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3. THE PROPOSED DEVELOPMENT

3.1 Introduction

3.1.1 This Chapter describes the elements that constitute the Proposed Development. It provides a description of the key components and information regarding the construction, operation and maintenance of the Proposed Development.

3.2 Overview of the Proposed Development

3.2.1 The Proposed Development would be required to connect the consented Achany Wind Farm Extension[1] to the electricity transmission network at Shin substation. Between the consented wind farm and Shin substation, the Proposed Development would comprise a combination of 16 km of new trident H-wood pole 132 kV overhead line (OHL) and approximately 1.2 km of new 132 kV underground cable (UGC). At Shin substation, the Proposed Development would connect onto an existing steel lattice tower located within the substation boundary. The OHL conductor that was on this tower has been decommissioned and the tower left in place would be used to facilitate the connection of Achany Wind Farm Extension. A Cable Sealing End (CSE) pole structure would be required to facilitate the transition between UGC and OHL. New permanent and temporary access tracks would also be required to facilitate the construction and operation of the Proposed Development.

3.2.2 Section 37 consent under the 1989 Act, including deemed planning permission under section 57(2) of the Town and Country Planning (Scotland) Act 1997, is sought for the following works:

- The installation and operation of approximately 16 km of new trident H-wood pole OHL between a new CSE pole structure, approximately 1.2 km south of the consented Achany Wind Farm Extension on-site substation and the existing Shin substation.
- Ancillary works required to facilitate the construction and operation of the Proposed Development, including tree felling and vegetation clearance, temporary measures to protect road and water crossings, upgrades to existing access tracks and existing access points, new permanent and temporary (likely trackway) access, permanent stone hardstanding areas related to the CSE structure, and associated working areas around infrastructure to facilitate construction.

3.2.3 The Proposed Development would also include the following works, which would fall under the Applicant's permitted development rights[2]:

- Approximately 1.2 km of UGC between the Achany Wind Farm Extension on-site substation and the new CSE structure to the south-west.

3.2.4 All elements of the Proposed Development are described further in this Chapter, and shown on **Figure 3.1a-e: Proposed Development**.

3.2.5 The environmental effects of the installation of the permitted development UGC are considered within **Appendix 1.1: Permitted Development Works Appraisal.** The construction methods for installation of UGC are detailed within this Chapter for completeness (see **Section 3.9**).

3.3 Associated Works

3.3.1 Other associated works are required to facilitate construction of the Proposed Development, or would occur as a consequence of its construction and operation. These works, listed below, do not form part of the description of the Proposed Development and are therefore not included in the application for statutory consents. On that basis they are therefore not assessed in detail in this EA. The associated works are:

[1] Received consent from the Scottish Government Energy Consents Unit in May 2023, reference number ECU00001930.

[2] Town and Country Planning (General Permitted Development) (Scotland) Order 1992

- Borrow pits and quarries which would be required to source stone for the construction of access tracks. Separate planning applications for these works would be sought by the Contractor; and
- Temporary construction compounds and laydown areas which would be required to facilitate construction of the Proposed Development. The final location and design of temporary site compounds would be confirmed by the Contractor and separate planning permissions would be sought as required.

3.4 Limit of Deviation

3.4.1 In general terms, a Limit of Deviation (LoD) defines the maximum extent within which a development can be built. There is a good degree of certainty with respect to the location of infrastructure, as presented within this EA, given the work that has been carried out by the Applicant during the route, alignment and EA stages of the project. Nevertheless, it is possible that further micro-siting may be required during the construction process to reflect localised land, engineering and environmental constraints, and therefore the LoD provides some flexibility in this regard.

3.4.2 In the case of the Proposed Development, a prescribed horizontal LoD is required for each of the key components of the project to allow flexibility in the final siting of individual poles, UGCs and access tracks. The LoDs for the different elements of the Proposed Development are as follows (see also **Figure 3.1a-e**):

- 100 m LoD (i.e. 50 m either side of the centre line of the proposed OHL alignment) is sought to allow for micro-siting of the OHL poles during construction;
- 100 m LoD (i.e. 50 m either side of the centre line of the proposed UGC alignment) is sought to allow for micro-siting of the UGC during construction;
- 100 m LoD (i.e. 50 m around the indicative CSE structure) is sought for the construction of the CSE structure; and
- 50 m (i.e. 25 m either side of the centre line of proposed tracks) is sought for the construction of new permanent access tracks and new temporary access tracks where they are outwith the OHL, UGC or CSE structure LoD's noted above. Where access tracks fall within these LoDs, the access track LoD would be merged with the OHL, UGC and CSE structure LoDs. This is to account for the possible movement of the OHL, UGC or CSE structure within their respective LoDs that the access would still need to serve.

