Volume 1: Chapter 3 - Project Description

VOLUME 1, CHAPTER 3: PROJECT DESCRIPTION

3. PROJECT DESCRIPTION

3.1 Introduction

3.1.1 This Chapter describes the various elements required to construct and operate the Proposed Development. It sets out the location, the aspects for which Section 37 Consent is being sought (including any associated works, the limit of deviation (LOD) and micrositing requirements), as well as the typical construction activities (including the programme, hours of work, construction traffic and environmental management during construction).

3.2 Location of the Proposed Development

3.2.1 The Proposed Development described within this Chapter, and assessed within **Volume 2, Technical Chapters** of this EIAR is also presented in **Volume 3, Figures 3.1.1-3.1.29: Proposed Development for which Section 37 Consent (Electricity Act, 1989) is sought**.

3.2.2 The location of the Proposed Development within each local authority area is displayed in **Volume 3, Figure 3.2: Overview of the Proposed Development and Local Authority Boundaries** and is summarised below and detailed in **Section 3.3**:

Aberdeenshire Council:

- New 400 kV double circuit OHL, tower numbers N1 to S82 (approximately 61 km of new 400 kV OHL).
- Permanent realignment of the existing Kintore to Tealing 275 kV OHL south of Kintore Substation (including temporary diversion, reconductoring and removal of redundant OHL).
- Permanent realignment of the existing Kintore to Craigiebuckler 132 kV OHL south of Kintore Substation (including Cable Seating End Compound, termination tower and removal of redundant OHL).
- Permanent realignment of the existing Kintore to Fetteresso 275 kV/400 kV OHL, southwest of Kirkton of Durris (including temporary diversion, reconductoring and removal of redundant OHL).
- A crossing of the existing Craigiebuckler to Tarland 132 kV OHL at Landerberry southeast of Echt (including temporary diversion, reconductoring and removal of redundant OHL).

Angus Council:

- New 400 kV double circuit OHL, tower numbers S206 to S83 (approximately 44.2 km of new 400 kV OHL).

3.2.3 The Proposed Development connects to the proposed Emmock substation located near Tealing to the existing Kintore Substation, via the proposed Hurlie substation in Fetteresso Forest. The tower ranges of the Proposed Development from each substation location are detailed below:

- downleads into Kintore Substation to downleads[1] into Hurlie substation: N1 to N96 (approximately 32.7 km); and
- downleads into Hurlie substation to downleads into Emmock substation: S1 to S206 (approximately 72.5 km).

3.2.4 The description of the Proposed Development has been subdivided into six sections from south to north referenced Sections A - F for ease of presentation, as listed in **paragraph 1.7.1** of **Volume 1, Chapter 1: Introduction and Background**.

3.2.5 Section A comprises proposed towers with the alpha-numeric nomenclature S206 to S163 which starts at the new proposed 400 kV substation known as Emmock[2], near Tealing. It initially passes in a northwestern direction past scattered properties around Balkemback and Balluderon to the west of Balkemback Cottages Stone Circle (Scheduled Monument). The Proposed Development then heads northeast over rising ground to the east of Craigowl Hill, before continuing northeast along the slopes of Ironside Hill, avoiding a communications mast located to the west. The Proposed Development then crosses the A928 Glamis to Petterden public road to the west of Finlarg Hill,

[1] In the context of a new build overhead line (OHL) that terminates to a substation, "downleads" refer to the conductors that transition from the overhead line tower down to the substation equipment. These conductors carry electrical current from the final span of the overhead line and connect it to substation components such as busbars, circuit breakers, transformers, or other terminal equipment.

[2] Consent is being sought separately under the *Town and Country Planning (Scotland) Act 1997* (Angus Council Reference 24/00699/FULN).

remaining in an upland area before returning to lower ground as it passes west of Hayston Hill across predominantly agricultural land. The Proposed Development then follows in a northerly route, crossing the A94 Glamis to Forfar public road to the east of Hunters Hill and the village of Glamis, avoiding the Glamis Den and Hunter's Hill Local Nature Conservation Site (LNCS), and to the west of the small settlement of Douglastown. The final part of Section A crosses low-lying and partly flood-prone agricultural land to the west of Forfar, intersecting with the Kerbet Water and Dean Water, which are both part of the River Tay Special Area of Conservation (SAC) (see **Volume 2, Chapter 11: Ecology**).

3.2.6 Section B comprises proposed towers with the alpha-numeric nomenclature S162 to S106, which starts to the west of Forfar, initially passing in a northeastern direction to the west of the settlement of Padanaram, and south of the Scheduled Monument at Ballinshoe Castle where the Proposed Development spans the Woodside LNCS at its narrowest point. The Proposed Development then crosses the A926 and B957 public roads and spans the River South Esk to the west of Justinhaugh Bridge which is designated as a SAC. The Proposed Development also intersects with the River South Esk and Aberlemno Local Landscape Area (LLA) at this location. The Proposed Development continues in a northeastern direction, passing approximately 1 km to the west of Tannadice village and the associated Conservation Area, and crosses the Noran Water to the west of the settlement of Wellford where it spans a strip of ancient woodland on the banks of the river. The Proposed Development continues on a northeasterly route to the south of The Angus Glens LLA and to the north of Roughmount Wood and Weiris Wood, before following a southeastern route through Duns Wood and Lochty Wood past the settlement of Careston, located approximately 1.5 km to the south of the Proposed Development. The Proposed Development continues in a northeastern direction across largely open agricultural land avoiding clusters of properties in the vicinity of Findowrie as it passes towards Little Brechin Wood.

3.2.7 Section C comprises proposed towers with the alpha-numeric nomenclature S105 to S52 which starts to the northwest of Brechin and initially passes in a northeastern direction between Belliehill Wood and Little Brechin Wood, intersecting the western edge of Bankhead Wood LNCS, to Auchenreoch where the Proposed Development crosses the West Water. South of Edzell Wood, the Proposed Development continues in an eastern direction, and crosses the B966 Brechin to Edzell public road between clusters of properties, where it then follows a northeastern direction across open agricultural land. Crossing the River North Esk to the southeast of the settlement of Edzell and south of the North Esk and West Water Palaeochannels Site of Special Scientific Interest (SSSI) and skirting the edges of woodland areas at Capo Plantation and Inverury Wood, the Proposed Development then passes to the south of the former Edzell Airfield site which is now being redeveloped with a range of different land uses. Following a northeastern route, the Proposed Development passes approximately 1 km to the north of the small settlement of Luthermuir and to the south of Eslie Moss SSSI through gently rising agricultural land. It then crosses the B974 Fettercairn to Marykirk public road and through the northern edge of mixed woodland at Lady Jane's Plantation, continuing in a northeastern direction to the south of Greenbottom Wood, both of which are classified as Long-Established woodlands of Plantation Origin (LEPO) on the Ancient Woodland Inventory (AWI). The Proposed Development continues in a northeastern direction through the Howe of the Mearns to the south of the Braes of the Mearns LLA, to a point approximately 2 km northwest of the town of Laurencekirk.

3.2.8 Section D comprises proposed towers with the alpha-numeric nomenclature S51 to S1 which starts to the northwest of the town of Laurencekirk, avoiding clusters of properties as it initially passes through gently undulating farmland. It crosses a number of minor roads in a generally northeastern direction towards Auchenzeoch where it passes between the settlement of Fordoun to the southeast and the village of Auchenblae to the northwest. As the Proposed Development continues northeast, it also increases the distance from higher ground associated with the Braes of the Mearns Special Landscape Area (SLA). The alignment navigates a pinch point of properties to avoid Fordoun Airfield and being within key views of a Listed Building at House of Redhall. The Proposed Development then crosses the B966 public road close to the location of commercial sites on land formerly used for a Fordoun airfield. It continues in a northern direction over more undulating topography past the settlement of Monboddo. It then turns northeast, crossing the Bervie Water in a valley to the west of Glenbervie village, avoiding Glenbervie Garden and Designed Landscape (GDL) and to the east of Droop Hill Cairns Scheduled Monument as well as two operational wind turbines. The Proposed Development passes over steeply rising ground following the lower southern and eastern slopes of Droop Hill to avoid complex hydrology and a site with planning permission for a windfarm. At Cotbank, the Proposed Development then follows a northeastern direction through an undulating landscape with several wind turbines,

continuing uphill across a varied and undulating upland landscape with occasional woodland shelterbelts. It then traverses up steeply sloping ground, avoiding the Elfhill LNCS to the east, towards the site of the proposed 400 kV substation at Hurlie[3] in Fetteresso Forest.

3.2.9 Section E comprises proposed towers with the alpha-numeric nomenclature N96 to N61 which begins at the proposed 400 kV substation site at Hurlie in Fetteresso Forest and passes in a northern direction through Fetteresso Forest, crossing the Cowie Water to the west of Mergie LNCS. It then crosses the A957 (Slug Road) Stonehaven to Banchory public road and continues over high ground at Craigneil Hill to the west of a consented application for an 11-turbine windfarm, which has since been redesigned for up to seven wind turbines. The Proposed Development continues north through Durris Forest, following the line of the existing Kintore to Fetteresso 275 kV/ 400 kV OHL to the immediate west of the Proposed Development. It then continues in a northern direction, crossing the Burn of Sheeoch and Strathie Burn which are tributaries of the River Dee and form part of the River Dee SAC. The route of the OHL then continues north to the west of the village of Kirkton of Durris before crossing the River Dee north of Wester Durris, designated as an SAC and an LNCS, as well as the Dee Valley SLA. The Proposed Development then crosses the A93 Aberdeen to Banchory road between West Park and Nether Park, and to the west of Park House GDL.

3.2.10 Section F comprises proposed towers with the alpha-numeric nomenclature N60 to N1 which begins north of the River Dee following a northerly route of gently rising ground intersecting the southern-most edge of the Loch of Park LNCS and adjacent to the Loch of Park SSSI before continuing through to Coldstream Plantation, avoiding the village of Drumoak and Drum Castle GDL to the east. It then follows a route in a north-northwestern direction, over the Gormack Burn, before crossing the B9125 public road to the west of the settlement of Schoolhill. The Proposed Development then crosses an existing 132 kV OHL south of the village Echt, before continuing in a northwestern direction, passing to the east of the village of Echt where it also crosses the B9119 public road. Following a generally northeastern direction, the OHL routes to the east of the prominent high ground of Barmekin Hill Fort Scheduled Monument with its summit hilltop and Barmekin Wood LNCS, and parallel to Dunecht House GDL. The Loch of Skene Special Protection Area (SPA)/SSSI/Ramsar site is located further to the east of the Proposed Development. The Proposed Development crosses the A944 Westhill to Alford public road across undulating ground to the west of Dunecht village and passes through an open agricultural landscape with occasional woodland plantations for approximately 5 km, before it connects with the existing Kintore Substation at the northern end of Section F.

3.2.11 Other works to existing OHLs which are required as part of the Proposed Development, and their location, is briefly described below.

Other required works to existing OHLs which form part of the Proposed Development

3.2.12 The permanent realignment of a section of the existing Kintore to Tealing 275 kV OHL approximately 0.95 km long is required to the south of the existing Kintore Substation. This section of OHL between South Leylodge and Kintore Substation would be realigned to the east to create a corridor of sufficient width for the Proposed Development to connect with the substation without needing to cross the existing OHL.

3.2.13 A permanent Cable Sealing End Compound (CSE Compound) is required to facilitate the realignment and undergrounding of a section of the existing Kintore to Craigiebuckler 132 kV OHL to the south of Kintore Substation (the underground cable works would be carried out as permitted development, see **paragraph 3.3.5**). The CSE Compound has a footprint of approximately 30 m by 45 m and is proposed to be located to the southeast of the existing Kintore Substation. The compound incorporates a terminal OHL tower and apparatus to connect the OHL conductors to the southern end of the new section of proposed underground cable. Approximately 440 m of permanent realignment of the existing Kintore to Craigiebuckler 132 kV OHL is also required on the southern approach to the CSE Compound.

3.2.14 A crossing of the existing Craigiebuckler to Tarland 132 kV OHL by the Proposed Development is required where the two OHLs would intersect at a location near Landerberry approximately 1.5 km southeast of Echt. This involves the

[3] Consent is being sought separately under the *Town and Country Planning (Scotland) Act 1997 (*Aberdeenshire Council Planning Reference APP/2024/1951).

modification of the existing 132 kV OHL into a diamond formation through the installation of two new low-profile towers and two new terminal towers. This allows for future maintenance activities to be undertaken under single circuit outages, reducing health and safety and network risk The length of new OHL required for the formation of the diamond modification as shown on **Figure 3.1.24** is approximately 350 m.

3.2.15 A permanent realignment of an approximate 1.2 km long section of the existing Kintore to Fetteresso 275 kV/400 kV[4] OHL is required in an area south of the River Dee, to the west and southwest of Kirkton of Durris. The OHL would be realigned westwards to provide sufficient width for the alignment of the Proposed Development to pass between residential properties and the existing OHL in this area.

