VOLUME 1: CHAPTER 4 - THE ROUTEING PROCESS AND ALTERNATIVES

Appendices (Volume 5 of this EIA Report)

Appendix V1-4.1: Alternative Technology Options and Design Solutions

Figures (Volume 3 of this EIA Report)

Figure V1-4.1a to g: Route Options

Figure V1-4.2a to p: Baseline Alignment and Variants

4. THE ROUTEING PROCESS AND ALTERNATIVES

4.1 Introduction

4.1.1 The need for the project and the work undertaken by SSEN Transmission to assess the strategic electricity transmission infrastructure requirements to identify the most appropriate, viable, and long term, enduring technical design solution is explained in **Volume 1: Chapter 2 – Project Need and Strategy.** To ensure consistency with the Final Needs Case that has been submitted to Ofgem, the system planning strategic option that has been recommended by SSEN Transmission to Ofgem for the Skye Reinforcement Project is referred to as the Strategic Reinforcement Option**.**

4.1.2 This Chapter describes the routeing process and consideration of alternatives that have been undertaken following identification of the preferred option (Option 4a) in the Initial Needs Case and the recommended Strategic Reinforcement Option as described in the Final Needs Case (Option 4a with two sections of underground cabling). The focus of this Chapter is to describe the routeing and alignment stages that were central to the EIA stages. These processes have enabled the consideration of reasonable alternatives, in accordance with Regulation 5(2)(d) and Schedule 4, paragraph 2 of the EIA Regulations.

4.1.3 The following stages are described in this Chapter, along with their respective outcomes:

- The approach to the routeing and alignment selection stages of the project;
- The route selection stage process and consultation responses;
- The alignment selection stage process and consultation responses;
- Design solutions considered;
- Other considerations to avoid or reduce likely significant effects; and
- The design strategy for ancillary infrastructure, including construction and operational access tracks.

4.2 Development Considerations

4.2.1 SSEN Transmission has obligations under section 9 of the 1989 Act to 'develop and maintain an efficient, co-ordinated and economical system of electricity transmission'.

4.2.2 SSEN Transmission, operating under licence held by Scottish Hydro Electric Transmission plc under the Electricity Act 1989, 'when formulating proposals to generate, transmit, distribute or supply electricity' is required, under Schedule 9 to:

- "*have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest*"; and
- "*do what* [it] *reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects*".

4.2.3 Furthermore, the requirements of the Construction (Design and Management) Regulations 2015[1] (CDM Regulations) require that the project design aims to minimise hazards and reduces risks during construction.

4.2.4 Taking account of these obligations, SSEN Transmission has considered technical, economic and environmental factors in evaluating the reasonable alternatives for the Proposed Development, with the objective of identifying a proposed alignment and associated Limit of Deviation (LOD) which is technically feasible and economically viable and which causes the least disturbance to the environment and to the people who live, work, visit and enjoy recreation within it.

[1] http://www.legislation.gov.uk/uksi/2015/51/contents/made (accessed 23/02/2022)

4.3 Design Solutions

4.3.1 **Volume 1: Chapter 2 – Project Need and Strategy** describes the different technical system design solutions and options that were considered for the purposes of delivering the Skye Reinforcement Project within the necessary timescales to meet the need for the reinforcement, as defined through the three drivers for the Skye Reinforcement Project; see Part 2.5 of Chapter 2. The particular characteristics of the design solution have to take into account compliance with the Applicant's statutory and licence obligations, and, the delivery strategy that is designed to ensure that the drivers for the project can be met.

4.3.2 Following identification of the preferred reinforcement option (Option 4a), the route and alignment selection stages of the project gave consideration to different design solutions that could mitigate likely significant environmental effects, or provide another benefit, for example rationalisation of the electricity network in a particular area. Such solutions include the use of alternative OHL technology (e.g. NeSTS), underground or subsea cables and are described in this Chapter in relation to the particular areas or geographical Sections of the project in which they have been considered. Further information is provided in **Appendix V1-4.1: Alternative Technology Options and Design Solutions**.