3.4.3 A vertical LoD, which refers to the maximum height of a pole above ground level, is also sought to allow a height increase or decrease of 20% of the proposed pole height. An indicative pole schedule presenting the proposed pole heights is included in **Appendix 3.1: Indicative Pole Schedule**, and the corresponding pole numbers are shown on **Figure 3.1a-e**. There is a high degree of certainty in relation to the height of the proposed poles given the engineering design work undertaken to date. The vertical LoD provides some flexibility nonetheless.

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

Operational Corridor

3.4.5 An Operational Corridor (OC) would be required to enable the safe operation and maintenance of the OHL. This would vary depending on the type of woodland (based on species present) in proximity to the OHL, and the height of support structures used within each woodland area. It is anticipated that the width of the OC would be 36 m either side of the OHL (i.e. 72 m in total). This is reduced to 60 m (30 m either side of the centreline of the OHL) when felling within areas of broadleaved trees.

3.4.6 For sections of new permanent track, a 25 m OC would be required (12.5 m either side of the track). Therefore, in areas of woodland or commercial forestry, should the OHL or permanent access track alignments be micro-sited within the LoD, the associated OC width would move with the OHL or access track alignment. This can sometimes result in the OC overlapping outside the LoD boundary.

3.5 Description of Overhead Line Infrastructure

3.5.1 As displayed on **Figure 3.1a-e**, the proposed OHL would commence from a CSE structure approximately 1.2 km south-west of the consented Achany Wind Farm Extension on-site substation. From the CSE structure, the proposed OHL would travel to the southeast, following the contour of the hillside, passing to the south of Rosehall Wind Farm. The proposed OHL would cross the A839 just to the west of the Rosehall Wind Farm access track, then carry on south-east passing to the north of Tullich and Linsidemore. The OHL continues south-east along the top of some steeper ground passing through Shin Forest, where it would turn south-west to cross the A837 and connect into the existing Shin substation close to the dwellings of Inveran.

Trident H Wood Poles

3.5.2 The trident H-wood pole would have a height of approximately between 10 m and 15 m (including insulators and support) (see **Appendix 3.1**). The proposed trident H-wood pole would support three conductors (wires) in a horizontal flat formation. The spacing between poles would vary depending on topography and altitude. The specific distances would be determined after a detailed line survey but would be approximately 100 m apart. A photograph showing a typical trident H-wood pole line is shown in **Plate 3.1** below.

3.5.3 The OHL would comprise a combination of suspension poles, failure containment poles, angle / tension poles, and terminal poles, as described below:

- Suspension poles: these are used for straight sections of OHL where there is no need to terminate the conductor;
- Failure containment poles: these are used after every 10th structure in a straight-line section. These poles are tension poles which have been designed to a higher reliability and are fully back stayed in both directions;
- Angle poles: these are used either in-line, where there is a need to terminate the conductors, and / or where there is a need to change the orientation of the OHL; and
- Terminal poles: these are used where there is a requirement to terminate the OHL on to an UGC at a CSE structure.

Plate 3.1: Typical H Wood Pole

Conductors and Span Length

3.5.4 Three conductors in horizontal formation and made from all aluminium alloy would be strung between each H-wood pole forming a single circuit. A fourth conductor would be underslung between the wood poles consisting of an all dielectric self-supporting cable also known as an ADSS. This is a non-metallic conductor which has a fibre optic core, and is used to provide a communications route between the substations.

3.5.5 Stays would be required at angle poles and in areas of soft ground. The spacing between individual poles would vary depending on topography and altitude and would be determined after a detailed line survey.

3.5.6 There would be no concrete in the foundations, instead they consist of a modular type design of cross baulks and brace blocks which supply lateral resistance when in compacted ground and resist the overturning of the wood poles.

3.6 Typical Construction Activities for Overhead Line Infrastructure

3.6.1 OHL construction typically follows a standard sequence of events as follows; these are described in more detail below:

- Phase 1 – enabling works;
- Phase 2 – OHL construction;
- Phase 3 – OHL commissioning; and
- Phase 4 – re-instatement.