3.3 Development for which Section 37 Consent and Deemed Planning Permission is sought

Development for which Section 37 Consent and Deemed Planning Permission is sought

3.3.1 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:

- construction of approximately 105.2 km of new 400 kV double circuit OHL between the existing Kintore Substation and new substation sites proposed at Fetteresso Forest (Hurlie 400 kV substation) and Tealing (Emmock 400 kV substation), including downleads into the substations (refer to **Volume 1, Chapter 1: Introduction and Background** for more information on proposed substations). This is known as the 'Proposed Alignment – for further detail see **Volume 1, Chapter 4: Alternatives and the Routeing Process**;
- permanent realignment of approximately 0.95 km of the existing Kintore to Tealing 275 kV OHL south of Kintore Substation;
- approximately 1.75 km of reconductoring of the existing Kintore to Tealing 275 kV OHL between towers 291 and 295R, and 298R and 299 as part of the permanent realignment;
- permanent realignment of approximately 440 m of the existing Kintore to Craigiebuckler 132 kV OHL and termination tower;
- a crossing of the existing Craigiebuckler to Tarland 132 kV OHL using a diamond crossing design (approximately 350 m of OHL) at Landerberry southeast of Echt;
- reconductoring of the existing Craigiebuckler to Tarland 132 kV OHL between towers 27 – 44 (the approaches immediately east and west of the diamond crossing at Landerberry) (approximately 4.75 km);
- permanent realignment of approximately 1.2 km of the existing Kintore to Fetteresso 275 kV/400 kV OHL, southwest of Kirkton of Durris;
  - up to approximately 1.47 km of reconductoring of the existing Kintore to Fetteresso 275 kV/400 kV OHL as part of the permanent realignment;
- installation of temporary earthing to conductor / tower steelwork on the existing Kintore to Fetteresso 275 kV OHL, existing Craigiebuckler to Tarland 132 kV OHL, and the existing Kintore to Craigiebuckler 132 kV OH. Upon completion of the works the earthing would be removed;
- construction of temporary OHL diversions to facilitate the permanent modifications to existing OHLs, as detailed above, which are required to construct the new 400 kV OHL. Temporary diversions are required for the following circuits:
  - temporary diversion of the existing Kintore to Tealing 275 kV OHL south of Kintore (approximately 1.10 km);
  - temporary diversion of the existing Craigiebuckler to Tarland 132 kV OHL (approximately 0.62 km); and
  - temporary diversion of the existing Kintore to Fetteresso 275 kV / 400 kV OHL (approximately 1.21 km).
- removal of the redundant section of the existing Kintore to Tealing 275 kV OHL south of Kintore Substation, following its realignment;

[4] The existing OHL at Fetteresso Forest is currently being upgraded to 400 kV. These works are expected to be completed by 2027 in advance of the Kintore to Tealing 400 kV OHL construction and commissioning.

- removal of the redundant section of the existing Kintore to Craigiebuckler 132 kV OHL following its realignment underground;
- removal of the redundant section of the existing Craigiebuckler to Tarland 132 kV, following the diamond crossing; and
- removal of the redundant section of the existing Kintore to Fetteresso 275 kV/400 kV OHL, southwest of Kirkton of Durris, following its realignment

3.3.2 In summary, the Proposed Development would comprise approximately 105.2 km of new 400 kV double circuit OHL, approximately 10.91 km OHL for the permanent realignment and reconductoring of other existing OHLs and associated temporary diversions comprising approximately 2.93 km, resulting in an overall total of 119.04 km of OHL.

Ancillary Development for which Deemed Planning Permission is sought

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

- a CSE Compound of dimensions approximately 30 m by 45 m, southeast of Kintore Substation to facilitate the undergrounding of approximately 1.76 km the existing Kintore to Craigiebuckler 132 kV OHL;
- the upgrade of existing, or creation of new, bellmouths at public road access points along the route;
- the formation of access tracks (permanent, temporary, and upgrades to existing access tracks) including a permanent access track to the CSE Compound and the installation of bridges and culverts to facilitate access along the route;
- temporary working areas around infrastructure to facilitate construction;
- formation of flat areas to site temporary plant from which the conductor would be pulled during construction, which would contain earthed metal working surfaces referred to as Equipotential Zones (EPZs);
- vegetation clearance and management;
- other temporary measures required during construction, such as measures to protect road and water crossings during construction (erection of scaffolding etc.);
- public road improvements which would be required in multiple areas within the vicinity of the Proposed Development to facilitate the passage of construction traffic to access points along the route; and
- removal of temporary works and site reinstatement, including replanting where required along the route.

3.3.4 These different forms of ancillary development are described in further detail in this Chapter in **Sections 3.7 and 3.8**.

Activities Covered Under Permitted Development under The Town and Country Planning (General Permitted Development) (Scotland) Order 1992, Class 40 (1) (a)

3.3.5 The existing Kintore to Craigiebuckler 132 kV OHL would be reinstalled using underground cable (UGC) for a distance of approximately 1.76 km to allow space for realignment of the existing Kintore to Tealing 275 kV OHL and the Proposed Development.

3.4 Additional Associated Works

3.4.1 Other works are likely to be required to facilitate construction of the Proposed Development, or would occur as a result of its construction and operation, and these are listed below. These works are not included in this application (as ancillary development for which deemed planning permission is sought) and do not form part of the description of the Proposed Development. On that basis they are not assessed in detail in this EIAR. These works include:

- borrow pits and quarries to source stone for the construction of access tracks. The final location and design of any borrow pits and quarries that may be necessary for construction would be confirmed by the Principal Contractors and separate planning permissions would be sought as required. For the purpose of the assessment in **Volume 2, Chapter 14: Traffic and Transport** it has been assumed that all stone would be imported as a worst case scenario;

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

3.5 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 project, ie each of the new steel lattice towers being installed, access track routes and temporary working areas.

3.5.2 The design of the Proposed Development described and assessed within this EIAR has been established following the identification of detailed environmental and technical considerations. The design process has included the appointment by SSEN Transmission of two Principal Contractors to inform the design and the constructability of the Proposed Development, including construction access. Investigation of sub-surface and geotechnical conditions has not been concluded at this stage in reporting. It is possible therefore that the location of individual towers or other infrastructure might need to be altered from the design assessed in this EIAR following geotechnical investigation, detailed design and further landowner discussions to reflect localised land, engineering and environmental constraints. This process of localised adjustment to infrastructure positions is known as micrositing and the LOD provides flexibility for the (post-consent) adjustment of tower and access track positions within a defined spatial envelope and subject to a change control process (see **Section 3.6** below).

3.5.3 Consideration has been given to the following principles in defining the LOD for the Proposed Development:

- a presumption towards following the proposed OHL alignment whilst providing flexibility for micrositing during the detailed design phase;
- a presumption towards avoiding sensitive environmental features (including but not limited to Ancient Woodland on the AWI (supplemented by site investigation), native woodland, SSSIs, GDLs and Scheduled Monuments) and minimising impacts on land use; and
- a presumption towards avoiding residential properties.

Horizontal LOD

3.5.4 In general, the horizontal LOD for which Consent is sought is as follows:

- OHL infrastructure (ie steel lattice towers and access tracks and all temporary working areas, EPZs, conductors and Operational Corridor[5]):
  - suspension towers and OHL conductors: 100 m either side of alignment centre[6] line (suspension towers would move a maximum of 55 m from their current position due to the Operational Corridor);
  - tension towers: 200 m LOD radius around the tower position (tension towers would move a maximum of 100 m from their current position due to the Operational Corridor); and
  - all temporary working areas must remain within the LOD.
- Access tracks outwith the OHL infrastructure LOD (distance refers to either side of the track centre line and includes bellmouths):
  - 100 m LOD for new temporary or permanent access tracks;
  - 25 m LOD for existing access tracks being upgraded; and

[5] An Operational Corridor is required for the entire length of the OHL, including through areas of woodland and commercial forestry to ensure the safe operation of the OHL (discussed further in **paragraph 3.8.21**). The Operational Corridor would never extend beyond the LOD.
[6] In plan this is the line of the earth wire which runs between the peaks of each tower.

  - where access tracks are within the OHL infrastructure LOD, the LODs would be merged.
- For the cable sealing end compound, an LOD of 50 m north and 50 m west is being sought.

3.5.5 **Volume 1, Chapter 5: EIA Process and Methodology** outlines how the LOD has been taken into consideration during the EIA assessments in **Volume 2, Chapters 7- 16**.

3.5.6 There are some areas within the horizontal LODs described in **paragraph 3.5.4** above that would be varied, typically to exclude identified sensitive areas from the available micrositing zone. Some of these areas have been accounted for and incorporated into the LOD shown on **Volume 3, Figures 3.1.1 – 3.1.29: Proposed Development for which Section 37 Consent (Electricity Act, 1989) is sought**, however, due to the iterative nature of the process, there are further areas which have not been incorporated into the LOD shown on **Volume 3, Figures 3.1.1 to 3.1.29** which need to be documented. An overview is these further variations is presented in **Table 3.1: Overview of the LOD Variations** and in **Volume 3, Figure 3.3.1 to 3.3.29: Overview of the LOD Variations**. There is a construction tolerance related to the final position of towers of up to 2 m.

Table 3.1: Overview of the LOD Variations

LOD Variation / Restriction Reference (Figure 3.3 only)	Tower Number(s)	Description of LOD/Infrastructure Variation/Restriction	Reason for Variation/Restriction	Applies to Operation and Maintenance (permanent)	Applies to Construction (temporary)	Figure Reference
LOD Restrictions shown on Figure 3.1						
-	S89	An area of the horizontal LOD removed to the north of tower S89. The Operational Corridor would oversail the area slightly but there would be no construction presence within the scheduled monument area.	The LOD has been restricted to avoid direct effects on a designated cultural heritage asset (Westside, barrows 115 m SW of Westerly SM6367 Scheduled Monument).	✓	✓	**3.1.10**
-	S190-S193	Horizontal LOD reduced to the east of S190-S193.	The LOD has been reduced to the east to avoid the higher points of Ironside Hill to reduce Landscape and Visual effects.	✓	✓	**3.1.2**
-	N7	Horizontal LOD has been restricted to the south of tower N6.	The LOD has been restricted so that it avoids interaction with the properties at Wardes Cottages.		✓	**3.1.28**
-	N19	Horizontal LOD has been restricted to the east of tower N19.	The LOD has been restricted so that it avoids interaction with the properties at Tillyfoddie.		✓	**3.1.27**
-	N24-N25	Horizontal LOD has been restricted to the west of towers N24-N25.	The LOD has been restricted so that it avoids interaction with the properties at Culfosie.		✓	**3.1.27**
-	N27-N28	Horizontal LOD has been restricted north of towers N27-N28.	The LOD has been restricted so that it avoids interaction with the Garden and Designed Landscape (GDL) Dunecht House (GDL00153).		✓	**3.1.27**
-	N28	Horizontal LOD has been restricted to the south of tower N28.	The LOD has been restricted so that it avoids interaction with the property at North Mains Farm.		✓	**3.1.22**
-	N29-N30	Horizontal LOD around the existing access track has been restricted to the south of towers N29-N30.	The LOD has been restricted so that it avoids interaction with the property Myriewell House.		✓	**3.1.22**

LOD Variation / Restriction Reference (Figure 3.3 only)	Tower Number(s)	Description of LOD/Infrastructure Variation/Restriction	Reason for Variation/Restriction	Applies to Operation and Maintenance (permanent)	Applies to Construction (temporary)	Figure Reference
-	N36-N37	Horizontal LOD around the existing access track has been restricted to the south of towers N36-N37.	The LOD has been restricted so that it avoids interaction with the property Milton of Finnercy.		✓	**3.1.22**
-	N38	Horizontal LOD has been restricted northeast of tower N38.	The LOD has been restricted to avoid direct effects on a designated cultural heritage asset (East Finnercy, Cairn (SM 6076), Scheduled Monument).		✓	**3.1.22**
-	N41	Horizontal LOD has been restricted southwest of tower N41.	The LOD has been restricted so that it avoids interaction with the property West Cullerlie Farm.		✓	**3.1.22**
-	N46-N47	Horizontal LOD has been restricted west of N46-N47.	The LOD has been restricted so that it avoids interaction with the property Murphiehowe.		✓	**3.1.21**
-	493, 493T and N62	Horizontal LOD has been restricted southeast of the existing Kintore to Fetteresso 275kV / 400 kV OHL realignment.	The LOD has been restricted so that it avoids interaction with the property Wester Durris Farm.		✓	**3.1.20**
-	N55-N54	Horizontal LOD has been restricted to the east.	The LOD has been restricted so that it avoids interaction with the Loch of Park Site of Special Scientific Interest (SSSI).	✓	✓	**3.3.21**
-	N59-N60	Horizontal LOD has been restricted east of N59-N60.	The LOD has been restricted so that it avoids interaction with the properties West Lodge Park and New West Lodge.		✓	**3.1.19**
LOD Restrictions shown on Figure 3.3						
1	S203-S202	Horizontal LOD restricted on eastern side to limit potential OHL movement east to 15 m between towers S203 and S202.	To maintain separation between the OHL and the property of Dunian.	✓		**3.3.1**
2	Access to S200	Horizontal LOD restricted around the existing access track boundary.	To avoid interaction with additional landowners.	✓	✓	**3.3.1**
3	Access to S200	Horizontal LOD restricted around the existing access track boundary.	To avoid interaction with additional landowners.	✓	✓	**3.3.1**

