3.4** of this chapter).

Forestry Clearance

3.8.13 Whilst the design of the Proposed Development has sought to minimise impacts on woodland and commercial forestry plantations where possible, some felling during construction, and to create an OC, is required. The width of the OC would be variable depending on the nature of the forest or woodland. Within areas of commercial forestry, the OC would require a distance of up to 45 m either side of the OHL, whilst in areas of native woodland it may be possible to reduce the OC. Further detail on proposed felling requirements is set out within the forestry chapter (see **Chapter 13: Forestry**) and woodland reports (See **Volume 5, Appendix 13.1: Woodland Reports**). Overall, the Proposed Development would require 536 .74 hectares (ha) of woodland to be felled. Some additional minor vegetation management and felling may be required around the existing access track network to provide sufficient width.

3.8.14 Separately, it is anticipated that there will be a requirement for a further 536.65 ha of management felling of commercial conifer forest outwith the OC to mitigate the risk of windblow. This management felling will be undertaken only with the landowner's consent and will require replanting. Felling permission for the areas of management felling would require be granted by Scottish Forestry. This would require the landowner to fully address the replanting of such areas of felling outwith the OC. As discussed further in **Chapter 13: Forestry,** it is the intention of the Applicant to encourage the landowners to follow this best practice in terms of redesigning their current Long-Term Forest Plans which in turn would aim to follow UK Forestry Standard for the implementation of the works required.

3.8.15 The Applicant is committed to making arrangements to plant off-site the equivalent area of woodland as compensatory planting, meeting the Scottish Government's Control of Woodland Removal Policy objective of no net loss of woodland. On this basis, the Applicant will plant 536.74 ha of woodland, equivalent to the area removed for the Proposed Development and this will be achieved within the regional land boundary of THC, of where the Proposed Development is geographically located.

Temporary Site Compounds

3.8.16 It is currently anticipated that a number of construction compounds and laydown areas will be required given the scale of the Proposed Development. These are associated works and do not form part of the consent

[9] Water Environment (Controlled Activities) (Scotland) Regulations 2011, available at https://www.legislation.gov.uk/ssi/2011/209/contents/made [Accessed February 2025]

application (see **Section 3.4** of this chapter). The locations of the temporary site compounds will be confirmed by the Principal Contractors once identified.

Phase 2 – Construction works

Foundations

3.8.17 Different approaches to forming foundations may be used for steel lattice towers, subject to ground conditions at each location. Typical foundations are likely to comprise either: pad and chimney; driven concrete, Continuous Flight Auger (CFA) Pile, tube and micro pile; or rock anchor. However, other foundation types could be used dependent on access constraints and/or surficial/subsurface ground conditions.

- Pad and Chimney: Prior to construction, an 85 m x 85 m (7225 m^2) (approximately) compound is established complete with stone access and laydown area for welfare, plant and materials. Each tower foundation (4 no. per tower) 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 approximately 4.5 m x 4.5 m x 0.7 m. Major items of plant required to construct the foundations typically include a 20 tonne excavator in order to excavate to formation and place the shoring system, and a concrete wagon to supply the concrete.
- Micro Pile: Often utilised in areas of deeper peat. Prior to construction, a stone piling pad will be required, typically 25 m x 25 m (625 m²) in area 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. Concrete is supplied via a concrete wagon.
- Rock Anchor: Rock anchors are considered if suitable hard rock is encountered at a depth of 2.5 m and is proven to have sufficient frictional and lateral resistance. Beyond this depth, pad and column foundations are typically 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 a concrete wagon.

3.8.18 Foundation types and designs for each tower will be confirmed following detailed geotechnical investigation at each position.

3.8.19 Dimensions of each foundation would be confirmed following micro-siting. For the purposes of this assessment, however, it has been assumed that each foundation would be buried to depths estimated up to 2.5 m below ground level (bgl) although 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 2 m depth.

3.8.20 For the purposes of this EIA Report it has been assumed that a working area of approximately 7225 m² would be required around each individual tower foundation and associated construction activities. The exact dimensions of the working area around each tower will be confirmed following micro-siting but would typically be no greater than 7225 m².