Phase 1 - Enabling works

Works to Existing Distribution Network

3.6.2 Works would be required to the existing 33 kV distribution network within some areas to facilitate safe working and operating conditions given the proximity of the distribution network to the Proposed Development. It is anticipated that these distribution assets would be realigned or undergrounded to make way for the Proposed Development. These works would be the responsibility of Scottish Hydro Electric Power Distribution (SHEPD).

Site Compounds / Borrow Pits and Quarries

3.6.3 As stated in **Section 3.3**, temporary construction compounds, laydown areas, borrow pits and quarries would be required to facilitate construction of the Proposed Development. The final location and design of these would be confirmed by the Contractor and separate planning permissions / applications would be sought as required.

Road Improvements and Access

3.6.4 Access will use existing tracks where possible, as well as the use of new temporary access panels and helicopters if required. **Figure 3.1a-e** shows the proposed access arrangements, which comprise a combination of existing accesses, the consented Achany Wind Fam Extension access track and of new temporary (likely trackway) access. Two sections of new permanent access track would be anticipated to be required. Access arrangements are expected to comprise the following:

- Existing accesses from the public road, tracks including forestry tracks and those that serve local properties and the consented Achany Wind Fam Extension would be used during construction wherever possible. Some minor improvements would be anticipated to some of these access points and tracks, including vegetation clearance, localised small scale widening and running surface improvements.
- Other access by low ground pressure vehicles may be required between poles. Such access would not require formal access tracks as access would either be via tracked vehicles or temporary trackway systems in boggy / soft ground areas as required.

- Where no existing tracks can be used, new, mostly temporary (likely trackway) access routes branching from existing accesses would be required. These are shown on **Figure 3.1a-e** and would be further refined by the Contractor in conjunction with landowners, within the defined LoD. Where the existing ground provides the appropriate bearing capacities, the new accesses would be constructed on-formation. Where the existing ground does not provide the appropriate bearing capacities and / or where peat is located, the new accesses would likely be floated on top of the soft ground, circumnavigating the requirement for deep excavations and disturbance of the peat.
- To facilitate access to the CSE structure from the consented Achany Wind Farm Extension access track, approximately 100 m of new permanent track is expected to be required. During construction of the OHL, the new permanent track would be approximately 5 m in width, however, it would be partially reinstated on commissioning of the OHL and reduced down to approximately 3 m in width (see **Figure 3.1a**).
- To facilitate operational access to bird flight diverters on the OHL which are proposed to the north of Linsidemore (see **Chapter 6: Ornithology**), a section of new permanent track would be expected to be required of approximately 1.5 km in total length. It would branch northwards from an existing access track and travel for approximately 600 m towards open grazing between pole 155 and 156. It would then travel north-west for approximately 450 m along the OHL until pole 150, and south-east for approximately 450 m along the OHL until pole 161. Similarly to the new permanent track proposed for the CSE structure, this section of new permanent track would also be approximately 5 m in width during construction of the OHL and would be partially reinstated on commissioning of the OHL down to approximately 3 m in width (see **Figure 3.1d**).

3.6.5 Where upgrades are identified as being required to existing access points from the local road network, further consultation will be undertaken with THC's Roads Department. Access along key routes would be maintained throughout the construction period to ensure no restriction of regular traffic.

Forestry Removal

3.6.6 As described in paragraph 3.4.5, an OC would be required to enable the safe operation and maintenance of the OHL. It is anticipated that the width of the OHL OC would be 36 m either side of the OHL (i.e. 72 m in total). This is reduced to 60 m (30 m either side of the centreline of the OHL) when felling within areas of broadleaved trees. While the Proposed Development has been designed to minimise woodland felling requirements where practicable, construction would require the removal of sections of woodland, which would be undertaken in consultation with Scottish Forestry and affected landowners. Where possible, pole locations would be micro-sited to further reduce woodland removal. In addition, the project would seek to adhere to Scottish Government's Control of Woodland Removal Policy[3].

3.6.7 For new permanent access tracks a 25 m OC has been assumed as required for the purposes of this EA (12.5 m either side of the track centreline). Any felling requirements for proposed temporary track are only considered where they are present within areas of tree cover and not already within the OHL OC.

3.6.8 After felling, any timber removed that is commercially viable would likely be sold and the remaining forest material would be dealt with in a way that delivers the best practicable environmental outcome and is compliant with waste regulations. Compensatory planting will be undertaken for woodland removed as a direct result of the project.