LOD Variation / Restriction Reference (Figure 3.3 only)	Tower Number(s)	Description of LOD/Infrastructure Variation/Restriction	Reason for Variation/Restriction	Applies to Operation and Maintenance (permanent)	Applies to Construction (temporary)	Figure Reference
4	Access to S198	Horizontal LOD restricted around the existing access track boundary.	To avoid interaction with additional landowners.	✓	✓	**3.3.1**
5	S177-178	Horizontal LOD is restricted to the east.	To avoid interaction with Long-Established (of Plantation Origin) (LEPO) woodland at Grid Reference NO405452.	✓		**3.3.3**
6	S175-S176	Horizontal LOD restricted on eastern side to limit potential OHL movement east to 25 m.	To maintain separation between the OHL and the property of Grieves House, Upper Hayston.	✓		**3.3.3**
7	S173-S172	Horizontal LOD restricted on northern side to limit potential OHL movement north to 25 m at tower S173-S172.	To maintain separation between the OHL and the property of Plans of Thornton.	✓		**3.3.3**
8	S168-S167 and S165-S164	Horizontal restriction on either side of the river crossings during construction. No construction plant or equipment within these areas. Access on foot to the areas and oversailing of the crossing would be acceptable. River crossing is a construction restriction only, noting that slight micrositing to the east or west may be required.	To avoid any further interaction with The Kerbet Water and Dean Water which are part of the River Tay Special Area of Conservation (SAC) during construction.		✓	**3.3.4**
9	Access to S166	Horizontal LOD restricted to the east of the existing access track boundary.	To avoid interaction with additional landowners.	✓	✓	**3.3.4**
10	Access to S166	Horizontal LOD restricted to the east of the existing access track boundary.	To avoid interaction with additional landowners.	✓	✓	**3.3.4**
11	Access to S162-S163	Horizontal LOD restricted to the existing access track boundary.	To avoid interaction with additional landowners.	✓	✓	**3.3.4**
12	S156-S157	Horizontal LOD restricted on northern side to limit potential OHL movement north to 10 m between towers S156 and S157.	To maintain separation between the OHL and the property of Woodhead of Ballinshoe.	✓		**3.3.5**
13	S153	Horizontal LOD restricted to the east. Access on foot for ecological monitoring would be allowed. Oversail of the	To ensure there is no construction or infrastructure within the GWDTE.		✓	**3.3.5**

LOD Variation / Restriction Reference (Figure 3.3 only)	Tower Number(s)	Description of LOD/Infrastructure Variation/Restriction	Reason for Variation/Restriction	Applies to Operation and Maintenance (permanent)	Applies to Construction (temporary)	Figure Reference
		GWDTE is allowed but no tower or new access track will be microsited to within the GWDTE.				
Annotation only	S151	Temporary working areas have been restricted 10 m from watercourses. New access tracks will be microsited 10 m from watercourses.	To avoid interaction with SEPA watercourse buffers.		✓	**3.3.5**
14	S151	Horizontal LOD restricted on both sides. Temporary working area around tower S151 will be restricted to south of the road. Scaffolding which will be required to cross the road will be kept within the Operational Corridor as far as possible, but some scaffolding may be needed outside of the Operational Corridor – this would be allowed so long as it wouldn't result in any further felling. Construction restriction only, noting that micrositing of the alignment to the north or the south may be required	To avoid and reduce any further interaction with Woodside Local Nature Conservation site (LNCS) during construction.		✓	**3.3.5**
15	Access to S150	Horizontal LOD restricted to the north.	To avoid interaction with additional landowners.	✓	✓	**3.3.5**
16	Access to S147	Horizontal LOD restricted to the north of the existing access track.	To avoid interaction with additional landowners.		✓	**3.3.6**
17	S146	Horizontal LOD to the southeast has been restricted.	The LOD has been reduced to the east to avoid the higher points of King's Seat hill to reduce the potential for additional landscape and visual effects.	✓		**3.3.6**
18	S145	Horizontal LOD restricted on eastern side to prevent any potential OHL movement east at tower S145.	To maintain separation between the OHL and the property of Wolflaw.	✓		**3.3.6**
19	S145	Horizontal LOD restricted on western side to limit potential OHL movement west to 35 m at tower S145.	To maintain separation between the OHL and the property of Cairnwell.	✓		**3.3.6**

LOD Variation / Restriction Reference (Figure 3.3 only)	Tower Number(s)	Description of LOD/Infrastructure Variation/Restriction	Reason for Variation/Restriction	Applies to Operation and Maintenance (permanent)	Applies to Construction (temporary)	Figure Reference
20	Access to S144	Horizontal LOD restricted to the west.	To avoid interaction with additional landowners.	✓	✓	**3.3.6**
21	S143	Horizontal LOD restricted to the west.	To avoid interaction with additional landowners.	✓	✓	**3.3.6**
22	S144-S142	Horizontal LOD restricted on western side to limit potential OHL movement west to 20 m between towers S144 and S142.	To maintain separation between the OHL and the property of The Cairn.	✓		**3.3.6**
23	S140-142	Horizontal restriction on either side of the river crossing during construction. Horizontal restriction to the east of S141 during construction and operation. No construction plant or equipment within these areas. Access on foot to the areas and oversailing of the crossing would be acceptable. * River crossing is a construction restriction only, noting that slight micrositing to the east or west may be required	To avoid interaction with the River South Esk SAC.	✓*	✓	**3.3.6**
24	S137-S138	Horizontal LOD restricted to the east.	To avoid interaction with additional landowners.	✓	✓	**3.3.7**
25	S135-S136	Horizontal LOD restricted on western side to prevent any potential OHL movement west between towers S135-S136.	To maintain separation between the OHL and the property of The Farmhouse (Baldoukie).	✓		**3.3.7**
26	S133	Horizontal LOD restricted on western side to limit potential OHL movement west to 15 m at tower S133.	To maintain separation between the OHL and the property of Knowe Cottage.	✓		**3.3.7**
27	S133	Horizontal LOD restricted to the north and west.	To avoid interaction with LEPO woodland at Grid Reference NO470594.		✓	**3.3.7**
28	S130-S131	Horizontal restriction on either side of the river crossing during construction. No construction plant or equipment	To avoid any further interaction with The Noran Water, part of the River South Esk SAC during construction.		✓	**3.3.7**

LOD Variation / Restriction Reference (Figure 3.3 only)	Tower Number(s)	Description of LOD/Infrastructure Variation/Restriction	Reason for Variation/Restriction	Applies to Operation and Maintenance (permanent)	Applies to Construction (temporary)	Figure Reference
		within these areas. Access on foot to the areas and oversailing of the crossing would be acceptable. River crossing is a construction restriction only, noting that slight micrositing to the east or west may be required.				
29	S130-S131	Horizontal LOD restricted on the eastern side (across the Noran Water), no construction plant or equipment within this area. Access on foot to the area and oversailing would be acceptable.	To avoid interaction with category 2a Ancient Woodland (of semi-natural origin).	✓	✓	**3.3.7**
30	S111	Horizontal LOD restricted on southern side to limit potential OHL movement south to 30 m at tower S111.	To maintain separation between the OHL and the properties at Lochty Houses.	✓		**3.3.9**
31	S120	Horizontal LOD restricted on northern side to prevent any potential OHL movement north at tower S120.	To maintain separation between the OHL and the property of Balmadity Farm Fern.	✓		**3.3.8**
32	Access to S115	Horizontal LOD restricted to the north.	To avoid interaction with additional landowners.	✓	✓	**3.3.8**
33	Access to S115	Horizontal LOD restricted to the north.	To avoid interaction with additional landowners.	✓	✓	**3.3.8**
34	S114	Horizontal LOD restricted on northern side to limit potential OHL movement north to 30 m at tower S114.	To maintain separation between the OHL and the property of Dunswood.	✓		**3.3.8**
35	S104	Horizontal LOD restricted on northern side to limit potential OHL movement north to 10 m at tower S104.	To maintain separation between the OHL and the property of Gungeon Cottage.	✓		**3.3.9**
36	S101	Horizontal LOD restricted to the south.	To avoid interaction with LEPO woodland, Little Brechin Wood at Grid Reference NO576630.		✓	**3.3.9**

LOD Variation / Restriction Reference (Figure 3.3 only)	Tower Number(s)	Description of LOD/Infrastructure Variation/Restriction	Reason for Variation/Restriction	Applies to Operation and Maintenance (permanent)	Applies to Construction (temporary)	Figure Reference
37	S101-S102	Horizontal LOD restricted on northern side to limit potential OHL movement north to 15 m at tower S102-S101.	To maintain separation between the OHL and the property of Nether Belliehill.	✓		**3.3.9**
38	S98	Horizontal LOD restricted to the east.	To avoid interaction with LEPO woodland, Bankhead Wood at Grid Reference NO582642.		✓	**3.3.10**
39	Access to S93	Horizontal LOD restricted to the east of the temporary access track.	To avoid interaction with additional landowners.	✓	✓	**3.3.10**
40	S88-S89	Horizontal LOD restricted on northern side to limit potential OHL movement north to 10 m at towers S88-S89.	To maintain separation between the OHL and the property of Westerly.	✓		**3.3.10**
41	S88-S89	Horizontal LOD restricted to the north.	To avoid interaction with additional landowners.	✓	✓	**3.3.10**
42	S77-S79	Horizontal LOD restricted on southern side to limit potential OHL movement south to 25 m between towers S77-S79.	To maintain separation between the OHL and the property of Northgate.	✓		**3.3.11**
43	S78	Horizontal LOD restricted to the north.	To avoid interaction with additional landowners.	✓	✓	**3.3.11**
44	S77-S79	Horizontal LOD restricted on northern side to limit potential OHL movement north to 25 m between towers S77-S79.	To maintain separation between the OHL and the property of Gawloch Farm.	✓		**3.3.11**
45	S76	Temporary working areas have been restricted 10 m from watercourses. Oversail of the area would be acceptable and is needed for the holding out blocks.	To avoid interaction with SEPA watercourse buffers.		✓	**3.3.11**
46	S74	Temporary working areas have been restricted 10 m from watercourses. The access track would be crossing the watercourse.	To avoid interaction with SEPA watercourse buffers.		✓	**3.3.11**

LOD Variation / Restriction Reference (Figure 3.3 only)	Tower Number(s)	Description of LOD/Infrastructure Variation/Restriction	Reason for Variation/Restriction	Applies to Operation and Maintenance (permanent)	Applies to Construction (temporary)	Figure Reference
47	S72-S73	Horizontal LOD restricted on southern side to prevent any potential OHL movement south between towers S72-S73.	To maintain separation between the OHL and the property of properties at Primrosehill.	✓		**3.3.11**
48	S70	Horizontal LOD restricted to the north.	To avoid interaction with additional landowners.	✓	✓	**3.3.11 and 3.3.12**
49	Access to S67	Horizontal LOD restricted to the north of the existing access track boundary.	To avoid interaction with additional landowners.	✓	✓	**3.3.12**
50	S68	Temporary working areas have been restricted 10 m from watercourses. The new temporary access track crossing would proceed.	To avoid interaction with SEPA watercourse buffers.		✓	**3.3.12**
51	S67	Horizontal LOD restricted to the north.	To avoid interaction with additional landowners.	✓	✓	**3.3.12**
52	S62-S63	Horizontal LOD restricted to the south.	To avoid interaction with additional landowners.	✓	✓	**3.3.12**
53	S61	Horizontal LOD restricted on western side to limit potential OHL movement west to 25 m at tower S61.	To maintain separation between the OHL and the property of 3 Coldstream Cottages.	✓		**3.3.12**
54	S61	Temporary working areas have been restricted 10 m from watercourses. The new temporary access track crossing would proceed but the access tracks will be microsited 10 m from watercourses.	To avoid interaction with SEPA watercourse buffers.		✓	**3.3.12**
55	S60-S61	Horizontal LOD restricted on eastern side to prevent any potential OHL movement east between towers S60-S61.	To maintain separation between the OHL and the property of Cowieshill Farmhouse.	✓		**3.3.12**
56	S59	Horizontal LOD restricted to the west.	To avoid interaction with additional landowners.	✓	✓	**3.3.12**