3.8.21 Where encountered, top soil (including peat) would be stripped from the tower working area to allow installation of tower erection pad(s) as necessary in order to accommodate construction plant. Concrete is likely 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.

3.8.22 It is anticipated that formation of each tower foundation would take approximately four weeks to complete. **Plate 3.3** provides and illustrative image of tower foundation construction.

Plate 3.3: Illustrative Image of Tower Foundation Construction

Steel Lattice Tower Construction

3.8.23 Tower construction can typically commence two weeks after the foundations have been cast, subject to weather conditions and concrete curing rates. Tower steelwork will be delivered to each tower construction site either as individual steel members or as prefabricated panels, depending on the method of installation and the available access. A working area, up to approximately 85 m by 85 m (7225 m^2), is required at each tower location to facilitate access, laydown and assembly. Sections are then assembled on the ground in preparation for sequential lifting operations. An all-terrain mobile crane is deployed to undertake tower erection. A 360 Roto telehandler would be utilised for moving tower sections into place for the crane and assisting in tandem lifts. **Plate 3.4** provides an example of tower construction.

Plate 3.4: Illustrative Image of Steel Lattice Tower Construction

3.8.24 Major items of plant required for erection would also include a flatbed wagon or articulated lorry to transport the steelwork to location.

Conductor Stringing

3.8.25 The conductor will be delivered to Site on wooden drums in pre-determined pulling section lengths. Prior to stringing the conductors, temporary protection measures (e.g. netted scaffolds), will be required across public roads and existing access tracks.

3.8.26 Conductor stringing equipment (i.e. winches, tensioners and ancillary equipment) are set out at either end of pre-selected sections of the OHL.

3.8.27 Prior to wiring operations, EPZ pulling positions need to be established. The typical size of a working area required for an EPZ pulling position is approximately 50 m by 50 m. This would likely be set up on trackway panels. As conductors are required to be pulled in opposite directions, two EPZ 50 m by 50 m trackway panelled pulling locations are required at each respective pulling tower (one on the upside and one on the downside of the tower).

3.8.28 Pilot wires would be pulled through the section to be strung. These would be hung on blocks (wheels) at each suspension tower and connected to a winch and tensioner at each end of the section. The winch, in conjunction with the tensioner, is used to pull the pilot wires between the structures. The conductor is pulled via the pilot wires through the section under tension to avoid contact with the ground and any underrunning obstacles. Once

the conductor has been strung between the ends of the section it is then tensioned and permanently clamped at each pole / tower.

Phase 3 - Commissioning

3.8.29 The OHL and support towers will then be subject to an inspection and snagging process. This allows the Principal Contractors and SSEN Transmission to check that the works have been built to specification and are fit to energise. The Proposed Development will also go through a commissioning procedure for the switchgear, communications and protection controls through the substations at Banniskirk, Carnaig and Fanellan. The circuits will then be energised from the substations in a phased sequence.

Phase 4 - Reinstatement

3.8.30 Following commissioning of the Proposed Development, it is anticipated that all construction sites will be reinstated and restored. Reinstatement would form part of the contract obligations for the Principal Contractors and would include the removal of all temporary access tracks and work sites around the tower locations, and the re-vegetation of all construction compounds.

3.9 OHL Crossings – Special Arrangements

3.9.1 Special arrangements are required to facilitate the crossing of the Proposed Development with an existing 132 kV or 275 kV OHL. As part of the Proposed Development, six special arrangements are proposed. The locations of these and each of the proposed arrangements are outlined in **Table 3.4.**

Table 3.4: Special Arrangement Summary

Section	Crossing Point	Voltage Level	Proposed Arrangement
A	Crofts of Benachielt	132 kV	Duck Under with Space Provision for Live Scaffolding
B	Strath Carnaig	132 kV	Diamond Duck Under with Flat Formation Towers
C	West of Loch Buidhe	275 kV	Diamond Duck Under with Flat Formation Towers
	Near Invershin	132 kV	Duck Under with Wood Poles, with live line Scaffold Provision
E	North-West of Fairburn	132 kV	Diamond Duck Under Arrangement
	West of Fanellan/Aigas Gorge	132 kV	Duck Under with Wood Poles, with live line Scaffold Provision

3.9.2 When crossing transmission lines, the preference is to have the two lines cross over each other in what is called a diamond arrangement. A schematic for a diamond arrangement is shown in **Plate 3.5** below.