3.6.9 Forestry considerations are discussed further in **Chapter 9: Forestry**.

3.6.10 Eight Woodland Reports are provided within **Appendix 9.1a-h** detailing tree clearance techniques, operational corridor extents, and a breakdown of areas and timber volumes.

[3] Forestry Commission Scotland (2009) Control of Woodland Removal Policy

Phase 2 – Construction works

Foundations

3.6.11 The foundations for trident H-wood poles comprise an excavation of approximately 3 m long and 3 m wide for each pole. The total construction area around each pole (the working area) may extend to 20 m by 10 m. Excavated turf and sub soils would be stacked separately according to type so that they can be replaced in reverse order, with the turf being replaced on top. Some backfilling may require the addition of hardcore to provide additional stability in areas where the natural sub soils have poor compaction qualities.

3.6.12 Where shallow rock is encountered along the route, this would require a pecker to break into the rock to a sufficient depth of around 2.5 m.

3.6.13 Stays, where required, would be installed at the same time as a pole is erected, involving the placement of a wooden sleeper block beneath the surface at a depth of approximately one metre.

3.6.14 Where very soft ground conditions are unavoidable, the use of “bog shoes”, comprising additional sleepers attached horizontally across the poles below ground, may be required. This would increase the excavated area between the poles.

H Pole Construction

3.6.15 Pole structures would be assembled completely within the laydown areas prior to transportation to the required locations. The assembled pole structures would be moved directly from the assembly areas and erected utilising one or two excavators, dependant on the complete H pole assembled weight. Stays would be installed at angle and terminal poles and potentially on cross slopes for stability.

3.6.16 Pole erection teams would likely consist of five to six operatives per team, each equipped with two tracked excavators, specialist tracked ATVs, rock breaking equipment and excavation formwork.

Conductor Stringing

3.6.17 The conductor would be delivered to site on wooden drums in pre-determined pulling section lengths. Prior to stringing the conductors, temporary protection measures (e.g. netted scaffolds or traffic management such as stop and go boards) would be required across public roads and existing access tracks. Conductor stringing equipment (i.e. winches, tensioners and ancillary equipment) would be set out at either end of pre-selected sections of the OHL.

3.6.18 A typical stringing team would consist of approximately 12 operatives. The route would be split into manageable sections, temporary backstays installed and pilot ropes pulled out through the section to be strung. The conductor drums would be mounted on stands at one end of the section to be strung and the conductor fed around a tensioning machine. At the opposite end the pilot rope would be fed around the puller winch bullwheels, prior to pulling. The tensioner would maintain the correct tension throughout the conductor pulling whilst the puller provides the ‘pull’. Once the new conductor reaches the puller the conductor pulling would be stopped. The conductor would be terminated at the puller end and tensioned by the tensioner. This process would be repeated until the complete section has been sagged and made off to specified design tensions.

3.6.19 In challenging sections, or to minimise the use of new temporary access panels, a helicopter can be utilised to assist with stringing conductors. It is anticipated that any necessary consents (e.g. planning consent or CAR authorisations) required for additional accesses or site establishment during construction would be acquired by the Contractor.

Phase 3 – Commissioning

3.6.20 The OHL and support poles would then be subject to an inspection and snagging process. This would allow the Contractor and SSEN Transmission to check that the works have been built to specification and are fit to energise. The Proposed Development would also go through a commissioning procedure for the switchgear, communications and protection controls for the substations at the Achany Wind Farm Extension substation and Shin substation. The circuits would then be energised from the substations.