LOD Variation / Restriction Reference (Figure 3.3 only)	Tower Number(s)	Description of LOD/Infrastructure Variation/Restriction	Reason for Variation/Restriction	Applies to Operation and Maintenance (permanent)	Applies to Construction (temporary)	Figure Reference
57	S55-S56	Horizontal LOD restricted on northern side to prevent any potential OHL movement north between towers S55-S56.	To maintain separation between the OHL and the at Haughhead Cottages.	✓		**3.3.12**
Annotation only	S57	New temporary access tracks will be microsited 10m from watercourses.	To avoid interaction with SEPA watercourse buffers.		✓	**3.3.12**
58	S46-S47	Temporary working area around tower S46-47 repositioned to the southwest.	Working area repositioned to avoid the GWDTE. No infrastructure to be located within GWDTE to the northeast.		✓	**3.3.13**
59	Access to S40	Horizontal LOD restricted to the north and west of the existing access track boundary.	To avoid interaction with additional landowners.	✓	✓	**3.3.14**
60	S36-S35	Horizontal LOD restricted on northern side to prevent any potential OHL movement north between towers S36-S35.	To maintain separation between the OHL and the property of Brownmuir House.	✓		**3.3.14**
61	Access to S33	Horizontal LOD restricted to the east of the existing access track boundary.	To avoid interaction with additional landowners.	✓	✓	**3.3.14**
Annotation only	S31	New temporary access tracks will be microsited 10m from watercourses.	To avoid interaction with SEPA watercourse buffers.		✓	**3.3.14**
62	S29-S30	Horizontal LOD restricted to the southeast of the tower.	To avoid GWDTE during construction.		✓	**3.3.14**
63	S20	Horizontal LOD restricted to the northwest of the tower. Oversail of the area would be acceptable, access to the area on foot would be allowed.	To avoid GWDTE during construction.		✓	**3.3.15**
64	S11	Horizontal LOD restricted to the southeast.	To avoid interaction with additional landowners.	✓	✓	**3.3.15**
65	Access to S8	Horizontal LOD restricted to the northwest of the temporary access track boundary.	To avoid interaction with additional landowners.	✓	✓	**3.3.16**

LOD Variation / Restriction Reference (Figure 3.3 only)	Tower Number(s)	Description of LOD/Infrastructure Variation/Restriction	Reason for Variation/Restriction	Applies to Operation and Maintenance (permanent)	Applies to Construction (temporary)	Figure Reference
66	S8-S7	Horizontal LOD restricted on northwestern side to limit potential OHL movement northwest to 25 m between Towers S8-S7.	To maintain separation between the OHL and the property of Nether Quithel Cottage.	✓		**3.3.16**
67	S6	Horizontal LOD restricted on eastern side to limit potential OHL movement southeast to 25 m at tower S6.	To maintain separation between the OHL and the property of 2 Annamuick Cottages.	✓		**3.3.16**
68	Access to S2	LOD around access track into Fetteresso Forest has been restricted to the existing access track boundary.	To avoid interaction with additional landowners.	✓	✓	**3.3.16**
69	N88-N90	Horizontal LOD restricted on eastern side to limit potential OHL movement east to 10 m between towers N88-N90.	To maintain separation between the OHL and the property of Mill of Mergie.	✓		**3.3.17**
70	N68-N67	Horizontal restriction on either side of the river crossing during construction. No construction plant or equipment within these areas. Access on foot to the areas and oversailing of the crossing would be acceptable. *River crossing is a construction restriction only, noting that slight micrositing to the east or west may be required.	To avoid any further interaction with the Burn of Sheeoch, part of the River Dee SAC during construction.	✓*	✓	**3.3.18, 3.3.19 and 3.3.20**
71	N66-N67	Horizontal LOD restricted on the eastern side (at the Burn of Sheeoch).	To avoid interaction with category 2a Ancient Woodland (of semi-natural origin) at Grid Reference NO773954 as far as possible.		✓	**3.3.19 and 3.3.20**
72	N64	Horizontal LOD restricted on eastern side to limit potential OHL movement east to 20 m at tower N64.	To maintain separation between the OHL and the property of Millton.	✓		**3.3.19 and 3.3.20**
73	N63	Horizontal LOD restricted on eastern side to limit potential OHL movement east to 20 m at tower N63.	To maintain separation between the OHL and the property of Wester Durris Farm.	✓		**3.3.19 and 3.3.20**
74 and 75	N61-N62	Horizontal restriction on either side of the river crossing during construction. Horizontal restriction to the east of N62	To avoid any further interaction with the River Dee SAC during construction.	✓*	✓	**3.3.19 and 3.3.20**

LOD Variation / Restriction Reference (Figure 3.3 only)	Tower Number(s)	Description of LOD/Infrastructure Variation/Restriction	Reason for Variation/Restriction	Applies to Operation and Maintenance (permanent)	Applies to Construction (temporary)	Figure Reference
		during construction and operation. *River crossing (75) is a construction restriction only, noting that slight micrositing to the east or west may be required. No construction plant or equipment within these areas. Access on foot to the areas and oversailing of the crossing would be acceptable.				
76	N59-N60	Horizontal LOD restricted on eastern and southern side to limit potential OHL movement east and south to 15 m between towers N59-60.	To maintain separation between the OHL and the properties at New West Lodge.	✓		**3.3.19**
77	N57-N58	Horizontal LOD restricted on western side to limit potential OHL movement west to 25 m between towers N57-N58.	To maintain separation between the OHL and the two properties at Woodside and Upper Park West.	✓		**3.3.19**
78	N54-N55	Horizontal LOD restricted on eastern side to limit potential OHL movement east to 25 m between towers N54-N55.	To maintain separation between the OHL and the property of Lochwood Cottage.	✓		**3.3.21**
79	N50	Horizontal LOD restricted to the west.	To avoid interaction with additional landowners.	✓	✓	**3.3.21**
80[7]	N50	Horizontal LOD to be restricted to the north of tower N50.	To avoid interaction with the GWDTE during construction. However, the tower shouldn't move further north into the GWDTE. *OHL conductor oversail of the GWDTE is allowed. Scaffolding and bog mats within GWDTE would be allowed but no excavations within the restricted area permitted.		✓*	**3.3.21**
81 & 82	N49-N50	Horizontal LOD restricted on eastern side to limit potential OHL movement east to 25 m and restricted on the western side to limit OHL movement	To maintain separation between the OHL and the properties located at Broomfield.	✓		**3.3.21**

[7] Note where restriction reference 80 (construction restriction) overlaps with restriction reference 82 (operational restriction) then there is an area which has both construction and operation restriction here.

LOD Variation / Restriction Reference (Figure 3.3 only)	Tower Number(s)	Description of LOD/Infrastructure Variation/Restriction	Reason for Variation/Restriction	Applies to Operation and Maintenance (permanent)	Applies to Construction (temporary)	Figure Reference
		west to 10 m between towers N49-N50.				
83	N49	Horizontal LOD restricted to the west.	To avoid interaction with additional landowners.	✓	✓	**3.3.21**
84	N49-N50	Horizontal LOD restricted to the east.	To avoid interaction with additional landowners.	✓	✓	**3.3.21**
85	N46-N47	Horizontal LOD restricted to the east.	To avoid interaction with additional landowners.	✓	✓	**3.3.21**
86	Access to N45	Horizontal LOD restricted to the northwest of the existing access track.	To avoid interaction with additional landowners.	✓	✓	**3.3.21**
87	N38-N39	Horizontal LOD restricted on western side to limit potential OHL movement west to 25 m between towers N38-N39.	To maintain separation between the OHL and the property of Little Finnercy.	✓		**3.3.25 and 3.3.22**
88	N43	Horizontal LOD increased by approximately 5 m at Mill of Echt.	To ensure the Operational Corridor is not outside of the LOD for the existing Craigiebucker to Tarland 132 kV OHL.	✓		**3.3.22 and 3.3.23**
89	N31-N32	Horizontal LOD restricted on the western side to limit OHL movement west to 10 m between towers N31-N32.	To maintain separation between the OHL and the property of South Monecht Farm.	✓		**3.3.22**
90	N31-N32	Horizontal LOD restricted on eastern side to limit potential OHL movement east to 25 m.	To maintain separation between the OHL and the property of South Monecht Cottage.	✓		**3.3.22**
91	N29	Horizontal LOD restricted on eastern side to limit potential OHL movement east to 10 m at tower N29.	To maintain separation between the OHL and the properties at Monecht Cottages.	✓		**3.3.27 and 3.3.22**
92	N22-N23	Horizontal LOD restricted on eastern side to limit potential OHL movement east to 10 m.	To maintain separation between the OHL and the properties of Old Wester Echt Lodge and Cottage.	✓		**3.3.27**
93	N22-N23	Horizontal LOD restricted on the western side to limit OHL movement west to 25 m between towers N23-N22.	To maintain separation between the OHL and the property of Old Wester Echt.	✓		**3.3.27**

LOD Variation / Restriction Reference (Figure 3.3 only)	Tower Number(s)	Description of LOD/Infrastructure Variation/Restriction	Reason for Variation/Restriction	Applies to Operation and Maintenance (permanent)	Applies to Construction (temporary)	Figure Reference
94	N21	Horizontal LOD restricted on western side to limit potential OHL movement west to 25 m at tower N21.	To maintain separation between the OHL and the property of New Wester Echt Farm.	✓		**3.3.27**
95	N16	Horizontal LOD to be restricted to the southwest of N16. Construction machine location will be kept to 25 m x 25 m platform area with temporary panels only.	To avoid interaction with LEPO woodland Corskie Wood south and west of the tower at Grid Reference NJ741099.		✓	**3.3.27**
96	N16-N17	Horizontal LOD restricted on eastern side to limit potential OHL movement east to 25 m between towers N16-N17.	To maintain separation between the OHL and the properties at Upper Corskie.	✓		**3.3.27**
97	N13	Horizontal LOD restricted to the southeast of N13.	To avoid interaction with GWDTE as far as possible. The tower is located within the GWDTE and can't be avoided completely, however the working area within the GWDTE should be repositioned as far as possible outside of the GWDTE and the tower should avoid moving east.	✓	✓	**3.3.28**
98	N6	Horizontal LOD restricted to the southeast of N6. The new permanent access track will be microsited outside of the GWDTE.	To avoid interaction with GWDTE during construction.		✓	**3.3.28**
99	N3-N4	Horizontal LOD restricted on eastern side to prevent any potential OHL movement east between towers N3-N4.	To maintain separation between the OHL and the property of Southside Cottage Leylodge.	✓		**3.3.29**
100	Access to Cable Sealing End Compound	Horizontal LOD restricted to the north of the permanent access track boundary.	To avoid interaction with additional landowners.	✓	✓	**3.3.29**
101	Access to 297	Horizontal LOD restricted to the north of the existing access track boundary.	To avoid interaction with additional landowners.	✓	✓	**3.3.29**
102	N1-N2	Horizontal LOD restricted on eastern side to limit potential OHL movement east to 25 m between towers N1-N2.	To maintain separation between the OHL and the properties in the Cul-de-sac group near Leylodge.	✓		**3.3.29**

Vertical LOD

3.5.7 It is possible that further engineering analysis at the detailed design stage may require an alteration of the required heights of towers necessary to maintain statutory ground clearance (of the OHL conductors). A vertical LOD, ie the maximum additional distance by which a tower can be varied from the design height above ground level, is therefore also sought. The vertical LOD would, subject to the design change process described in **Section 3.6**, allow for a tower height increase or decrease of up to 9 m on the proposed tower height presented within **Volume 5, Appendix 3.1: Tower Schedule**. The 9 m variation is consistent with the extensions to which steel lattice towers are designed, and therefore any increase or decrease in the height of steel lattice towers would be no greater than a change of 9 m. The vertical LOD therefore provides some flexibility to accommodate changes necessary following completion of relevant ground condition investigations and detailed tower and foundation designs.

3.6 Management of Micrositing Within LOD

3.6.1 Prior to any change being made to the Proposed Development within the LOD, a change control process would be undertaken to ensure that there is no unacceptable increase in adverse impacts as a result of the change. This process is managed via the Applicant's internal process 'Change Request Procedure for Project Design Parameters Controlled by Consent Limitations (PR-NET-ENV-503)'.

3.6.2 Where there is a requirement to vary the location (or height) of infrastructure within the LODs, the relevant environmental information within the EIAR would be reviewed to establish any potential constraints or significant adverse change in effect compared with those reported in the EIAR. Further advice on LOD changes would be sought from environmental specialists, and where relevant consultation would be carried out with Aberdeenshire Council or Angus Council (as local authorities) and any other relevant statutory consultees as required.

3.7 Description of Overhead Line Infrastructure

Steel Lattice Towers

Standard Towers

3.7.1 Three basic types of towers are proposed as OHL support structures within the Proposed Development, as illustrated in **Volume 3, Figure 3.4.1: Tower Design – Proposed ASTI SSE400 Tower Suite** and as follows:

- suspension towers: these are used for straight sections of OHL where there is no need to manage uplift loads on the support structure. The conductors are suspended from the tower arms;
- angle/tension towers: these are used either for straight sections, where there is a need to manage uplift loads on the support structure, where there is an operational security requirement, or where there is a need to change the direction of the OHL alignment. The conductors extend from the tower arms horizontally; and
- terminal towers: proposed at the substations, from which the termination of the OHL to the substation is made. The conductors extend from the tower arms horizontally and downwards into the substation.