4.4 Approach to Route and Alignment Selection

4.4.1 Guidelines for the routeing of new high voltage OHLs have been established within the electricity supply industry. These guidelines are known as the 'Holford Rules' and have been widely used throughout the UK since the 1960s. The 'Holford Rules' set out a hierarchical approach to routeing which advocates avoiding areas of high amenity value, minimise changes in direction, take advantage of topography and minimise visual interaction with other transmission infrastructure. These principles of the Holford Rules are discussed in greater detail in paragraph 4.4.5 below.

4.4.2 SSEN Transmission has developed its own guidance, based on the principles set out in the Holford Rules, but broadening the basis for routeing decisions to reflect contemporary practice, and, to provide a framework to ensure environmental, technical and economic considerations are identified and appraised at each stage of the routeing process.

4.4.3 The approach to route and alignment selection has therefore been informed by SSEN Transmission's guidance[2]. The guidance splits the routeing stage of a project into four principal stages, as follows:

- Stage 0: Routeing Strategy Development[3];
- Stage 1: Corridor Selection;
- Stage 2: Route Selection; and
- Stage 3: Alignment Selection.

4.4.4 Each stage is an iterative process and involves an increasing level of detail and resolution, bringing cost, technical and environmental considerations together in a way which seeks to achieve the best balance at each stage. The stages that are carried out can vary depending on the type, nature of and size of a project and consultation is carried out at each stage of the process.

4.4.5 In accordance with the steps outlined in the Holford Rules[4] and SSEN Transmission guidance[2], the following principles have been taken into account during the route (where practicable) and alignment stages of the Skye Reinforcement Project:

[2] SSEN Transmission (March 2018), Procedures for Routeing Overhead Lines of 132kV and above (updated in September 2020 to include underground cables of 132 kV and above)
[3] Setting out the proposed strategy for the routeing stage of a particular project.
[4] Scottish Hydro Electric Transmission Limited (SHETL). (October 2004). *The Holford Rules: Guidelines for the Routeing of New High Voltage Overhead Transmission Lines with NGC 1992 and SHETL 2003 Notes; Revision 1.01*

- Avoid if possible major areas of highest amenity value (including those covered by national and international designations and other sensitive landscapes);
- Avoid by deviation, smaller areas of high amenity value;
- Try to avoid sharp changes of direction and reduce the number of larger angle towers required;
- Avoid skylining the route in key views and where necessary, cross ridges obliquely where a dip in the ridge provides an opportunity;
- Target the route towards open valleys and woods where the scale of poles or towers will be reduced and views broken by trees (avoid slicing through landscape types and try to keep to edges and landscape transitions);
- Consider the appearance of other lines in the landscape to avoid a dominating or confusing wirescape effect; and
- Approach urban areas through industrial zones and consider the use of undergrounding in residential and valued recreational areas.

4.5 Corridor Selection (Stage 1)

4.5.1 A Corridor had been identified for the previously named Fort Augustus to Skye Project (see Part 2.3 of **Volume 1: Chapter 2 – Project Need and Strategy**), when the proposed solution was to develop a wood pole OHL to run in addition to the existing 132 kV OHL connection. As the project evolved into the Skye Reinforcement Project (i.e. the Proposed Development), the Corridor was reviewed in tandem with the conclusions of the reinforcement strategy[5] to determine its appropriateness in delivering the specific needs of the project (see **Volume 1: Chapter 2 – Project Need and Strategy)**. This review concluded that, subject to an extension of the Corridor to Ardmore (given the Fort Augustus to Skye project terminated at Dunvegan), the Corridor continued to represent the appropriate geographical area within which the identification and appraisal of route options (Stage 2) should be carried out.

4.6 Route Selection (Stage 2)

4.6.1 The route selection stage of the project involves the identification of route options (circa 1 km wide), and an appraisal of the environmental, technical and economic constraints of these route options, prior to arriving at a preferred route for the purposes of consultation and a proposed route to take forward to the alignment selection stage (Stage 3).

