APPENDIX V2-3.13: LANDSCAPE AND VISUAL MITIGATION

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1. LANDSCAPE AND VISUAL MITIGATION

1.1 Introduction

1.1.1 This Appendix provides details of mitigation measures for the Proposed Development which are intended to minimise or offset landscape and visual effects.

1.1.2 Mitigation for landscape and visual effects involves the following different methods which are discussed separately in this Appendix:

- Embedded Mitigation: Mitigation through design whereby an intent to minimise landscape and visual effects has been instrumental in the development of the design for the Proposed Development;
- Implementation Mitigation: Mitigation in design, applied through the use of best practice construction and reinstatement techniques, and specially considered techniques, on-site; and
- Specific Mitigation: Mitigation proposed to offset specific landscape or visual effects.

1.1.3 It should be noted that there may be some crossover between the above methods.

1.2 Embedded Mitigation

1.2.1 Much of the mitigation for landscape and visual purposes has been embedded in the design for the Proposed Development, in the form of the route selection process, the alignment selection process, and, the selection of the proposed technology for different Sections of the route. This process is discussed in detail within **Volume 1: Chapter 4 - Routeing Process and Alternatives**. Key issues in design development, specific to the reduction of landscape and visual effects for each Section, are discussed below:

Section 0

1.2.2 The replacement of an existing wood pole OHL with a similar, though slightly more robust trident H wood pole OHL through this Section, was considered likely to lead to minimal adverse landscape and visual effects. The alignment, where possible, was kept similar to the existing alignment in order to ensure that the effects would remain similar. However, an opportunity was taken to move the Proposed Development to the east side of Beinn na Mointich, and the Dun Hallin broch, which reduces effects on the local crofting landscape around Hallin, and the role of the Dun Hallin Broch as a landmark.

Section 1

1.2.3 The replacement of a wood pole OHL by a steel lattice tower OHL through this Section leads to inevitably greater landscape and visual effects. The selected alignment follows a broadly similar alignment to the original wood pole OHL, which was considered to be the best alignment through much of the landscape. However, careful consideration was given to the alignment passing the settlement areas of Glenmore and Mugeary. This has been aligned as far from properties at Glenmore as possible, along the edge of the forest plantation, where an existing line is already present through the landscape and in the view. The alignment moves closer to properties passing Mugeary, to avoid passing along the skyline ridge, but would be set within the existing forest plantation to minimise the visual effect.

1.2.4 Consideration was also given to the use of different types of support structures through Section 1, with the use of NeSTS transmission support structures considered. However, it was concluded that the transparent form of steel lattice structures would lead to lesser landscape and visual effects overall.

1.2.5 Other than through forested areas, and in the case of existing tracks, tracks used for construction through Section 1 would be temporary, and restored after construction works were complete (see **Section 1.3**) which would help to further reduce landscape and visual effects.

Section 2

1.2.6 This Section, passing through The Cuillin Hills National Scenic Area (NSA) and around the edge of Wild Land Area (WLA) 23. Cuillin), was identified as being highly sensitive to landscape and visual effects. For this reason, the Proposed Development would comprise an underground cable (UGC) connection for an approximate 15 km stretch of this Section between Glen Varragill Forest and Luib. The cable corridor would be restored following construction, replicating as far as possible the pre-construction landcover and habitats. With the use of best practice reinstatement measures at implementation stage, as detailed in **Part 1.3** below and **Appendix V1-3.7**, the use of a UGC connection is predicted to effectively mitigate landscape and visual effects through this area.

1.2.7 Permanent access tracks have been minimised through Section 2 but are required to access the proposed Sealing End Compounds and to facilitate operational access near Luib and Strollamus. This track has been routed around the rear of Creag Strollamus from Broadford, to avoid the requirement for a track up the open hill slopes behind Strollamus.

Section 3

1.2.8 Route and alignment selection within Section 3 has been largely driven by other environmental and technical factors, although these issues to some extent also help to mitigate landscape and visual effects. Through the western part of this alignment to the rear of the wider Broadford area, the Proposed Development follows an alignment very close to that which would be removed, which is considered to lead to little additional landscape and visual effect. Tracks through this area would be temporary, other than through forested areas.