3.7.2 **Table 3.2: Tower Design Parameters** presents further information on the tower designs which would be used for the Proposed Development. All towers have a lattice design and would be constructed from fabricated galvanised steel which would be grey in colour. Further detail of tower heights, types and base dimensions are provided in **Volume 5, Appendix 3.1: Tower Schedule**.

Table 3.2: Tower Design Parameters

	Proposed 400 kV OHL	Realignment of existing Kintore to Fetteresso 275 kV/400 kV OHL	Realignment of existing Kintore to Tealing 275 kV OHL	Existing Craigiebuckler to Tarland 132 kV OHL diamond crossing	Existing Kintore to Craigiebuckler 132 kV terminal tower at the CSE Compound
Tower suite	Proposed ASTI SSE400 Tower Suite	L8c Tower Suite		L4m tower suite	L4m DT
Figure reference	**Figure 3.4.1: Tower Design – Proposed ASTI SSE400 Tower Suite**	**Figure 3.4.2: Tower Design – L8 Tower Suite**		**Figure 3.4.3: Tower Design – L4 Tower Suite**	**Figure 3.4.3: Tower Design – L4 Tower Suite**
Average height (m)	57.00	45.00		14.50	30.00
Design height range (m)	49.52 to 71.67	36.50 to 67.70		11.65 to 17.65	23.30 to 41.30
Total no. of towers (permanent)	187 suspension towers 109 angle/tension towers Four terminal towers **300 towers total**	2 temporary towers 2 suspension towers 4 angle/tension towers 0 terminal towers **8 towers total**	2 temporary towers 2 suspension towers 2 angle/tension towers 0 terminal towers **6 towers total**	0 suspension towers 2 angle/tension towers 2 terminal towers **4 towers total**	0 suspension towers 0 angle/tension towers 1 terminal tower **1 tower total**
Total no. of towers (temporary)	N/A	2	2	3	0

3.7.3 Tower locations, structure type and design heights (above ground level) are provided in **Volume 5, Appendix 3.1 Tower Schedule**. Consultation between the Applicant and the Ministry of Defence (MOD) has confirmed that there is no requirement for operational lighting of the OHL.

Conductors and Span Length

Proposed 400 kV OHL

3.7.4 The proposed steel lattice towers would support six conductor bundles (three wires per bundle of All Aluminium Alloy Conductor) on six horizontal cross-arms (three on each side). The conductor bundles would be supported from insulator sets (also known as suspension or tension sets) attached to each of the cross arms. The insulators are proposed to be of glass fabrication, but can also be made of other material, either porcelain or composite materials. The OHL insulator sets would use a mix of single and twin suspension strings per arm depending on the required strength and tower type. The insulator sets would be approximately 5.1 m long for suspension towers and approximately 7.7 m for tension towers.

3.7.5 The span length (distance between towers) would vary depending on topography, constraints, and land usage. The current average span length is approximately 351 m with a maximum span of 501 m.

3.7.6 An earth wire conductor with a fibre optic core (referred to as Optical Ground Wire (OPGW)) would be suspended between tower peaks, above the phase conductors. For some tension towers where the conductor arms are of unequal lengths, the earthwire would be off-set to one side of the tower peak to maintain its position equidistant from the conductors on each side. Phase conductors would have a diameter of 37.3 mm and the earthwire would have a diameter of 23.9 mm.

3.7.7 The conductors would achieve a minimum clearance to ground of 9 m under normal operating conditions in all areas. There may be locations along the routes for which additional clearance may be required.

3.7.8 Some conductors will also include bird diverters which is required as part of the mitigation for Ornithology as outlined in **Volume 2, Chapter 12: Ornithology** and as presented in **Volume 3, Figures A12.7.1 to A12.5: Bird Flight Diverter Placement**.

Cable Sealing End Compound

3.7.9 The purpose of the CSE Compound would be to facilitate the transition from UGC to OHL (and vice versa). The existing Kintore to Craigiebuckler 132 kV OHL requires undergrounding for the provision of space near Kintore Substation for the Proposed Development. The undergrounding includes a new CSE Compound and L4m terminal tower, to transition from OHL to UGC. The works comprise constructing the new terminal tower, a fenced compound area (comprising a 2.4 m high palisade fence and gate) to house the protection equipment required and car parking for a single vehicle, a permanent access track to the compound, and the dismantling of eight existing towers. Approximately 440 m of permanent realignment of the existing 132 kV OHL is required on the approach to the CSE Compound. No temporary structures are required for these works. An indicative design is provided in **Volume 3, Figure 3.5a-c: Indicative Cable Sealing End Compound Design**.

Existing Transmission OHL Realignment

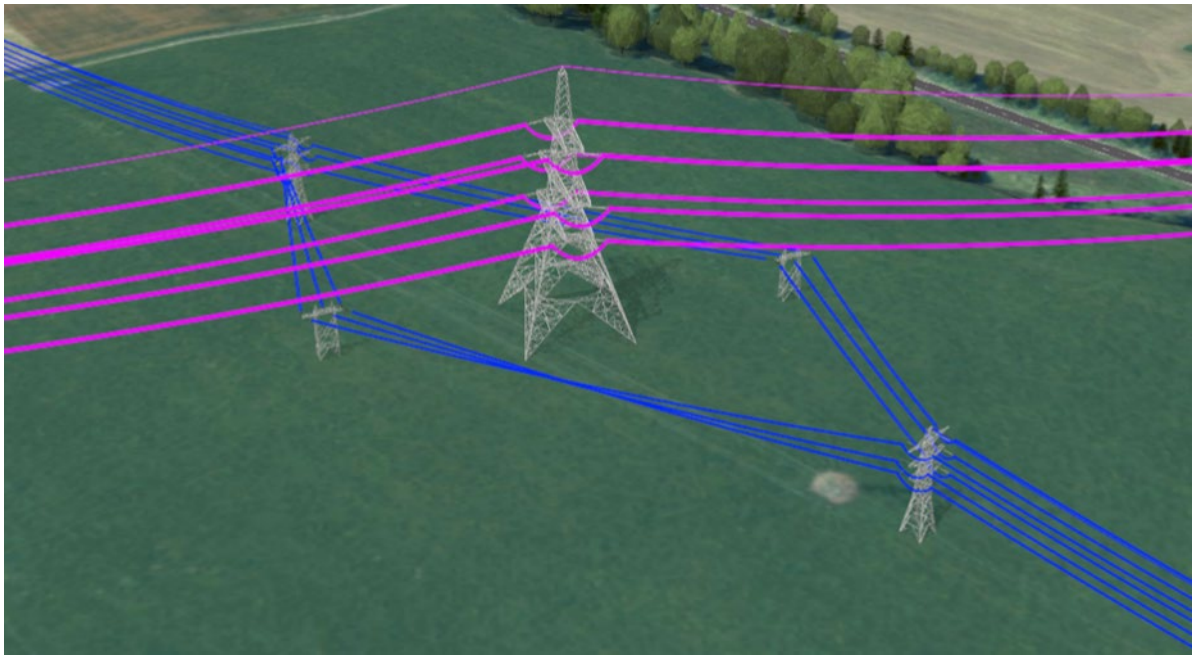
3.7.10 The existing Kintore to Tealing 275 kV OHL requires realignment to make space near Kintore Substation for the Proposed Development. The works comprise constructing four new L8c support towers for the permanent realignment. Two temporary towers are required to complete the works. Four existing towers would be dismantled as part of the works. The new support structures would be strung with a twin conductor system on each of the six phases, as well as an earthwire at the peak.

3.7.11 The existing Kintore to Fetteresso 275 kV/400 kV OHL requires realignment to achieve the separation distance between the Proposed Development and residential properties, southwest of Kirkton of Durris. The works comprise constructing six new L8c support structures for the permanent realignment of the OHL. Two temporary towers are required to complete the works. Four existing towers would be dismantled as part of the works. The new support structures would be strung with a triple conductor system on each of the six phases, as well as an earthwire at the peak.

Existing Transmission OHL Crossing

3.7.12 The existing Craigiebuckler to Tarland 132 kV OHL requires modification to achieve the required crossing arrangement near Landerberry to ensure safe operation of the 132 kV OHL and the proposed new 400 kV OHL. The works comprise constructing two new L4m SF60 (low profile) and two L4m D10 support structures in a diamond formation. Three temporary towers are required to complete the works. One existing tower would be dismantled as part of the works. The new support structures would be strung with a single conductor on each phase, one circuit would be on the northern part of the diamond, and the other circuit would be on the southern part of the diamond. An example of a diamond crossing is presented in **Plate 3.1: Diamond Crossing Example (pink OHL is the Proposed Development; blue is the existing OHL modification.**

Plate 3.1: Diamond Crossing Example (pink OHL is the Proposed Development; blue is the existing OHL modification)



Access Tracks

3.7.13 Safe construction access would be required to each tower construction site for delivery of materials, plant, fittings, fixtures, working platforms and operatives. Access requirements to each tower depend on the tower type and the construction operations required at that tower.

3.7.14 Many individual tower sites would be accessible from public roads and existing farm/forestry tracks and (where possible, existing accesses would be utilised, however access spurs from these existing tracks are required in some areas.

3.7.15 Many of the existing accesses have been identified as requiring upgrades to bring them to a standard required for delivery of the type of plant and volume of materials required to construct the Proposed Development. In some areas, two different accesses (either new or upgrades of existing track, including bellmouths where applicable) have been identified to the same tower. These areas are where negotiations with landowners are ongoing and the final track to be used has not yet been agreed. Ultimately, following agreement with the landowners, only one of the two tracks (and bellmouths where applicable) would be required in each of these cases but both have been assessed within the EIAR to allow impacts to be determined.

3.7.16 Existing road junctions would be utilised where possible, where field, forestry or farm tracks exist; however, numerous new or upgraded access junctions (bellmouths) would require formation in agreement with the respective local authority roads department to safely connect access tracks with the public road network.

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;
- Phase 2 – construction works;
- Phase 3 – commissioning;
- Phase 4 – dismantling existing OHLs; and
- Phase 5 – reinstatement.

3.8.2 The Proposed Development doesn't require any works near to railways.

Phase 1 – Enabling Works

Existing Distribution and Transmission Lines

3.8.3 Works would be required to some existing electricity distribution network infrastructure and 132 kV, 275 kV and 400 kV transmission network infrastructure to facilitate safe working and operating conditions given the proximity of the existing OHLs to the Proposed Development. It is anticipated that these network assets would be realigned or undergrounded to make way for the Proposed Development. Where this relates to electricity transmission infrastructure (132 kV and above), it is included as part of the Proposed Development, see **Section 3.3** above. For electricity distribution infrastructure specific details are not available at this stage; these works do not form part of the Proposed Development, see **Section 3.4**.

Access During Construction

3.8.4 The design of access tracks has been developed by the project team considering both construction and operational access requirements, and with reference, where relevant, to NatureScot's good practice guide on constructing access tracks in Scottish uplands[8]. All new access tracks would be constructed in accordance with good practice working methods with watercourse crossings designed and constructed to comply with legislation set out in *The Water Environment (Controlled Activities) (Scotland) Regulations 2011* (as amended). Typical access solutions are set out below with respect to the different technology types proposed and a typical access track design is presented in **Volume 3, Figures 3.6.1-3.6.2: Typical Access Track Cross Sections (Indicative)**.

3.8.5 Access track upgrades, construction and ground protection can be undertaken in a number of ways. The preferred method for each site would be selected by the Principal Contractors based on the suitability to withstand expected construction loads, cause the least environmental damage (taking account of ground conditions and habitat types etc.), and be constructed and reinstated at the lowest cost.

3.8.6 The range of construction methods proposed for the formation of access tracks include:

- patching/upgrade of existing access tracks;
- installation of permanent access track routes to new tower locations to assist with ongoing operation, maintenance and repair of the proposed asset, and where land use/land management activities can accommodate or benefit from this;
- installation of temporary metal or plastic roadway panels (eg Trackway, Dura-Base or similar);
- installation of temporary stone tracks with geo-textile fabric base which would be removed and the underlying land reinstated following construction completion; or
- use of specialised low ground bearing pressure vehicles.

3.8.7 The location of proposed temporary and permanent access tracks which have been assumed in the design for this EIAR are presented on the drawings in **Volume 3, Figure 3.1.24 to 3.1.29: Proposed Development for which Section 37 Consent (Electricity Act, 1989) is sought**.