4.6.2 Given the previous work that had been undertaken at route selection stage as part of the Fort Augustus to Skye Project[6], the selection of routes for the Skye Reinforcement Project began by reviewing those routes previously identified and appraised to determine whether they remained relevant for further analysis as part of the revised project requirements, or whether modifications to these route options or new route options were required. Following desk-based and site visit review of the route options, it was concluded that the previously identified route options were still applicable and no modification was deemed required. Additional route options were however developed for Section 0 of the project north of Dunvegan to Ardmore, given the Fort Augustus to Skye project terminated at Dunvegan.

Route Identification and Appraisal

4.6.3 Route options were identified for each section of the project following desk-based review and site walkovers, giving due consideration to the principles set out in the Holford Rules and SSEN Transmission guidance, as described in Part 4.4 of this Chapter.

[5] Skye Overhead Line Reinforcement Strategy, Document Reference T2BP-STR-0006 (SSEN Transmission). Available via https://www.ssen-transmission.co.uk/media/3847/skye-overhead-line-reinforcement-strategy.pdf

[6] Detailed within the Fort Augustus to Skye Project Consultation Document, SSEN Transmission (September 2016)

4.6.4 Indicative route options were identified at 1 km widths to allow for subsequent identification of alignments during the next stage of the process (Stage 3).

4.6.5 Appraisal of route options involved systematic consideration against the topic areas noted below:

- Natural Heritage
  - Designations;
  - Protected Species;
  - Habitats;
  - Ornithology; and
  - Hydrology / Geology.
- Cultural Heritage:
  - Designations; and
  - Cultural Heritage Assets.
- Proximity to Dwellings:
  - Residential Properties
- Landscape and Visual:
  - Designations;
  - Landscape Character; and
  - Visual Amenity.
- Land Use:
  - Agriculture;
  - Forestry; and
  - Recreation.
- Planning
  - Policy; and
  - Proposals
- Technical
  - Environmental Design;
  - Topography;
  - Ground Conditions;
  - Access;
  - Existing Infrastructure;
  - Existing Network;
  - Operational.
- Cost
  - Capital.

4.6.6 A Red-Amber-Green (RAG) rating was applied to each topic area for each route option, indicating potential constraint to development.

4.7 Summary of Route Option Appraisal (Stage 2)

4.7.1 The following part of this Chapter summarises the route options appraised during stage 2 of the routeing process. For each geographical Section, a summary of the route options identified and appraised is set out, together with the main environmental and technical constraints identified during the appraisal. Confirmation of

the preferred route (i.e. taken to consultation), a summary of consultation responses, and confirmation of the proposed route (i.e. following consultation, and taken to Stage 3: Alignment Selection) is provided. Further detail on the reporting of the route option stage, including consultation, is provided in Part 4.8 of this Chapter.

Section 0 – Ardmore to Edinbane

4.7.2 Within Section 0, the following route options were identified and appraised during the route selection process (see also **Figure V1-4.1a: Route Options (Section 0)**):

Ardmore to Dunvegan

- Route Option 0A (Existing Route) - Broadly following the route of the existing wood pole OHL, from Ardmore Substation to Dunvegan Substation. The route crosses to the north / eastern side of the B886 road and passes to the rear of crofts and properties on the Waternish peninsula, then following the A850 and a minor road to reach Dunvegan Substation;
- Route Option 0B (Garradh Mòr) - Initially following the route of the existing wood pole OHL, from Ardmore crossing to the north east side of the B886 road and passing to the rear of crofts and properties at Upper Halstra. The route then crosses the peninsula towards Gillen and follows an elevated route within and along the edge of forestry, to the west of the small hills which form the spine of the Waternish peninsula. The route then crosses the A850 and open moorland to reach Dunvegan Substation; and
- Route Option 0C (Greshornish) – Following a similar route to Route OB to Gillen. It then follows a route around the north-western coastal edge of the Waternish peninsula to Greshornish, following the minor Greshornish road back to the A850. The route then crosses the A850 and open moorland to reach Dunvegan Substation.