1.2.9 Around the coast, the Proposed Development passes through the Kinloch and Kyleakin Hills Special Area of Conservation (SAC) and therefore the OHL alignment has been routed above the tree-line, with the Operational Corridor reduced from 80 m to 30 m in width, thereby removing the need for native woodland loss. An alignment has been selected which generally follows natural ledges in the landform, and therefore reduces as far as possible, potential landscape effects relating to cut and fill. Tracks through this part of the Section are required to be permanent, but would be floated where possible, further reducing the need for potentially visible areas of cut and fill. Careful restoration measures would be employed through this Section, to minimise the permanent appearance of these tracks in the landscape, as discussed in **Part 1.3**.

<u>Section 3 Alternative Alignment</u>

1.2.10 The alternative alignment for Section 3 would introduce a steel lattice tower OHL to an area not previously influenced by this type of development. Greater landscape and visual effects are therefore considered inevitable. Minor modifications to the alignment have been made during the design phase for this alternative alignment to try to minimise the landscape and visual effects where possible, focussing on the prominence of towers and potential skylining, when viewed from the minor road to Kylerhea. The final alignment is considered to be the optimum to reduce as much as possible, the landscape and visual effects, when taking account of other limitations.

1.2.11 A permanent access track is required to follow this part of the alignment. Restoration measures would be employed through this Section, to minimise the permanent appearance of this track in the landscape, as discussed in **Part 1.3**.

Section 4

1.2.12 The alignment through Section 4 would follow the alignment of the existing steel lattice tower OHL to be replaced, as far as possible, in order to ensure that long term effects would be unlikely to be very noticeably greater in most instances. This has included a Section of like-for-like replacement of the alignment to the north of Kinloch Hourn within the Knoydart NSA, where the restrictive landform would lead to any practical alternative

having a much greater level of landscape and visual effect. Deviations from the existing alignment have been made in two particular locations as follows:

- Within the Knoydart NSA, the alignment follows a path to the west of Loch Coire Shubh and Loch an Doire Dhuibh, rather than an alignment following the existing OHL to the east of these lochs which was found to be not suitable due to the nature of the terrain and health and safety implications. This deviation was given careful consideration with respect to landscape and visual concerns and the Special Qualities of the NSA, and has been aligned to the west of the public road for just under 1.5 km. Although leading to the OHL crossing the road in two locations, this preserves the visual connection between the narrow, winding public road and the lochs, which are considered to form a valued scenic snapshot when travelling this route.
- At the Glenquoich crossing point, within the Moidart, Morar and Glen Shiel Special Landscape Area (SLA), the terrain allows insufficient space for the new alignment to be constructed adjacent to the existing OHL without being situated more prominently. An alignment close to the bridge on the upper side away from the Loch Cuaich was selected as most suitable, in preference to an alignment on the Loch Cuaich side of the road. This ensures that the OHL does not need to cross the road and avoids intrusion into valued views across Loch Cuaich and towards the Knoydart mountains. Although the towers would be prominent, the positioning of the crossing close to the bridge itself, a popular vantage point, means that unimpeded views would be obtained up Glenquoich, beneath the conductors.

1.2.13 Where the alignment passes through areas of ancient woodland, the Operational Corridor has been reduced from 80 m to 30 m which would help to limit loss of woodland, which is a key characteristic of the landscape within parts of this Section, in particular, around Glen More, Gleandubhlochain and Kinloch Hourn areas.

1.2.14 Due to the complex terrain and remote nature of Section 4, between Srath a' Chomair and Loch Cuaich, permanent access tracks are required. This Section, within the NSA, and WLA 18. Kinlochhourn - Knoydart – Morar is considered particularly sensitive to new access tracks and therefore careful consideration has been given to minimising the numbers of tracks required and the finish of these tracks, to reduce landscape and visual effect. This is detailed further within **Part 1.3**, below.