Existing Accesses Upgrade and Repair

3.8.8 Where possible, the Applicant seeks to use existing access track networks, and watercourse crossings to facilitate construction of the Proposed Development (Including existing access tracks within Durris Forest, part of the Forestry and Land Scotland (FLS) estate). Approximately 69.71 km of existing access tracks require upgrading to make them suitable for safe construction access. These upgrades vary in extent, from filling of potholes, to adding additional layers of aggregates to the running surface and, in some cases, requiring additional geotextile or geogrids as well as stone to be added to the track structure. Some accesses such as those requiring widening of the running surface may also require changes to drainage arrangements. During use, the access tracks may require ongoing maintenance to ensure a suitable running surface is maintained.

[8] Scottish Natural Heritage, 2013 (Updated 2015). Constructed tracks in the Scottish Uplands (2nd Edition). [Online] Available at: https://cairngorms.co.uk/wp-content/uploads/2019/09/CD039-Scottish-Natural-Heritage-Constructed-tracks-in-the-Scottish-Uplands-2015.pdf.

Temporary Access Tracks

3.8.9 Approximately 85.56 km of temporary access track would be required to be installed using one of the following construction methods:

- **Temporary Stone Access Tracks**: Temporary stone access tracks on a geo-textile fabric base may be used to facilitate safe construction vehicular access to tower locations for construction where no permanent access is required, or where nearby access is sufficient for ongoing operation of the Proposed Development. All temporary stone access tracks would be removed and reinstated on completion of construction. Access track widths would be 3.5 m as a minimum, but most access tracks would be approximately 7 m wide (including drainage ditches), reduced to 5 m for floating access tracks, where there is a benefit, such as to minimise impacts to peatland (see **paragraph 3.8.13**).
- **Temporary Roadway Panels***:* Metal or plastic interlocking roadway panels (eg Trackway, Dura-Base or similar) can be installed over existing access tracks or to form new access for the duration of construction works in areas with suitable ground conditions and gradients. The delivery/installation vehicle would travel to the Site loaded with panels and may also pull a trailer loaded with additional panels. The panels are usually unloaded and laid individually directly from the delivery/installation vehicle using the Hiab crane device mounted on the vehicle. The first panels would be laid onto the access then the wagon would drive onto the panels and advance along the access, installing additional panels to extend the 'road' as it proceeds.
- **Specialist Low Ground Bearing Pressure Vehicles**: Vehicles with low ground bearing pressure tyres or with rubber tracks may be employed for certain lightweight operations eg taking small quantities of material or a small team of operatives to remote sites where no track exists. Additional access protection may not be needed if these operations can be carried out without leaving track marks, usually only possible in dry conditions. The tracks for these vehicles are referred to as 'All-Terrain Vehicle (ATV)' tracks.

3.8.10 The Applicant is investigating the opportunity to use soil stabilisation techniques which may be used in some locations to enhance the durability and functionality of access tracks, whether temporary or permanent. Temporary methods, such as mechanical and chemical stabilisation, could provide immediate support and reduce erosion. Permanent techniques, like cement and lime stabilisation, would ensure long-term durability and minimal maintenance. These methods also reduce the need for extensive stone and vehicle movements compared to full stone access tracks, making them more efficient and environmentally friendly.

New Permanent Access Tracks

3.8.11 Approximately 29.22 km of new permanent access track would be required to be installed which would be approximately 4.5 m wide. There is an additional 180 m of new permanent access required to tower N32 which will be used for operation and maintenance only, and not for construction as shown on **Volume 3, Figure 3.1.24: Proposed Development for which Section 37 consent (Electricity Act, 1989) is sought - Page 24**.

3.8.12 New permanent access tracks would be required in some locations for the inspection and maintenance of the Proposed Development during its operation. These permanent access tracks are subject to further design and landowner agreement; however, where agreement to retain an access is not acquired, the access would be removed and the ground would be reinstated through a methodology and standard agreed with the landowner (see the 'Temporary Stone Access Tracks' bullet point above in **paragraph 3.8.9**. The proposed permanent access routes shown are current best options identified, but subject to Site Investigation and detailed design, and may be subject to change (within the specified LOD) to achieve favourable gradients or avoid constraints identified prior to construction.

3.8.13 Where there is a benefit, such as to minimise impacts to peatland, the construction of permanent floating access tracks may be considered (eg following further site specific ground investigations). It is currently anticipated that floating access would be utilised at the access tracks to towers N83 and N84 located at Craigneil Hill in Section E and access to towers N77, N78 and N79 located in Durris forest in Section E. Floating access tracks require the placing of a geotextile membrane on existing topsoil and vegetation followed by aggregate layers. Depending on ground conditions, two or more layers of geotextile would be placed in layers of 300 mm to 500 mm. The access tracks would be capped with layers of Type 1 aggregate or similar material.

3.8.14 See **Volume 3, Figures 1 3.6.1-3.6.2: Typical Access Track Cross Sections (Indicative)** for illustrations of typical track design under different circumstances.

Access Junctions/Bellmouths

3.8.15 Formation of numerous temporary and permanent bellmouth/access junctions at the interface with the existing public road network are required. Existing bellmouths would be also utilised, which are anticipated to require minimal upgrade work. Typical bellmouth layouts are provided in **Volume 3, Figure 3.7: Typical Bellmouth Layout (Indicative)**, and their locations are shown on **Volume 3, Figures 3.1.1-3.1.29: Proposed Development for which Section 37 Consent (Electricity Act, 1989) is sought**. Deemed planning permission would be sought for access tracks, bellmouths, and junction upgrades as part of the Section 37 application.

Public Road Improvement (PRI) Works

3.8.16 To enable larger construction heavy goods vehicles (HGVs) and Abnormal Indivisible Load (AIL) vehicles (if required) to access the Site, numerous PRI works would need to take place in advance of formation of access tracks. The type of works include short sections of road widening; junction widening; passing places and bridge strengthening. **Volume 5, Appendix 3.5: Public Road Improvement Works** presents high-level information on the proposed PRIs and identified environmental constraints which would be progressed further at the detailed design stage. Indicative location plans and indicative passing place design are also provided in:

- **Volume 3, Figures 3.8.1 to 3.8.19: Indicative Public Road Improvement Works;** and
- **Volume 3, Figures 3.9.1 to 3.9.3: Passing Places Indicative Design.**

Watercourse Crossings

3.8.17 Watercourses have been avoided in the design of the proposed tower positioning and associated accesses as far as possible, although due to the linear nature of the Proposed Development and topographical challenges, some watercourse crossings would be required associated with proposed tower accesses. The design of the crossings would be agreed by the Principal Contractors as part of the detailed design, following best practice in consultation with the Scottish Environment Protection Agency (SEPA). Appropriate authorisations would be obtained by the Principal Contractors, as required, and as discussed in the paragraph below. Typical designs are provided in **Volume 3, Figures 3.10.1-3.10.2: Typical Watercourse and Gas Main Crossings (Indicative)**. Further details regarding the required watercourse crossings are provided in **Volume 5, Appendix 13.1 Watercourse Crossing and Buffer Assessment**.

3.8.18 All watercourse crossing engineering works (including both temporary and permanent watercourse crossings) would be carried out in compliance with the *Water Environment (Controlled Activities) (Scotland) Regulations 2011* and would follow best practices in line with SEPA's guidance. Further discussion on the watercourse crossings proposed as part of the Proposed Development, and a schedule of watercourse crossings is provided in **Volume 2, Chapter 13: Hydrology, Hydrogeology, Geology and Soils.**

Access During Operation

3.8.19 Permanent access tracks would only be required in more remote areas, or where topography and ground conditions are not adequate for ATV/trackway access. It is intended however to keep requirements for permanent access tracks to a minimum. Where tracks are required to be retained permanently, they would be reinstated to a reduced width of 4.5 m which is suitable for 4x4 vehicles and with reference, where relevant, to NatureScot's good practice guide on constructing access tracks in Scottish uplands[8].

Forestry Clearance and Vegetation Management

3.8.20 The Applicant has sought to avoid and minimise impacts on woodlands/forestry where possible. However, due to numerous other constraints along the route (as discussed in **Volume 1, Chapter 4: Alternatives and the Routeing Process**), some impacts on woodlands and/or forestry are unavoidable.

3.8.21 An Operational Corridor is defined as the designated area around the OHL that is maintained to ensure the safe and reliable operation of the OHL. As noted in **paragraph 3.5.4**, the Operational Corridor would never extend beyond the

LOD. Trees are generally removed from within the Operational Corridor to facilitate construction and ensure continued safe operation of the OHL.

3.8.22 The Operational Corridor width would typically be 45 m either side of the OHL centreline, but this may vary in some instances, for example, depending on the type of woodland/forestry and local topography. The Operational Corridor may be reduced where the OHL passes through broadleaved woodland subject to site specific checks. Additional forestry removal has also been included for new access track formation. Where there are new temporary access tracks or for the temporary OHL diversions (where applicable), tree re-planting would be sought to be undertaken following commissioning of the OHL and removal of the temporary development. The requirements and undertaking of infrastructure, management and scrub/regeneration felling/clearance are documented in **Volume 2, Chapter 8: Forestry**.

3.8.23 Infrastructure felling is required for the Proposed Development which will be left unstocked as the Operational Corridor for the Proposed Development. In order to comply with the criteria of the *Scottish Government's Control of Woodland Removal Policy*[9] off-site compensatory planting would be required. Full details of felling requirements are outlined in **Volume 2, Chapter 8: Forestry**. The Applicant is committed to providing appropriate compensatory planting. The extent, location and composition of such planting would be agreed with Scottish Forestry and would take into consideration any revision to felling and restocking plans.

Site Compounds and Borrow Pits

3.8.24 As mentioned in **Section 3.4** it is currently anticipated that a number of construction compounds and laydown areas would be required given the scale of the Proposed Development, the locations of which would be confirmed by the Principal Contractors. These would typically be established during Phase 1 of the construction sequence. The obtaining of any necessary planning permission or other authorisations required for the Site compounds would be the responsibility of the Principal Contractors. The final location and design of borrow pits and quarries would be confirmed by the Principal Contractors and separate planning permissions would be sought as required.

Temporary OHL Diversions

3.8.25 To facilitate the construction of the Proposed Development, temporary diversions of other OHLs are required to be constructed to minimise outage requirements on the circuits being modified. It is anticipated that there are three areas where temporary diversions would be required along the length of the proposed OHL, at locations where the proposed OHL would interact with existing circuits on the network. Details of these temporary diversions are presented in **Volume 3, Figures 3.1.1-3.1.29: Proposed Development for which Section 37 Consent (Electricity Act, 1989) is sought.** They are:

- Two lengths, 0.75 km and 0.35 km (total of 1.10 km) of temporary diversion to facilitate the realignment of the existing Kintore to Tealing 275 kV OHL near Kintore Substation;
- 0.62 km of temporary diversion to facilitate the diamond crossing of the existing Craigiebuckler to Tarland 132 kV OHL near Landerberry; and
- Two sets, 0.60 km and 0.61 km (total of 1.21 km) of temporary diversion to facilitate the realignment of the existing Kintore to Fetteresso 275 kV/400 kV OHL near Wester Durris.

3.8.26 The temporary diversions are required to be installed prior to any modifications of the existing network taking place to maintain the operability of the existing network. To minimise the outage requirements, the temporary tower(s) is usually offset from the existing alignment to create sufficient space to carry out the construction.

3.8.27 The first construction activity to take place is installation of temporary and permanent access tracks to the proposed temporary tower(s) and to any of the existing towers within the same section. Once access to the tower locations is established the next step is installation of the foundations. The towers are constructed in the same process as a permanent tower which is described below in Phase 2 – Construction Works.

[9] Forestry Commission Scotland, 2009. *The Scottish Government's Policy on Control of Woodland Removal*. Edinburgh.

3.8.28 Once the temporary tower assembly is complete the stringing operations can then take place to move the existing circuit over to the temporary tower(s). Access is typically required to the closest tension towers at each end of the temporary diversion on the existing line to adjust the conductors as they are moved over to the temporary tower. The sequence for moving the circuits over to the temporary towers is typically as follows:

- a short single circuit outage is taken on the existing OHL to allow for the circuit to be moved across to the temporary tower;
- this is followed by a double circuit outage to allow for the earth wire to be moved across or an additional earth wire to be installed on the temporary diversion to the temporary tower to provide lightning protection and communications for protection of the circuit; and
- upon completion of this, the circuit that has been moved over can then be energised and the temporary diversion is then complete.

3.8.29 Once the main construction works have been completed for the towers on the realigned section of the OHL, the above sequence is then reversed to move the circuit back over to the modified existing OHL and the temporary tower(s) can then be dismantled and surrounding area reinstated.

Realignment of Existing OHL Infrastructure

3.8.30 Where it is proposed that the existing OHLs (Kintore to Fetteresso 275 kV/400 kV OHL; and Kintore to Tealing 275 kV OHL) are to be realigned to create space for the Proposed Development, it is anticipated that the construction sequence would be the same as is required for the main development which is described later in the Chapter in Phase 2 – Construction Works.