Dunvegan to Edinbane

- Route Option 0D (Existing Route) – Following the route of the existing wood pole OHL from Edinbane Substation in a south easterly direction over open moorland toward St John's Chapel before heading east across moorland and through woodland towards Edinbane Substation; and
- Route Option 0E (Ben Aketil) – Following an easterly / south easterly route from Dunvegan Substation across open moorland, crossing Gleann Eoghainn before passing to the south of Ben Aketil and through woodland towards Edinbane Substation.

Summary of Route Options Appraisal

4.7.3 Between Ardmore and Dunvegan, Route Options 0A to 0C pass through the North West Skye Special Landscape Area (SLA) over varying lengths, whilst Route Option 0C also passes through the Greshornish SLA. All routes share the same 1 km (approximately) route from Ardmore Substation. Here, there are potential constraints associated with Trumpan Church, a Scheduled Monument (SM), and proximity to properties within this area. There are also numerous recorded cultural heritage assets within the area. There are no nature conservation designations crossed by any of these routes. Route Option 0C has the greatest potential to be constrained of the three routes from a landscape and visual perspective as it crosses through both the North West Skye and Greshornish SLA's, and areas that are considered sensitive to development of the type proposed, particularly given lack of access.

4.7.4 Between Dunvegan and Edinbane, neither of the routes (Route Options 0D and 0E) pass through sites designated for landscape interests and both routes would go through areas of landscape character broadly accommodating of this type of development. Neither route passes through any nature conservation sites designated as being of international importance. Both routes would pass through, or within the vicinity of, the An Cleireach Site of Special Scientific Interest (SSSI). Although this is a nationally important designation, it is a geological SSSI featuring Tertiary igneous intrusions and it is anticipated that impacts can be managed through

micrositing and appropriate construction access. The most notable difference between the two routes is the proximity to settlement and existing infrastructure, with Route Option 0A being the closer of the two routes to such features.

4.7.5 From an engineering and economic perspective, the proximity of Route Options 0A (Ardmore to Dunvegan) and 0D (Dunvegan to Edinbane) to the existing OHL and road network offers better access opportunities during construction and maintenance of the OHL and is more economical as a result.

Preferred Route

4.7.6 The preferred route option put forward for this Section was Route Option 0A and 0D combined as they provide better access and are least constrained from an environmental perspective. These routes would broadly follow the same route as the existing 132 kV wood pole OHL, which would be removed following construction of the new OHL.

Consultation Responses

4.7.7 During consultations at route option stage (see Part 4.8 of this Chapter), responses received from statutory and non-statutory consultees provided general support for the preferred route identified within Section 0. Environmental sensitivities were highlighted in consultation responses, particularly in relation to designated cultural heritage sites and assets, and ornithological constraints. Comments from the local community ranged from queries on capacity and future generation, the alignment of the OHL and design solution, and community consultation.

Proposed Route

4.7.8 Following review of consultation responses, SSEN Transmission determined that, subject to further consideration of environmental constraints and sensitivities at the alignment selection stage, the preferred route in Section 0 (Route Option 0A / 0D) is taken forward as the proposed route.

Section 1 – Edinbane to North of Sligachan[7]

4.7.9 Within Section 1, the following route options were identified and appraised during the route selection process (see also **Figure V1-4.1b: Route Options (Section 1)**):

- Route Option 1A (Existing) – Following the route of the existing wood pole OHL through Glenmore with options to the west and east of Glen Varragill Forest;
- Route Option 1B (A863 Bracadale) – Following the A863, but moving inland around Bracadale to avoid the populated areas and coastal views at this point before returning to run parallel to the coast road; and
- Route Option 1C (Tungadal) – Crosses Glen Bracadale and passes to the west of Glen Tungadal Forest. It crosses higher ground than Route Option 1B, skirts the south face of Roineval and then heads east towards the A87. The route then re-joins Route Option 1A.