Plate 3.5 Proposed Diamond Duck Under Arrangement Schematic

3.10 Land Take

3.10.1 **Table 3.5** summarises the indicative land take associated with the Proposed Development.

Table 3.5: Indicative land take for the Construction and Operation of the Proposed Development

Activity	Construction	Operation
Access Track (Temporary)	122.7 km	N/A
Access Track (Permanent)	95.9 km	95.9 km
Temporary Construction Working Area at Towers	2.8 km^2	N/A
Permanent Land Take for 400 kV Towers	N/A	0.1 km^2
Area of woodland within OC	462.48 ha	462.48 ha

3.11 Construction Programme

3.11.1 It is anticipated that construction of the Proposed Development would take place over a 48 month period (approximately), following the granting of consents and discharge of pre-commencement conditions. A further seven months (approximately) would be required for dismantling works associated with the existing OHL.

3.12 Construction Employment and Hours of Work

3.12.1 Employment of construction staff would be the responsibility of the Principal Contractors. However, SSEN Transmission encourages the Principal Contractors to make use of suitable labour and resources from areas local to the location of the works. It is envisaged that there would be a number of separate teams working at the same time at different locations along the Proposed Development. The resource levels would be dependent on the final construction sequence and would be determined by the Principal Contractors.

3.12.2 Construction working is likely to be during daytime periods only. Working hours are anticipated seven days a week between approximately 07.00 to 19.00 during British Summer Time (BST) and 07.00 to 18.00 during Greenwich Mean Time (GMT), seven days a week.

3.13 Construction Traffic and Site Compounds

3.13.1 Construction of the Proposed Development would give rise to regular numbers of staff transport movements, with work crews travelling to work site areas from site compound areas that will be identified by the Principal Contractors.

3.13.2 A Construction Traffic Management Plan (CTMP) will be prepared by the Principal Contractors, in consultation with SSEN Transmission, THC and Transport Scotland. The CTMP will describe all mitigation and signage measures that are proposed on the public road network. An Outline CTMP is included in **Volume 5, Appendix 14.5.**

3.14 Environmental Management during Construction

3.14.1 The assessment in this EIA Report has been carried out on the basis that all works will be carried out in accordance with industry best practice construction measures, guidance and legislation, together with the following documents and procedures:

GEMPs

3.14.2 General Environmental Management Plans (GEMPs) have been developed by the Applicant. The GEMPs considered relevant for the Proposed Development are identified in **Volume 5, Appendix 3.3: General Environmental Management Plans (GEMPs).**

SPPs

3.14.3 Species Protection Plans (SPPs) have been developed by the Applicant and have been agreed with NatureScot. These can also be found in **Volume 5, Appendix 3.4: Species Protection Plans (SPPs)**.

CEMP

3.14.4 A contractual management requirement of the Principal Contractors will be the development and implementation of a Construction Environmental Management Plan (CEMP). An Outline CEMP has been included in **Volume 5, Appendix 3.6.** This document will detail how the Principal Contractors will manage the Site in accordance with all commitments and mitigation detailed in this EIA Report, statutory consents and authorisations, and industry best practice and guidance. **Chapter 19: Schedule of Mitigation** provides a summary of all mitigation measures included in this EIA Report.

3.15 Operation and Maintenance

3.15.1 In general, OHLs require very little maintenance. Regular inspections are undertaken to identify any unacceptable deterioration of components, so that they can be replaced. Inclement weather, storms or lightning can cause damage to either the insulators or the conductors on OHLs. If conductors are damaged, short sections may have to be replaced.

3.15.2 During the operation of the Proposed Development, it will be necessary to manage vegetation along the operational corridor (OC) to maintain required safety clearance distances.

3.16 Decommissioning the Proposed Development

3.16.1 The Proposed Development would not have a fixed operational life. The effects associated with the construction phase can be considered to be representative of worst-case decommissioning effects, and therefore no separate assessment on decommissioning has been undertaken as part of this EIA Report.