Section 5

1.2.15 The alignment for Section 5 follows very closely, the original alignment of the steel lattice OHL which was replaced by the 132 kV Quoich to Aberchalder wood pole OHL. Although due to be removed, these existing towers are largely still in position. The Proposed Development would therefore reverse any beneficial effects of their removal in relation to the Quoich to Aberchalder OHL, but given their similarity to the towers originally intended for removal, would be reflective of a situation recently present. Additional mitigation would be considered in areas where notable beneficial effects of the wood pole OHL would be lost including micro-siting of towers and strategic planting if possible (see **Part 1.4**).

1.2.16 Following the original alignment, also allows use of an existing wayleave, which reduces the extent of additional woodland removal that would be required. Where the Proposed Development passes through areas of ancient woodland, the Operational Corridor has also been reduced from 80 m to 30 m which would further reduce woodland loss in some areas.

1.2.17 Consideration was also given to the use of different types of support structure through Section 5, with the use of NeSTS transmission support structures considered. However, it was concluded that the transparent form of steel lattice structures would lead to lesser landscape and visual effects overall.

1.2.18 There would be a requirement for new tracks to construct towers within Section 5. As most of these tracks would be within forest wayleaves they would be permanently retained. However, additional care would be given to the construction and finish of new and upgraded sections of access track through open areas, near Poulary and Loch Lundie (see **Part 1.3** below).

Section 6

1.2.19 For technical reasons, the technology selected for Section 6 of the Proposed Development would be a UGC connection for its full length. The cable corridor would be restored following construction, replicating as far as possible the pre-construction landcover and habitats. With the use of best practice reinstatement measures at implementation stage, as detailed in **Part 1.3** below and **Appendix V1-3.7**, this is anticipated to effectively mitigate landscape and visual effects through this Section.

1.3 Implementation Stage Mitigation

1.3.1 Mitigation measures to be considered during the implementation of the Proposed Development would include the use of best practice construction and restoration techniques, with special measures being developed for the most sensitive landscapes.

1.3.2 To help with the success of these measures, monitoring and advice during construction by a Landscape Clerk of Works (LCoW) is recommended within the more sensitive designated landscape areas, including National Scenic Areas, Wild Land Areas and Special Landscape Areas.

Selection of Temporary Working areas and Compounds

1.3.3 The potential for temporary landscape and visual effects would be a consideration in the identification of sites for temporary working areas and compounds. The avoidance of locations where effects may be significant would be the first consideration in siting these areas. Temporary mitigation measures, such as mounding or fencing would be applied where avoidance was not found to be practicable.

General Reinstatement of Working Areas and Tracks

1.3.4 The reinstatement of areas disturbed during construction would be fundamental to ensuring that the Proposed Development would be successfully accommodated into the existing landscape in the longer term. Careful reinstatement of landform would be employed across working areas, cable laying corridors and temporary tracks, re-using materials excavated during the construction period to reflect the terrain within adjacent areas. Further details on these measures are included in **Appendix V1-3.7: Outline Site Restoration Plan**. Landform would be remodelled around new steel lattice towers, sealing end compounds and cut and fill tracks to ensure that these tied smoothly into their surroundings and to minimise the visual extent of these features where possible – for example, to help conceal foundations, fencing or lower level infrastructure associated with sealing end compounds, or the running surfaces of tracks from visual receptor locations or within the wider landscape.

1.3.5 Reinstatement of landform would include the creation of suitable gradients for cut and fill slopes associated with access tracks to enable the replacement of peat / soils and re-establishment of vegetation. Where the receiving terrain is not suitable to allow these gradients, the use of suitable geoengineering techniques, such as jute matting would be utilised to help establish vegetation and prevent erosion.

1.3.6 The natural regeneration of native species is the preferred method of achieving vegetation restoration, as outlined in the Outline Site Restoration Plan (see **Appendix V1-3.7**), and Peat Management Plan (PMP) (see **Appendix V2-7.3**). Where native soils or vegetation were considered insufficient to support natural re-vegetation, this would be supplemented by seeding with an agreed seed mix. Seeding would only occur within protected areas, with the agreement of NatureScot.