Summary of Route Options Appraisal

4.7.10 Whilst Route Option 1B offered better access opportunities during construction given the proximity to the A863, thereby reducing the technical challenges and increased cost of accessing the more remote areas of Route Options 1A and 1C, the route options appraisal noted a number of environmental constraints along this route.

[7] Section 1 was referred to in the Consultation Document: Route Options, SSEN Transmission (March, 2020) as 'Edinbane to Sligachan'. This has since been amended to more accurately reflect the transition between the Proposed Development from Section 1 to Section 2 of the project.

4.7.11 Route Option 1B could result in potential impacts on the North West Skye SLA, and may be visible from areas such as Bracadale and Drynoch. Furthermore, Route Option 1B would introduce a new feature through approximately 8 km of the Cuillins Special Protection Area (SPA), whilst also passing through the Sligachan Peatlands Special Area of Conservation (SAC) / SSSI with the potential for damage to designated habitats including blanket bog. Route Option 1B also had the potential for effects on the setting of a cluster of SM's and Listed Buildings (LB) around Bracadale Bay, in particular the iconic broch of Dun Beag.

4.7.12 It was considered that Route Option 1A would have fewer potential impacts on the Cuillins SPA / SSSI by passing through a shorter section of the designated site, whilst also broadly following the route of the existing OHL, thereby presenting a lower risk to golden eagles, albeit other ornithological sensitivities existi throughout the route. Similarly, direct and indirect impacts on the Sligachan Peatlands SAC / SSSI should be avoided if possible. Route Option 1A could however cross areas of deeper peat and sensitive habitats, whilst there was potential for visual effects from properties at Glenmore and Mugeary, depending on the alignment chosen.

4.7.13 Route Option 1C would introduce a new feature through the Cullins SPA / SSSI in an area of higher altitude that is known to be used by golden eagle and other protected bird species. This higher ground could result in the OHL being skylined with potential for landscape and visual impacts from the west.

Preferred Route

4.7.14 The preferred route for Section 1 was determined to be Route Option 1A due to the interaction and potential for adverse effect on European designated sites for Route Options 1B and 1C, as well as landscape and visual sensitivities.

Consultation Responses

4.7.15 During consultations at route option stage (see Part 4.8 of this Chapter), support for the preferred route in Section 1 was provided by NatureScot and Scottish Forestry. Potential constraints and environmental sensitivities were highlighted by statutory and non-statutory consultees, particularly in relation to designated cultural heritage sites and assets, ornithological constraints, Class 1 peatlands and the potential for landscape and visual effects. Comments received from the local community in relation to this Section focused on capacity and the transition from wood pole to steel structure, although no specific comments on route options were received.

Proposed Route

4.7.16 Following review of consultation responses, SSEN Transmission determined that, subject to further consideration of environmental constraints and sensitivities at the alignment selection stage, the preferred route in Section 1 (Route Option 1A) was taken forward as the proposed route.

Section 2 – North of Sligachan to Broadford[7]

4.7.17 Within Section 2, the following route options were identified and appraised during the route selection process (see also **Figure V1-4.1c: Route Options (Section 2)**):

- Route Option 2A (Existing) – following the route of the existing 132 kV wood pole OHL, skirting the edge of the Cuillin Hills, broadly following the A87 and coastline; and
- Route Option 2B (The Braes) - initially crossing moorland to the north of Ben Lee before heading south to Peinachorrain and involving an overhead crossing of Loch Sligachan before re-joining Route Option 2A.

Summary of Route Options Appraisal

4.7.18 The majority of Route Option 2A follows the A87 and follows the edge of the Cuillin Hills National Scenic Area (NSA) and Cuillins Wild Land Area (WLA). This is a sensitive and dramatic landscape, although views of the existing wood pole 132 kV OHL and lower voltage distribution infrastructure are common when travelling through this landscape along the A87. However, the larger replacement steel structures would make a new OHL a more prominent feature which could reduce the perceived wild land values of the WLA and could adversely affect the special qualities of the NSA. The route would also pass through the Cuillins SPA for approximately 18.5 km, for which golden eagle is a qualifying feature. However, it is considered that a new OHL within this route and replacing the existing OHL would present a low potential risk to golden eagles as they will already be less likely to utilise this area, due to their avoidance of areas of human disturbance and preference for ridge lines and higher altitudinal levels of terrain features.