3.8.31 The majority of the realignment would be built offline with no outages required. Outages would only be required for the replacement of the towers where the realignment joins back into the existing circuits, due to the existing towers not being able to accommodate the change in direction of the alignment. To replace these towers a temporary diversion would be installed to minimise the outages as described above. Upon completion of the replacement tower construction, the temporary diversion would be removed (See **Phase 4 – Dismantling Existing OHLs**) and the realignment would be energised in its new position.

Construction Lighting

3.8.32 Winter working (for all phases of construction) may require task-specific lighting due to the shorter duration of daylight, when lighting would be required at the beginning and end of the day. Lighting would be used only when required during core working hours, unless otherwise stated, and would comprise lighting of work areas and access and egress with low level directional lighting. Outside of working hours lighting would only be used for critical safety and security purposes. Security cabins would require lighting during the hours of darkness, within and outside working hours.

Phase 2 – Construction Works

Foundations

3.8.33 Different approaches to forming foundations may be used for steel lattice towers, subject to ground conditions at each location. These would comprise:

- conventional pad and column foundations (no piling installation); and
- piled foundations (type of piled foundation is dependent on ground conditions at each location).

3.8.34 Foundation types and designs for each tower would be confirmed by the Principal Contractors during detailed design, following detailed geotechnical investigation at each tower position. All tower positions would require foundations at each leg. The foundation type is expected to be a combination of conventional (concrete pad and column) and piled type. This assumption is based on an initial geotechnical desktop survey and the anticipated different construction methodologies required due to the varying terrain. Conventional foundations are typically used in locations of good ground conditions. Piled foundations are used where ground conditions are found to be poor, such as in areas of flooding and peat. Dimensions of pad and column foundations would be confirmed following micrositing but usually consist of formation to depths of between 3 m and 6 m below ground level (bgl) and would typically be in the order of

6 m by 6 m in plan size for each tower leg. The foundation is located beneath the ground with a layer of soil covering it of sufficient depth for habitats to reinstate. The permanent footprint above ground is approximately 1 m by 1 m and referred to as the 'muff'. The structure footprint for each tower, ie the area of the tower base bounded by the four legs, is presented in **Volume 5, Appendix 3.1: Tower Schedule**.

3.8.35 Where ground conditions indicate deep peat[10] or near surface rock, piles, mini-piles, mono-piles or rock anchors may be more appropriate engineering solutions. Peat is generally thin to absent over much of the site, however there is some peat within Durris Forest at towers N77 and N78.A peat depth survey report (**Volume 5, Appendix 13.3: Peat Survey Report**) summarises peat deposits across the full probed extent of the OHL route.

3.8.36 The piling solution take would depend on the location specific ground conditions, however typically a casing would be required to prevent the borehole from collapsing in on itself due to the structural instability of peat. Mini-pile solutions typically involve installing up to twelve piles (each between 150 mm and 300 mm diameter) below each tower leg. The piles are encompassed within a near surface pile cap, upon which the tower leg rests. The piles normally extend into the existing bedrock to satisfy both compression and uplift design loadings. Pile depths can extend up to 25 m. Where near surface rock is evident, mono-piles or rock anchors may be employed. Mono-piles consist of a sacrificial steel casing driven into the ground to rock level. A hammer drill is then utilised to remove the material within the casing and drill into the rock to the pre-determined depth. A structural steel tube is then installed within the sacrificial casing and the annulus grouted to secure the tube within the casing and the rock. The tower stub would then be set within the upper section of tube before the tube is filled with grout. No pile cap is required for this foundation type. Final condition would be a section of the structural steel tube protruding above ground to a maximum of 600mm. Rock anchors do not require a casing, and the pile cap normally rests on the bedrock. The pile cap is secured to the bedrock by interconnecting mini-piles.

3.8.37 Where conditions are suitable, the Applicant may opt to use steel equivalent foundations, known as steel grillages, instead of reinforced concrete. The construction activities and environmental impact, bar the pouring and transport of concrete, are anticipated to be effectively the same where steel grillages are utilised.

3.8.38 For the purposes of the EIAR it has been assumed that individual tower foundations and associated construction activities would require a fenced off temporary working area of up to 100 m x 100 m around each individual tower location. The exact dimensions of the temporary working area around each tower would be confirmed following micrositing and further design by the Principal Contractors.

3.8.39 Where encountered, topsoil (including peat) would be stripped from the temporary 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, although tower locations with difficult and remote access may require limited batching on-site. Once the concrete has been cast and set, the excavation would be backfilled, using the original topsoil where possible. Depending on the foundation construction technique, there may be a requirement for preparation of grout in close proximity to the tower location.

3.8.40 It is anticipated that formation of each tower foundation would take approximately four weeks. **Plate 3.2: Illustrative Image of Tower Foundation Construction** provides an illustrative image of tower foundation construction.

[10] 'Deep peat' is classified as areas of peat that are greater than 50 cm in depth.

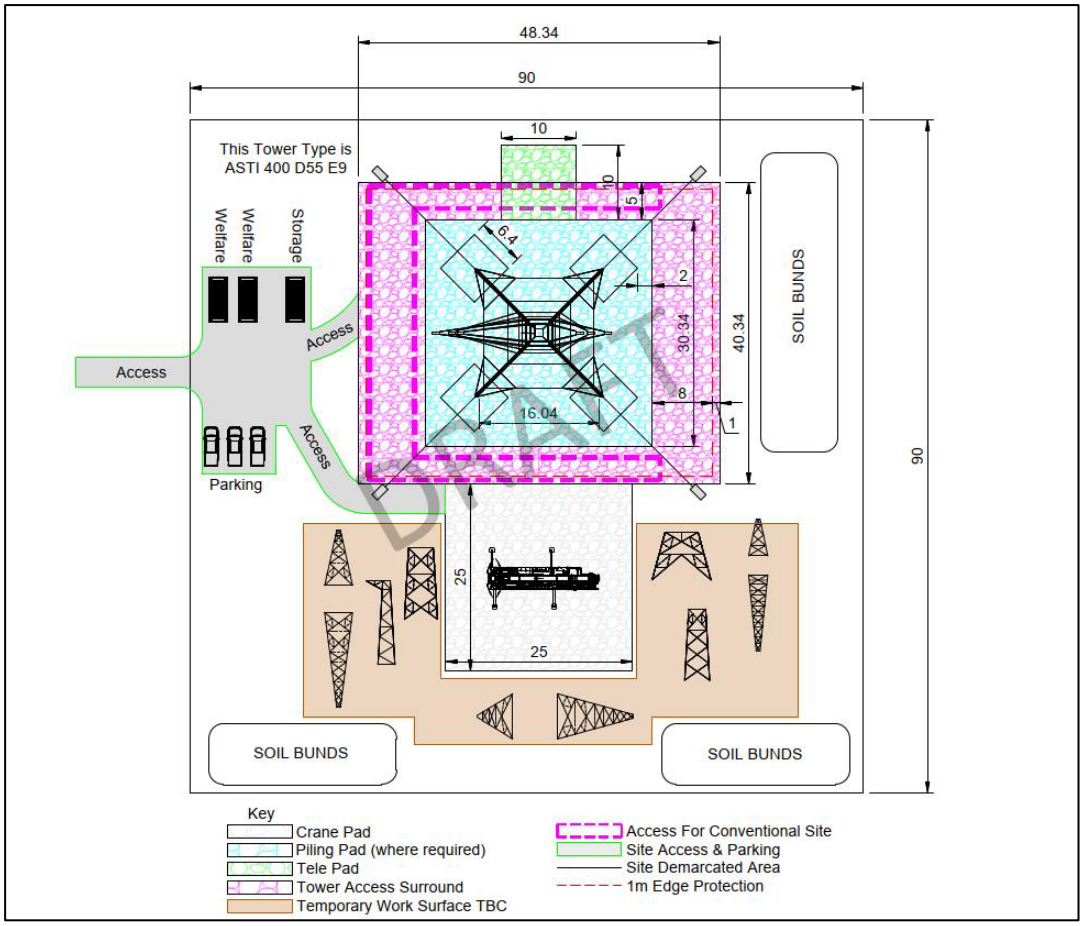
Plate 3.2: Illustrative Image of Tower Foundation Construction

Steel Lattice Tower Construction

3.8.41 Tower construction can typically commence four weeks after the foundations have been cast, subject to weather conditions and concrete curing rates. Tower steelwork would be delivered to each tower construction site either as individual steel members or as prefabricated panels, depending on the method of installation and the available access. A temporary working area up to 100 m by 100 m, is required at each tower location (up to 200 m by 200 m for angle towers) to facilitate access, laydown and assembly. **Plate 3.3: Indicative Temporary Working Area Arrangement** illustrates the temporary working area arrangement for towers which differ depending on the tower type (suspension and tension) but would have the following constituents:

- crane pad constructed out of crushed stone, geogrid and geotextiles to form a level stable base on which the crane can safely work. The pad can be installed as soon as the tower foundation is complete. It must be constructed in accordance with the temporary works design (compacted and tested) to ensure the made up ground meets the ground bearing capacity required during crane lifting operations;
- piling stone pad where required to provide suitable ground to support the piling rig during operations, either a one level pad or split-level pads to suit the ground profile. The pad can be installed as soon as access is ready. It must be constructed in accordance with the design (compacted and tested) to ensure the made-up ground meets the ground bearing capacity required for the drilling rig;
- telehandler stone pad is required to provide suitable ground to support the telehandler during operations. The pad can be installed as soon as the tower foundation is complete. It must be constructed in accordance with the temporary works design (compacted and tested) to ensure the made-up ground meets the ground bearing capacity required during crane lifting operations;
- tower access surround, this area would not require stone however would be used as a laydown area for materials throughout the tower construction process. Where ground is level, trackway matting may be utilised to spread the load across the ground. If the Site is particularly sloped, then the compound would be microsited as much as possible to provide a sufficient working area; and
- tension towers require a temporary ‘holding out position’ to raise the tower working platforms which would be utilised when stringing the conductors (see **paragraph 3.8.46** below). This platform is winched into position by a tractor at one and a half the tower height away and once in position gets locked off and attached to concrete sledges. Where this holding out position cannot be left in situ for the duration of the stringing works due to on-site constraints (eg, roads/walkways) the platform can be locked off to alternative concrete sledges closer to the tower body.

Plate 3.3: Indicative Temporary Working Area Arrangement



3.8.42 **Plate 3.4: Illustrative Image of Tower Construction** provides an illustrative image of the construction of a tower.

Plate 3.4: Illustrative Image of Tower Construction

Conductor Stringing

3.8.43 The conductor would be delivered to the Site on wooden drums in pre-determined pulling section lengths. Prior to stringing the conductors, temporary protection measures (eg netted scaffolds), would be required across public roads and existing access tracks. Where conductors are pulled between towers, methods would ensure that conductors do not come to ground and therefore watercourses would be protected; standard measures such as a wooden A-frame would be used over smaller burns and scaffolding and/or traffic control over navigable rivers.

3.8.44 **Plate 3.5: Illustrative Image of Temporary Construction Scaffolds** provides an illustrative image of temporary scaffolding used to protect a public road.

Plate 3.5: Illustrative Image of Temporary Construction Scaffolds

3.8.45 Conductor stringing equipment (ie winches, tensioners and ancillary equipment) are set out at EPZs at either end of pre-selected sections of the OHL. Winches and tensioners are placed within the EPZ usually approximately one and a half times the tower height from the tension tower which terminates the section being pulled. The EPZ landforms would be restored to their original profile following completion of stringing operations and removal of plant. Pulling locations require a permanent access track to facilitate longer term maintenance such as reconductoring.

3.8.46 Pilot wires (or 'bonds') 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 the respective 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 tower.

3.8.47 Conductor stringing (reconductoring) would also be required in the three areas subject to realignment/modification including:

- approximately 1.75 km of reconductoring of the existing Kintore to Tealing 275 kV OHL between towers 291 and 295R, and 298R and 299 as part of the permanent realignment;
- up to approximately 4.75 km of reconductoring of the existing Craigiebuckler to Tarland 132 kV OHL between towers 27-44 as part of the diamond crossing; and
- up to approximately 1.47 km of reconductoring of the existing Kintore to Fetteresso 275 kV/400 kV OHL as part of the permanent realignment.

Helicopter Use During Construction

3.8.48 Helicopters may be used during the conductor stringing phase at any point along the entire length of the Proposed Development, to introduce the pilot wire which would then be used to pull the conductors and earth wires through.

3.8.49 In some cases, helicopters may be used more widely, for example for tower erection (instead of a crane) or to deliver steel for foundation installation. Where helicopters are used, construction plant would still require access to each tower location to facilitate construction and erection of towers. Helicopter landing zones would also need be identified, which would be the responsibility of the Principal Contractors.

Phase 3 – Commissioning

3.8.50 Following tower construction and conductor stringing, the OHL and support towers would be subject to an inspection and snagging process. This allows the Principal Contractors and the Applicant to check that the works have been built to specification and are fit to energise. The circuits would then be energised from the substations in a phased sequence.