Special Reinstatement Measures for Tracks in Sensitive Areas

1.3.7 Through some of the most remote areas, where permanent access tracks are required for maintenance purposes, special reinstatement considerations are proposed for access tracks to minimise the effects of multiple access tracks on the sense of remoteness or of individual access tracks on scenic qualities. These measures are considered relevant to the following areas:

- Section 2, for permanent tracks within The Cuillin Hills NSA, and WLA 23;
- Section 3, around the remote coast between Gleann nam Beiste and the Kyle Rhea OHL crossing point;
- The Section 3 Alternative Alignment, between the Bealach Udal and Kylerhea Glen minor road; and
- Section 4 between Srath a' Chomair, and Loch Cuaich, through the Knoydart NSA and WLA 18.

1.3.8 Through these Sections, there are currently no tracks present or existing tracks / paths are of very low impact unlikely to allow vehicle access (other than ATV) and therefore contributing to an experience of remoteness. Access proposals through these areas comprise either new, permanent tracks or upgrading of the existing low impact paths / ATV tracks. These can be broadly defined as one of two types:

- Spine road tracks, following the alignment of the Proposed Development and providing access to multiple towers; and
- Spur accesses to single, or small numbers of towers (up to four).

1.3.9 For spine road tracks, it is proposed that these would be narrowed after completion of construction works, by the placement of excavated peat, soils or turves along the verges to a width suitable for landrover or ATV vehicle. Where cut and fill tracks are proposed, any additional materials may be used to provide strategic mounding alongside the track, to help limit its wider visual appearance. In very steep sections, for example, to the rear of Kinloch Hourn, the use of geoengineering techniques would be proposed to support the operational track, and to ensure that vegetation can be re-established to minimise its visual effects.

1.3.10 Spine road tracks would be surfaced using locally sourced stone, with a colour and tone to match existing exposed bedrock within the nearby landscape. It is anticipated that these measures would ensure that tracks would bed down over time and, by 10 years post construction, would not appear substantially more robust in character than existing similar tracks within these, or other nearby, parts of the landscape.

1.3.11 For permanently retained spur tracks within sensitive areas, it is proposed that these would be retained as 'green' tracks. This would involve the retention of the supporting structure of the track, including cut and fill and gradients suitable for vehicular access but using a number of techniques to reduce the visual perception of the running surface of the track. The following options are likely to be explored:

- Covering the running surface of tracks with a layer of top peat or soils and seeding if necessary, to leave a route navigable by ATV vehicles (most likely to be considered only for short tracks to individual towers within sensitive parts of the Knoydart NSA, such as Loch Coire Shubh);
- Placing top peat / topsoil down the centre of the track and seeding if necessary to encourage a vegetated centre line with running surface on either side to support more regular use by vehicles such as land rovers; and
- Hydro-seeding the running surface of the track with a suitable seed mix and carrier mulch to encourage light vegetation growth across the track's surface which would be able to establish further depending on the regularity and types of use the track would support.

Measures to Minimise the Landscape and Visual Effects of Above Ground Features for Underground Cables

1.3.12 Sections of UGC connection are proposed through part of Section 2 and all of Section 6. In particular within Section 2, the purpose of this is to minimise the longer term landscape and visual effects through a sensitive landscape (the Cuillin Hills NSA). For operational purposes, the cable would require jointing positions at approximate 700 m intervals along the cable alignment, comprising groups of four sub-surface chambers, which would be protected by stock proof fence, or above ground junction boxes where a high or medium risk of flooding in underground chambers is possible. Positions for these junction boxes would potentially include locations along the seaward side of the A87, alongside Loch Sligachan where they may interrupt coastal views

from the road, the moorland setting on the landward side of the road through Gleann Torra-mhichag, a location at the head of Loch Ainort, adjacent to the Moll minor road, and moorland and forest settings through Section 6.