4.7.19 Route Option 2B would also result in the potential for adverse landscape and visual impacts, particularly at the new OHL crossing of Loch Sligachan at Peinachorrain and Sconser, because of the potential to cause intrusion and a barrier to the coastal views toward Raasay, and within other valued coastal and mountain views. In isolation, the route would avoid the Cuillins SPA, but as it would re-join Route Option 2A at Sconser, impacts on the SPA would be as per Route Option 2A, albeit for a shorter length. The route over higher ground to the north of Loch Sligachan, and the crossing of the loch, could present a potential constraint for a number of protected bird species including red-throated diver, white-tailed eagle and other water birds.

4.7.20 On environmental grounds, both options present and share a number of similar constraints, particularly from a landscape and visual perspective. However, from a technical and economic perspective the appraisal firmly suggested a preference for Route Option 2A given the proximity to the existing OHL and road network offering better access opportunities during construction and maintenance of the OHL and is more economical as a result.

Preferred Route

4.7.21 Route Option 2A was identified as the preferred option for Section 2, albeit that it was acknowledged at route option stage that further detailed environmental and engineering survey work would be required to find an acceptable alignment and design solution through this sensitive landscape and environment, which could result in a review of the preferred route option.

Consultation Responses

4.7.22 Comments received from statutory and non-statutory consultees during route option consultations (see Part 4.8 of this Chapter) highlighted some of the sensitivities of this section. Qualified support for the preferred route was provided by Scottish Forestry, John Muir Trust and RSPB, albeit the landscape, visual and ornithological sensitivities and potential for significant effects was highlighted. In contrast, NatureScot cautioned that they may object to Route Option 2A due to potential impacts on the Cuillin Hills NSA and that further consideration to Route Option 2B should be given.

4.7.23 The comments received from local residents and a community trust in this section focussed on the landscape and visual sensitivities of this area, and capacity for local renewable generation.

Proposed Route

4.7.24 Given the sensitive nature of Section 2, it was recognised at route options stage (Stage 2) that further environmental and engineering survey work would need to be undertaken at the alignment stage (Stage 3) before a proposed route could be identified. As such, no decision on a proposed route through this Section was made at the conclusion of the routeing stage.

Section 3 – Broadford to Kyle Rhea

4.7.25 Within Section 3, the following route options were identified and appraised during the route selection process (see also **Figure V1-4.1d: Route Options (Section 3)**):

- Route Option 3A - follows the route of the existing steel lattice overhead line, traversing the headland at Loch Alsh to the east of Kyleakin and through the Kinloch and Kyleakin Hills SAC / SSSI;
- Route Option 3B - initially follows Route Option 3A and the existing steel lattice overhead line before then following the minor road through Glen Arroch to the settlement at Kylerhea, also passing through the Kinloch and Kyleakin Hills SAC / SSSI;
- Route Option 3C - a variation to Route Option 3A which largely follows the A87 from Breakish to Kyleakin before re-joining Route Option 3A to the south of Kyleakin;
- Route Option 3D - This option would comprise an alternative route to the eastern extent of Route Option 3A which bisects the Kinloch and Kyleakin Hills SAC and SSSI, from a point close to the existing steel lattice OHL at Kyleakin to the crossing point of Kyle Rhea, passing through Bealach nam Mulachag; and
- Route Option 3E - This option would comprise an alternative route to the eastern extent of Route Option 3B which would avoid the settled area around Kylerhea by rising over the shoulder of Beinn Bhuidhe via Coire na Coinnich and descending via Coire Buidhe to the existing crossing point at Kyle Rhea.