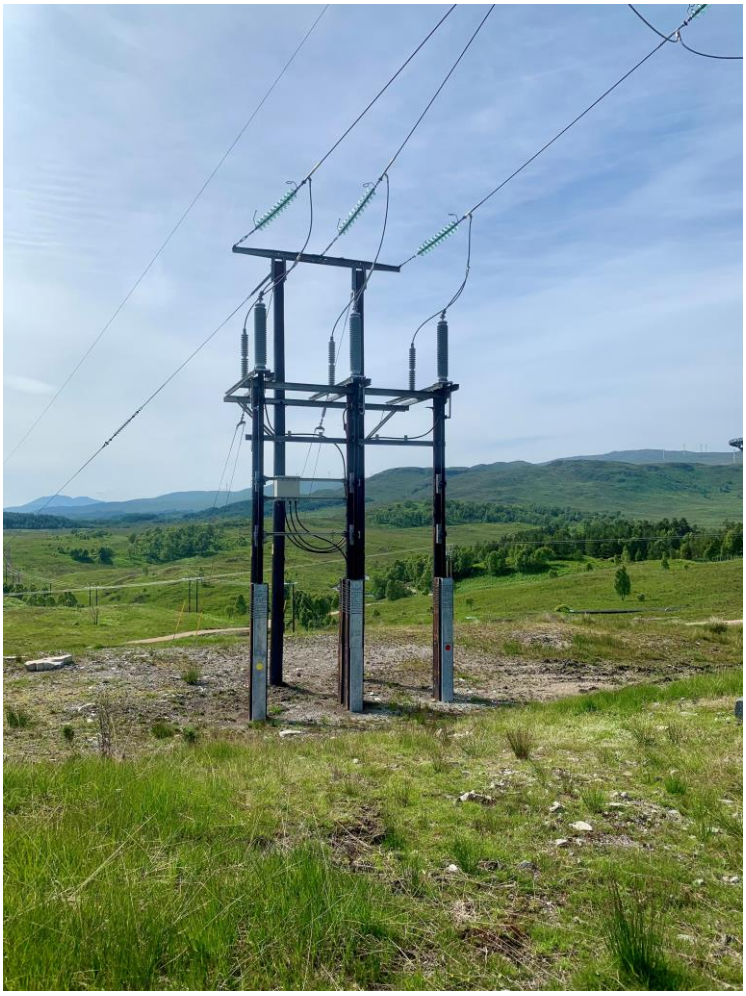
Phase 4 – Reinstatement

3.6.21 Following commissioning of the Proposed Development, it is anticipated that all areas disturbed during construction would be reinstated as described in **Section 3.11** below. Reinstatement will form part of the contract obligations for the Contractor and will include the removal of all temporary access tracks, all work sites around the pole locations and the re-vegetation of laydown areas to recreate the former habitat as far as possible.

3.7 Description of Cable Sealing End Structure

3.7.1 One CSE structure would be required to facilitate the transition from UGC to OHL (see **Figure 3.1a**). The CSE structure would accommodate the CSE equipment and downleads mounted on trident poles. Cables would emerge from below ground and would be affixed to the structure. The cables would be enclosed in protective boxing and anti-climb measures would be installed on the structure for safety reasons. The exact design of the CSE structure would be confirmed by the Contractor. A typical CSE structure is shown on **Plate 3.2** below.

Plate 3.2: Typical Cable Sealing End Structure



3.8 Description of Underground Cable

3.8.1 One section of UGC would be required for the Proposed Development. It would commence from the Achany Wind Farm Extension substation and travel south-west for approximately 1.2 km where it would connect to the CSE structure. The indicative cable alignment is shown on **Figure 3.1a**, along with the LoD of 100 m. A working corridor of approximately 30 m would be required during the installation of the 132 kV underground cables.

3.8.2 As stated in **Section 3.2**, the UGC works would fall under the Applicant's permitted development. The environmental effects of the installation of the permitted development UGC section are considered within **Appendix 1.1: Permitted Development Works Appraisal**. The construction methods for installation of UGC are detailed below for completeness.

3.9 Typical Construction Activities for Underground Cable

3.9.1 Cables would typically be installed through open cut trench techniques. The proposed cabling would comprise one electrical circuit in a single trench comprising of three phases (cables) in a ducted trefoil (triangular) formation. There would also be one fibre duct installed within the trench which would also transition to OHL and become the ADSS as discussed in **Section 3.5** above. The trench would be approximately 1.3 m wide and 2 m in depth. In some instances, the trench could be made wider (through benching and battering) for stability and safety of the workforce. Alternative trench and duct arrangements may be employed for short lengths (<20 m) for specialist crossing locations such as crossing other cable circuits.

3.9.2 The trench bottom would be uniform with adequate clearance on each side of the ducts and be free from roots, organic debris, clods, rocks, stones, and other materials likely to cause damage to the cable duct.

3.9.3 Trench walls would be supported appropriately where necessary to ensure trench stability. Excavations would be kept free from water by use of mobile pumps, with water pumped to a suitable location as agreed on site by the Environmental Clerk of Works (ECoW) and in accordance with SSEN Transmission's General Environmental Management Plans (GEMPs) (**Appendix 3.2**). Drainage design measures to ensure the discharge would not result in pollution to surface water will be set out in a Construction Environmental Management Plan (CEMP).