1.3.13 In order to minimise the predicted landscape and visual effects of junction boxes and underground jointing bays, the following mitigation measures would be adopted where possible:

- Colouring of junction boxes would be carefully considered. A dark brown colour is recommended for boxes within a moorland or forest backdrop when seen from the road or paths. A dark grey colour is considered more suitable for boxes located between the A87 and Loch Sligachan;
- Soil and turves would be carefully replaced around chamber covers or junction boxes and surface areas of concrete would be avoided as far as possible, to reduce the visual footprint of these areas;
- Consideration would be given to the detailing around each group of junction boxes to reduce their visual prominence. This may include:
  - For junction boxes in moorland or forest settings: strategic landform and placement of turves or boulders as appropriate to disguise where possible, the foot of boxes or platform areas for underground chamber covers;
  - For junction boxes along loch shore areas: detailing may reflect that of the recently completed car park area at Sligachan Old Bridge, using features such as drystone walling, turf mounding or scrub planting where possible, to improve the setting of the boxes.

1.4 Specific Mitigation

1.4.1 Additional specific mitigation measures are recommended for consideration and implementation where possible where it is considered there may be potential to reduce adverse effects on individual receptors or in relation to individual features. However, the implementation of these measures would be dependent upon other external factors, including landowner agreements. These recommendations are summarised by Section, below:

Section 0

- No specific additional measures proposed.

Section 1

- Route R1-1 (A87): Although no significant effects are anticipated for receptors using this route, minor landform creation is proposed around the proposed sealing end compound at Glen Varragill to help minimise the potential for visibility of the compound area.

Section 2

- Receptor Location B2-8 (Luib): Although longer term significant effects are not anticipated for receptors in this settlement area, minor landform and planting of native woodland scrub species are proposed to mitigate the visual effects of the nearby sealing end compound and terminal tower.
- Receptor Locations B2-9 (Dunan) and B2-10 (Strollamus): Although longer term significant effects are not anticipate for receptors in these settlements, strategic planting of native species or woodland scrub building on existing scrub adjacent to the A87 would help to reduce and soften views of towers obtained from these areas with some benefits also occurring for users of the A87 in this area.

Section 3

- No specific additional measures proposed.

Section 3 Alternative Alignment

- Receptor Location B3B-5 (Kyle Rhea), Route R3B-16 (Kyle Rhea Otter Hide footpath) and Outdoor Location O3B-2 (Otter Hide Car Park and Picnic Area): Targeted native woodland planting to mitigate visual effects of towers at close proximity; and

- Route R3B-6 (Glen Arrroch / Kyle Rhea Minor Road) and Outdoor Location O3B-1 (Bealach Udal): Potential improvements to the Bealach Udal viewpoint location to help offset negative effects to visual receptors. This could involve improvements to parking, improvements to the viewing experience such as interpretation, and strategic planting or placement of rocks to soften views of individual towers from this location.

Section 4

- Local Character Zones (LCZ) 4-2 (Druim Iosal to Kinloch Hourn) and 4-3 (Kinloch Hourn to Loch Cuaich): Where the Proposed Development would pass through areas of ancient woodland, it is recommended that a detailed survey of the woodland should be undertaken prior to tree works taking place and the potential for crown reduction should be prioritised before felling, wherever possible.

Section 5

- Receptor Location B5-12 (Leacan Dubha and Munerigie): strategic native woodland / scrub planting and micro-siting of towers where possible to help soften longer term appearance of towers; and
- Route R5-2 (Loch Garry / Loch Cuaich Minor Road): Strategic planting alongside the public road on the approach to Quoich Dam, to soften the visual transition between NeSTS towers and steel lattice towers.

Section 6

- Route R6-1 (Minor road between Auchterawe and Fort Augustus): Protection and reinstatement of planting, earthworks and disturbed ground between the minor road and Fort Augustus Substation (to comply with the existing and proposed landscape design of the Fort Augustus Substation Woodland Management Plan). In particular, screening along the south-east of the road to prevent secondary effects resulting from views opening up of the existing Substation.