Summary of Route Options Appraisal

4.7.26 Route Options 3A, 3B, 3D and 3E require to cross the Kinloch and Kyleakin Hills SAC / SSSI to varying degrees. Route Option 3A would potentially pass through both woodland and open ground habitats and impact upon qualifying features of the SAC / SSSI, particularly given existing access limitations. Route Option 3A could also result in impacts on landscape character. Route Option 3B would generally avoid the woodland qualifying habitat of the SAC but would still cross other qualifying habitats and could also result in potential likely significant landscape and visual impacts to and from Glen Arroch. Route Option 3C provides an alternative to the western extent of Route Option 3A and would still require to pass through the SAC / SSSI to connect with the existing crossing towers at Kyle Rhea.

4.7.27 Route Options 3D and 3E would bisect the SAC / SSSI through an area without any infrastructure or access at present. These options could result in impacts on habitats (including qualifying features of the SAC / SSSI) and landscape character, as well as breeding golden eagles. All options have the potential to cross areas of deeper peat and peatland habitats.

4.7.28 From a technical perspective, Route Options 3A (eastern extent), 3D and 3E present technical challenges due to the lack of existing access opportunities and areas of steep slope and ravines. In contrast, the presence of the minor road through Glen Arroch provides the potential for better access opportunities for Route Option 3B.

4.7.29 Opportunities to avoid the SAC / SSSI are discussed further in relation to the route options stage of the project in paragraphs 4.7.33 to 4.7.40 (Section 4) which describes how options are restricted to crossing the Skye Bridge and following the north coast of Loch Alsh before passing through Glen Shiel. This could be achieved via a connection with Route Option 3A (western extent) or 3C.

Preferred Route

4.7.30 On balance, due to a combination of the technical and environmental challenges associated with Route Option 3A (eastern extent), 3D and 3E and lack of any added benefits resulting from Route Option 3C as it would still require routeing through the SAC / SSSI assuming a connection with other route options within Section 3, Route Option 3A (western extent) and 3B were initially put forward as the preferred option in this section. It was

acknowledged however that further detailed environmental and engineering survey work would be required to find an acceptable alignment and design solution through this sensitive landscape and environment, which could result in a review of the preferred route option.

Consultation Responses

4.7.31 During consultations at route option stage (see Part 4.8 of this Chapter), there were contrasting views expressed by statutory and non-statutory consultees in this Section. NatureScot stated that the preferred route following Glen Arroch (Route Option 3B) is likely to be the '*least worst option'* in the context of the SAC / SSSI, whilst RSPB stated a strong preference for Route Option 3A following the existing OHL. This Section generated a considerable number of responses from the local community and community representatives. The vast majority of views expressed were of concern against the preferred route through Glen Arroch and Kylerhea (Route Option 3B), with many requesting this was reviewed and the existing OHL route (Route Option 3A) be considered again.

Proposed Route

4.7.32 As a result of the sensitive nature of Section 3, it was recognised that further environmental and engineering survey work would be required to find an acceptable alignment and/or design solution through this Section, which may result in a review of the preferred route. As such, no decision on a proposed route through this Section was made at the conclusion of the routeing stage.

Section 4 – Kyle Rhea to Loch Cuaich / Loch Cluanie

4.7.33 Within Section 4, the following route options were identified and appraised during the route selection process (see also **Figure V1-4.1e: Route Options (Section 4)**):

- Route Option 4A – following the route of the existing steel lattice OHL from Kyle Rhea to Quoich Dam, via Kinloch Hourn;
- Route Option 4B – following a route through Glen More towards Shiel Bridge and the A87 through Glen Shiel; and
- Route Option 4C – crossing the Skye Bridge and following the north coast of Loch Alsh before joining Route Option 4B at Shiel Bridge.