Phase 4 - Dismantling Existing OHLs

3.8.51 The following elements of the project require dismantling/removal:

- removal of approximately 1 km of the redundant section of the existing Kintore to Tealing 275 kV OHL south of Kintore Substation, following its realignment;
- removal of approximately 2.1 km of the redundant section of the existing Kintore to Craigiebuckler 132 kV OHL southeast of Kintore Substation following its realignment underground;
- removal of approximately 150 m of the redundant section of the existing Craigiebuckler to Tarland 132 kV, following construction of the diamond crossing; and
- removal of approximately 1.1 km of the redundant section of the existing Kintore to Fetteresso 275 kV/400 kV OHL, southwest of Kirkton of Durris, following its realignment.

3.8.52 Conductors and insulators would be removed first. The conductors would be collected using winch and cable drum, using a method similar to that described above for stringing. Tower removal is typically completed by cutting the legs and felling the tower in a controlled manner. The towers are then cut into sections using hydraulic shears and sections of tower would either be extracted from the Site using an ATV or flown out by helicopter depending on the location of the tower. The tower leg stubs and concrete foundation are normally decommissioned in situ, with stubs folded into an excavation of approximately 1 m depth within the tower's footprint, and the ground reinstated.

3.8.53 The existing Operational Corridor would be returned to the landowner to be incorporated into future forestry planting plans where relevant.

Phase 5 – Reinstatement

3.8.54 Following commissioning of the Proposed Development, all temporary working areas around tower bases and other construction sites would be reinstated. Reinstatement would form part of the contract obligations for the Principal Contractors and would include the removal of all temporary lattice tower diversions, temporary access tracks, all work sites around the tower locations and the re-instatement of all land occupied by construction compounds. An Outline Site Restoration Plan is provided in **Volume 5, Appendix 3.3: Outline Site Restoration Plan** and reinstatement principles are detailed in the Applicant's General Environmental Management Plans (GEMPs) provided in **Volume 5, Appendix 3.2: General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs)** including measures relating to soil management. Potential opportunities are also being explored for on-site enhancements and these are discussed in detail in **Volume 2, Chapter 9: Landscape and Visual Amenity** and **Volume 2, Chapter 11: Ecology.**

Reinstatement of Access Tracks

3.8.55 Reinstatement of excavated temporary stone access tracks would involve the replacement of subsoil and topsoil, and grading and installation of drainage, as required, with turves replaced vegetation side up. Where required, donor turves may be sourced from adjoining areas to replace lost turves and provide a mosaic from which vegetative cover of the established species are able to recover. Where there are insufficient turves, the ground would be allowed to

vegetate naturally, although some seeding may be required to stabilise sites and prevent erosion, or where landowner requirements dictate otherwise. Temporary access tracks placed on top of the existing ground level (of floating construction type) may not require any reinstatement measures after removal of the stone and geotextile base. Temporary watercourse crossings would be removed and the banks and (if relevant) the bed of the watercourse would be reinstated as closely as possibly to conditions pre-construction, and in accordance with relevant SEPA best practice and mitigation commitments set out in **Volume 2, Chapter 17: Schedule of Mitigation**.

3.8.56 Methods for the reinstatement of the limited areas where peat soils may be affected has been set out in the Peat Management Plan (**Volume 5, Appendix 13.4: Outline Peat Management Plan (PMP)**).

Reinstatement of Temporary Working Areas

3.8.57 Topsoil would be stored within the temporary working area for each tower during construction. Where possible, turves would be removed and stored on top of the topsoil bunds for use in the reinstatement. Sub-soils removed to enable the construction of the foundations would be temporarily stockpiled in separate bunds within the temporary working area. Soil management would follow the principles in the Applicant's GEMP as provided in **Volume 5, Appendix 3.2: General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs)**.

3.8.58 Where a temporary working area was previously vegetated, they would be allowed to re-vegetate naturally wherever possible.

Reinstatement of Construction Compound(s)

3.8.59 Construction compound(s) would be reinstated at the end of construction with all buildings and materials removed and soils appropriately reinstated in accordance with conditions associated with planning permission.

3.9 Land Take

3.9.1 **Table 3.3: Approximate Land Take for Construction and Operation of the Proposed Development** summarises the indicative land take associated with the Proposed Development, based on the nature of activities described in the preceding sections.

Table 3.3: Approximate Land Take for Construction and Operation of the Proposed Development

Activity	Construction (m^2)	Operation (m^2)
Access Track - Temporary stone (track length 85.56 km x width 7 m)	598,892	N/A
Access Track - New Permanent; excluding existing accesses. (track length 29.22 km x width (4.5 m)	131,477	131,477
Access Track Proposed new stone permanent (Operational and maintenance only) (track length 180 m x width (4.5 m)	N/A	810
Existing Track Upgrade (track length 69.71 km x assume 3 m widening)	209,139	209,139
Temporary Working Areas Including EPZ	4,667,597	N/A
Permanent Land Take for towers (1 m^2 per tower leg)	N/A	1260
Permanent Land Take for CSE Compound	1,374	1,374
Permanent Land re-instatement at towers (1 m^2 per tower leg) Include the pink towers for removal at XS, XT and diamond special arrangements and red towers for removal at XCW	N/A	88

3.10 Construction Programme

3.10.1 It is anticipated that construction of the Proposed Development would take place over approximately a five-year period. The detailed programming of works would be the responsibility of the Principal Contractors in agreement with the Applicant. It is anticipated that construction would commence in 2026 (subject to consents and approvals being granted) with a proposed energisation date of late 2030. The construction works are due to be delivered concurrently

in two sections: Emmock to Hurlie (Sections A to D), and Hurlie to Kintore (Sections E to F), it is currently anticipated that Sections E to F may be completed in advance of sections A to D due to its relative length.

3.10.2 The construction phasing and programme is subject to change based upon progress with the necessary statutory consents being granted, the discharge of any pre-commencement conditions, and voluntary wayleaves being agreed or granted through the necessary wayleave process. The final decisions in relation to construction methods and phasing would be made by the appointed Principal Contractors, having regard to any conditions attached to the statutory consents. A high level outline programme is presented in **Table 3.4: Indicative Construction Programme**.

Table 3.4: Indicative Construction Programme

	2026				2027				2028				2029				2030				2031			
Activity	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Mobilisation			■																					
Public Road Improvements				■	■	■	■	■	■	■														
Access Track Construction				■	■	■	■	■	■	■	■	■	■											
Tower Foundations/Piling Installation					■	■	■	■	■	■	■	■	■	■	■	■	■	■						
Tower Assembly/Erecting						■	■	■	■	■	■	■	■	■	■	■	■	■						
OHL Wiring/Commissioning										■	■	■	■	■	■	■	■	■	■	■				
Energisation																				■				
Access Removal/Reinstatement																				■	■	■	■	■

3.11 Construction Employment and Hours of Work

3.11.1 SSEN Transmission takes community responsibilities seriously. The delivery of a major programme of capital investment provides the opportunity to maximise support of local communities.

3.11.2 Employment of construction staff would be the responsibility of the Principal Contractors, but SSEN Transmission encourages the Principal Contractors to make use of suitable labour, plant and resources from areas local to the works through sustainable procurement codes and supplier guidance.

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

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

3.12 Construction Traffic

3.12.1 Construction of the Proposed Development would give rise to regular numbers of staff transport movements, with small work crews travelling to and from work site areas. The construction compounds would have a safe area for parking away from public roads.

3.12.2 Vehicle movements would be required to construct public road improvement works, temporary or upgraded access tracks, deliver the foundation and tower components and conductor materials to the Site, and deliver and collect materials and construction plant from the main Site compound and to individual tower locations.

3.12.3 The Principal Contractors 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 roads authorities. CTMPs would describe all mitigation and signage measures that are proposed on the public road accesses based on access maps and subsequent site assessments. The CTMP would be part of the CEMP (see **Volume 5, Appendix 3.4: Outline Construction Environmental Management Plan** for further details).

3.12.4 Temporary traffic lights may be required at some locations on public roads leading to site accesses (eg for delivery of scaffold materials or formation of new road access points). For minor access 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. All requirements for temporary traffic management would be agreed with the respective local roads authority and incorporated as contractual requirements in the CTMPs.

Details of all traffic movements which have been predicted for the EIA based on the preliminary project design are presented in **Volume 2, Chapter 14: Traffic and Transport**. For the purposes of the assessment, it has been assumed that all stone would be imported (see **Section 3.4** in relation to borrow pits).

3.13 Environmental Management During Construction

3.13.1 The assessment in this EIAR has been carried out on the basis that all works would be carried out in accordance with industry best practice construction measures, guidance and legislation, together with implementation of the following documents and procedures:

General Environmental Management Plans

3.13.2 GEMPs have been developed by the Applicant. The GEMPs considered relevant for this project are listed below and provided in **Volume 5, Appendix 3.2: General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs)**:

- Oil Storage and Refuelling;
- Soil Management;
- Working in or near Water;

- Working in Sensitive Habitats;
- Working with Concrete;
- Watercourse Crossings;
- Waste Management;
- Contaminated Land;
- Private Water Supplies;
- Forestry;
- Dust Management;
- Biosecurity on Land;
- Restoration; and
- Bad weather.

Species Protection Plans (SPPs)

3.13.3 SPPs have been developed by the Applicant and have been agreed with NatureScot (formerly Scottish Natural Heritage (SNH)). This full suite is listed below and provided in **Volume 5, Appendix 3.2: General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs)**:

- Badger;
- Bat;
- Beaver;
- Bird;
- Fresh Water Pearl Mussel;
- Otter;
- Red Squirrel;
- Pine Marten;
- Water Vole;
- Wildcat; and
- Wood Ant.

Construction Environmental Management Plan and

3.13.4 A contractual management requirement of the Principal Contractors would be the development and implementation of a Construction Environmental Management Plan (CEMP). This document would detail how the Principal Contractors would manage the Site in accordance with all commitments and mitigation detailed in the EIAR, statutory consents and authorisations, and industry best practice and guidance. **Volume 2, Chapter 17: Schedule of Mitigation** provides a summary of all mitigation measures included in this EIAR.

3.13.5 The CEMP would also reference the aforementioned GEMPs and SPPs. The implementation of the CEMP would be monitored on-site by a suitably qualified and experienced Advisory Environmental Clerk of Works (ECoW), with support from other environmental professionals as required (see below).

3.13.6 An Outline CEMP is included in **Volume 5, Appendix 3.4: Outline Construction Environmental Management Plan (CEMP)**.

Environmental Clerk of Works

3.13.7 As outlined in the Applicant's Consents and Environment Specification, the Principal Contractors will each appoint a minimum of one Environmental Manager and two roles of Advisory ECoW during construction of the Proposed Development. The Advisory ECoWs will be on-site during construction and will provide advice on and monitor compliance with the CEMP, GEMPs and SPPs, the environmental requirements that the Applicant places upon the Principal Contractors and relevant legislation. Although the Advisory ECoWs will be appointed by the Principal Contractors, they will report directly to the Applicant where immediate remediation or correction is required. The

Advisory ECoW will provide regular reporting which will be made available to all relevant site staff including the Applicant.

3.14 Operation and Maintenance

3.14.1 In general, OHLs require very little maintenance. Regular inspections are undertaken to identify any unacceptable deterioration of components, so that they can be replaced.

3.14.2 The Operational Corridor of the OHL is also monitored through periodic inspection to identify growth of trees which may compromise the resilience of the OHL. Within the Operational Corridor, habitats would be allowed to regenerate naturally; however, natural regeneration of trees would be managed through tree removal/trimming to prevent them interfering with the safe operation and maintenance of the line ('resilience felling'). The Applicant would use a process of 'managed resilience' which would seek to retain naturally regenerated (and lower height) broadleaved trees and shrubs as close as possible to the line to keep as much tree cover as possible. Removal of other vegetation, eg gorse (*Ulex europaeus*) and rhododendron, may be required to ensure the area under the conductors is clear so access can be taken and to facilitate safe maintenance or repair in the event of failure. Smaller-growing species/shrubs would be able to be retained closer to the line rather than larger growing species. OHL tree maintenance would take place on a four-yearly cycle.

3.14.3 From time to time, 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. Insulators and conductors are normally replaced after about 40 years, and towers may require painting as part of maintenance.

3.14.4 In the event of a fault on the line, delivery of working platforms may be required to tension towers to allow the towers to be safely worked on. These platforms can be delivered on large tracked ATVs. In steep or remote areas, it is required to retain access formation to these tension towers to ensure that safe access can be made.

3.15 Decommissioning

3.15.1 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 EIAR. However, an outline mitigation strategy for decommissioning has been provided as **Volume 5, Appendix 3.6: Outline Decommissioning Mitigation Strategy** to inform such future requirements and to help avoid the potential for significant effects associated with this project stage.