3.9.4 All excavated material would be carefully stored a minimum of 10 m away from and downslope of any adjacent watercourse with particular care taken to prevent any risk of runoff or windborne dry sediment being discharged into the watercourses.

3.9.5 Engineered backfill would be placed around the cable ducts in appropriate layers to protect the cable from accidental damage, and to ensure the desired cable rating is achieved. A 75 mm minimum bedding layer of stabilised backfill would be laid in the trench to provide bedding for the ducts. Marker boards would then be placed on top of the engineered fill. Excavated material would then be placed on top of the marker board and compacted in place.

3.9.6 Given the length of the cable section, one to two joint bays (a location at which cable lengths are jointed) would likely be required. The location of the joint bay(s) would be agreed during detailed design, and in discussion with the relevant landowner. The joint bay(s) would comprise an underground concrete lined structure approximately 9 m in length, 3.5 m wide and 2 m deep. An above ground link pillar would also be required within 10 m of the joint bay(s), protected by a stock proof fence. **Plate 3.3** illustrates a typical above ground link pillar.

Plate 3.3: Typical Link Pillar

3.9.7 Once all trenching has been complete, and the ducting installed and backfilled, the cable installation process would be able to begin. The cable would be coiled onto a cable drum to allow for transportation from the manufacturing plant to the site location. This drum would then be then loaded onto a cable installation trailer which would allow the drum to rotate and the cable to be pulled from the drum. A steel wire bond would be attached to a winch and drawn through the duct until it would reach the joint bay or location at which the cable drum is positioned. Following pre-installation checks, the cable would be able to be drawn through the duct.

3.9.8 Reinstatement of the surface layers would be completed by returning the remaining excavated material to the trench in layers, in reverse order with the existing vegetation placed on the trench where possible.

3.10 Construction Access

3.10.1 Construction of the Proposed Development would give rise to regular numbers of staff transport movements, with small work crews travelling to work site areas. It is anticipated that the Contractor would identify a single main compound area, with a safe area for parking away from the public road. The obtaining of any necessary planning consent or other authorisations required for the site compound would be the responsibility of the Contractor.

3.10.2 Construction access would utilise existing forestry or estate tracks or the consented Achany Wind Farm Extension access tracks where possible. Vehicle movements may be required to upgrade accesses and tracks; deliver the foundation and pole components and conductor materials to site; transportation of the workforce; and deliver and collect materials and construction plant from the main site compound and to individual pole locations.

3.10.3 The Contractor would determine where access is required, and for which items of plant, and prepare a Construction Traffic Management Plan (CTMP) in consultation with SSEN Transmission and the local roads authority. To address potential impacts from construction traffic and describe all mitigation and signage measures that are proposed on public road accesses, the CTMP would be prepared pre-construction in consultation with THC and Transport Scotland. Access along or crossing Core Paths, or any recreational

routes would be managed via an Outdoor Access Management Plan, which would form part of the CTMP. The CTMP implemented for the works would be reviewed by the Contractor throughout the project and updated as necessary.

Site Access Arrangements

3.10.4 As described in **Section 3.6**, the majority of the access for the OHL would be via trackway panels which would provide a temporary surface for construction vehicles. Some temporary tracks would also be required to facilitate the construction of the UGC. It is anticipated the requirements for this would be determined at the detailed design stage.

3.10.5 Two sections of new permanent access track would be required (see **Figure 3.1a and 3.1d**). This would be to facilitate access to the CSE structure from the consented Achany Wind Farm Extension access track and also to facilitate operational access to bird flight diverters on the OHL which are proposed to the north of Linsidemore.

Abnormal Loads

3.10.6 No abnormal loads are anticipated to be required for transport of components for the Proposed Development. All vehicles associated with construction would be below the criteria for abnormal loads, as defined by the UK Government[4].

Potential Traffic Mitigation

3.10.7 In order to minimise potential traffic effects, the following good practice measures, forming embedded mitigation, would be put into place and would be set out in the CTMP:

- Driver induction: all contractor drivers would take part in an induction briefing, covering the contents of the Construction Traffic Management Plan, and be updated as required or on a planned basis.
- Driver rotation: drivers and operators of construction vehicles would follow shift patterns allowing appropriate breaks and off days, reducing the risk of accidents.
- Travel times: journeys would be planned so as to avoid passing locations such as schools during opening and closing times or places of worship during services.
- Emergency access: access for emergency vehicles would be maintained at all times.
- Debris control: monitoring and measures would be put in place to ensure site debris is not transferred onto public roads by construction traffic.
- Inspection regime: inspection of construction vehicles and local roads would be carried out at regular periods to ensure safe operations.
- Travel arrangements: where practical, employees involved with construction of the Proposed Development should live locally to minimise the number of journeys required.
- Public access: where practicable, site operations will not restrict or obstruct public rights of way. Where this cannot be avoided, obstruction time would be minimised and an alternative route established.

3.11 Construction Environmental Management

3.11.1 All works will be carried out in accordance with the following:

[4] GOV.UK. (2019). *Transporting abnormal loads*. [online] Available at: https://www.gov.uk/esdal-and-abnormal-loads [accessed 10 July 2024].

GEMPs

3.11.2 General Environmental Management Plans (GEMPs) have been developed by the Applicant. The GEMPs considered relevant for this project are identified in **Appendix 3.2**.

SPPs

3.11.3 Species Protection Plans (SPPs) have been developed by the Applicant and have been agreed with NatureScot. These can be found in **Appendix 3.3**.

CEMP

3.11.4 A contractual requirement of the Contractor would be the development and implementation of a Construction Environmental Management Plan (CEMP). It is anticipated that the implementation of a CEMP would be a condition to any grant of consent. This document would detail how the Contractor would manage the site in accordance with all commitments and mitigation detailed in the EA, statutory consents and authorisations, and industry best practice and guidance. **Chapter 10** of this EA provides a summary of all mitigation measures identified within this EA, and this will be updated as required following further consultation and consent conditions.

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

Reinstatement

3.11.6 Reinstatement works are generally undertaken during construction (and immediate post-construction phase) and aim to address any areas of ground disturbance and changes to the landscape as part of the construction works. Such works would involve the reinstatement of areas disturbed during the construction phase.

3.11.7 The following paragraphs provide a summary of the working areas that would be reinstated, and typically how this would be achieved.

Reinstatement of Access Tracks

3.11.8 As shown in **Figure 3.1a-e**, the majority of the access for the OHL would be via trackway panels which would provide a temporary surface for construction vehicles. Some temporary tracks would also be required to facilitate the construction of the UGC. These would be removed and the land reinstated.

3.11.9 Reinstatement would involve replacement of subsoil, then topsoil, grading and installation of drainage as required with turves replaced vegetation side up. Where there are insufficient turves, the ground would be allowed to vegetate naturally, although some seeding[5] may be required to stabilise sites and prevent erosion, or where landowner requirements dictate otherwise. Methods for the reinstatement of peat would be set out in the Peat Management Plan (see **Appendix 7.2: Peat Management Plan**).

3.11.10 As described in **Section 3.6**, two sections of new permanent access track would be anticipated to be required (see **Figure 3.1a and 3.1d**). The first of which would facilitate access to the CSE structure from the consented Achany Wind Farm Extension access track. The second section would be to the north of Linsidemore to facilitate operational access to bird flight diverters on the OHL which are proposed in this area (see **Chapter 6: Ornithology**).

[5] The specific seed mix would be made in agreement with the project ecologist.

3.11.11 These tracks would be partially reinstated on commissioning of the OHL to reduce its width to approximately 3 m for use by SSEN Transmission for maintenance access.

Reinstatement of Work Areas (Poles and Underground Cable)

3.11.12 Soil would be stored within the working area for each element during construction. Subsoils and topsoil removed to enable the construction of the foundations, or excavation of trenches, would be temporarily stockpiled in separate bunds within the working area or corridor, with stripped turves stored on top of the bunds.

3.11.13 Reinstatement would involve replacement of subsoil, then topsoil with turves replaced vegetation side up. 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.

Reinstatement of Construction Compounds

3.11.14 At the end of construction all materials, buildings, and temporary compounds would be removed. Where required the land would be regraded with subsoil put down first, then topsoil with turves replaced vegetation side up. 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.

3.12 SSEN Transmission's Biodiversity Ambition

3.12.1 Biodiversity Net Gain (BNG) is a process which leaves nature in a better state than before development work started. SSEN Transmission has developed a BNG toolkit based upon Natural England Biodiversity Metric[6, 7] (in the absence of an agreed Scottish metric) which aims to quantify biodiversity based upon the value of habitats for nature. It is an efficient and effective method for demonstrating whether development projects have been able to maintain or increase the biodiversity value of a development site after construction works.

3.12.2 The scope of the BNG assessment is to quantify the overall potential biodiversity impacts for the Proposed Development; this includes a biodiversity baseline assessment, quantification of habitat losses due to temporary works and permanent structures, and analysis of biodiversity gains following reinstatement of habitats in areas of temporary construction work and additional habitat enhancement and creation (whether onsite and / or offsite).

3.12.3 SSEN Transmission is committed to protecting and enhancing the environment by minimising the potential impacts from their construction and operational activities. As part of this approach, SSEN Transmission has made commitments to ultimately ensure a 10% net gain for biodiversity in line with their biodiversity ambition and environmental legacy commitments[8], Sustainability Strategy[9] and Sustainability Plan[10]. New infrastructure projects must:

- Ensure natural environment considerations are included in decision making at each stage of a project's development;
- Utilise the mitigation hierarchy to avoid impacts by consideration of biodiversity in project design;

6 Natural England (2019) *The Biodiversity Metric 2.0: auditing and accounting for biodiversity value. User Guide (Beta Version, July 2019)*. Online at: http://publications.naturalengland.org.uk/file/5366205450027008, [accessed: 6th August 2024].

7 Further versions of the Natural England Biodiversity Metric have since been published. SSEN Transmission are in the process of incorporating this into their guidance and toolkit.

8 SSEN Transmission (2023). *Delivering a positive environmental legacy*. Online at: https://www.ssen-transmission.co.uk/globalassets/documents/sustainability-and-environment/environmental-legacy-booklet, [accessed: 6th August 2024].

9 SSEN Transmission (2018). *Delivering a smart, sustainable energy future: The Scottish Hydro Electric Transmission Sustainability Strategy* (2018) https://www.ssen-transmission.co.uk/media/2701/sustainability-strategy.pdf, [accessed: 6th August 2024].

10 SSEN Transmission (2019). *Our Sustainability Plan: Turning Ambition into Action.* https://pre-dxp.ssen-transmission.co.uk/globalassets/documents/sustainability-strategy/our-sustainability-plan-consultation-report.pdf, [accessed: 6th August 2024].

- Positively contribute to the UN and Scottish Government Biodiversity strategies by achieving an overall Net Gain; and
- Work with their supply chain to gain the maximum benefit during asset replacement and upgrades.

3.12.4 The design and evolution of this project has been carried out in line with these commitments, and the Applicant is committed to delivering a 10% net gain for biodiversity following implementation of the outline Habitat Management Plan (**Appendix 8.4: Outline Habitat Management Plan**).

3.13 Construction Programme, Employment and Hours of Work

3.13.1 It is anticipated that construction of the Proposed Development would take place over a 23-month period, following the granting of consents.

3.13.2 SSEN Transmission considers it important to act as a responsible developer with regards to the communities within which the construction works take place. The delivery of a major programme of capital investment provides the opportunity to maximise support of local communities. Employment of construction staff would be the responsibility of the Contractor; however, the Applicant would encourage the Contractor to make use of suitable labour and resources from areas local to the Proposed Development where possible.

3.13.3 As would be stated in the CEMP, construction activities would in general be undertaken during daytime periods only. This would involve work between approximately 07:00 to 19:00 in the summer and 07:30 to 17:00 (or as daylight allows) in the winter, seven days a week.

3.13.4 Any variation in these working hours would be agreed in advance with THC.

3.14 Operation and Maintenance

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

3.14.2 During the operation of the Proposed Development, it may be necessary to manage vegetation to maintain required safety clearance distances from infrastructure.

3.15 Decommissioning

3.15.1 If the Proposed Development were to be decommissioned all components of the OHL, inclusive of material from the poles, conductors and fittings, would be removed from site and either recycled or disposed of appropriately. The UGCs would be removed where practical to do so, however if they could not be retrieved then the ducts would be cut and sealed. The expectation is that this cable system would be recoverable at decommissioning.

3.15.2 A method statement would be agreed with THC setting out the detail of the decommissioning process for OHL and UGC.

3.15.3 Efforts would be made to repurpose the Proposed Development for future connections prior to any decommissioning. Consent to be applied for is therefore in perpetuity.

3.15.4 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 EA.