Summary of Route Options Appraisal

4.7.34 Route Option 4A, following the route of the existing OHL, passes through a very remote, rugged landscape with steep complex topography and high scenic qualities. This is reflected in large parts of this area being designated for landscape, namely Knoydart NSA, Kinlochhourn, Knoydart and Morar WLA, and Moidart, Morar and Glen Shiel SLA. There is limited vehicular access along this route between Balvraid and Kinlochhourn. Habitats along the route predominantly comprise heather moorland, peatlands, grassland on the lower areas, and areas of mixed and broadleaved woodland. These woodlands comprise native woodland, predominantly classified as upland birchwood, and ancient woodland with some areas noted on the Ancient Woodland Inventory (AWI).

4.7.35 Route Option 4B would be routed through Glen More and Glen Shiel. The area of greatest constraint would be Glen Shiel, which contains the A87 and is the main tourist route to Skye with high visitor numbers each year. Glen Shiel is recognised as an important landscape through landscape designations such as Kintail NSA and Moidart, Morar and Glen Shiel SLA, as well as running between two Wild Land Areas; Central Highlands WLA and Kinlochhourn – Knoydart – Morar WLA. There is also potential for direct and indirect impacts on the Glen Shiel battlefield site and SM. The historic importance of the battlefield site is also noted to contribute to the special qualities of the NSA.

4.7.36 Route Option 4C would pass through the Kintail NSA, from Dornie to Shiel Bridge (extending beyond to the Glen Shiel Battlefield as part of Route Option 4B). The route would therefore have the potential to affect some of the Special Qualities of the NSA. There is potential for an OHL following this route to be locally prominent and distracting in some areas, particularly where space is limited and steep slopes descend to the loch shore. There would be views from receptors in buildings along the route, particularly at Kyleakin, Kyle of Lochalsh, Balmacara, Reraig, Auchtertyre, Ardelve, Dornie, Inverinate, Morvich, Allt a Cruinn and Shiel Bridge, as well as some sections of the A87 and potentially from popular tourist destinations of cultural heritage significance such as Eilean Donan Castle and St Dubhthach's Church and Burial Ground, as well as walking routes.

4.7.37 Steep slopes and terrain would also present technical challenges, particularly between Dornie and Shiel Bridge. This extreme terrain could result in the only viable route being close to the shore of Loch Alsh and Loch Duich, on the northern side of the A87. These areas comprise native and ancient woodland. Landscape and cultural heritage issues in relation to Route Option 4B through Glen Shiel would remain if this route were taken forward given the absence of any other viable alternative.

Preferred Route

4.7.38 Section 4 comprises a particularly challenging Section from both an engineering and environmental perspective. The preferred route in Section 4 was Route Option 4A, following the existing OHL. Whilst it was acknowledged that this route comprises technical challenges and environmental sensitivities, it was determined that the environmental and engineering constraints associated with Route Options 4B and 4C, in particular the steep slopes and terrain, the presence of the A87 tourist route, the landscape and visual sensitivities of the Kintail NSA and highly valued and travelled Glen Shiel, potential effects on native and ancient woodland, and the cultural heritage sensitivities (e.g. at Eilean Donan Castle and Glen Shiel battleground), were such that these were not feasible alternatives and therefore Route Option 4A was put forward as the preferred route in this section.

Consultation Responses

4.7.39 During consultations at route option stage (see Part 4.8 of this Chapter) there was general support for the preferred route put forward by statutory and non-statutory consultees, albeit consultees advised caution given the sensitive landscape the OHL would be routed through, and NatureScot advised that they may object, subject to a fuller understanding of impacts. Comments received from the local community in relation to this section focused on consultation, landslip risk, alignment and design solutions, and construction related queries.

Proposed Route

4.7.40 Following review of consultation responses, SSEN Transmission determined that, subject to further consideration of environmental constraints and sensitivities at the alignment selection stage, the preferred route in Section 4 (Route Option 4A) was taken forward as the proposed route.

Section 5 – Loch Cuaich / Loch Cluanie to Invergarry / Glen Moriston

4.7.41 Within Section 5, the following route options were identified and appraised during the route selection process (see also **Figure V1-4.1f: Route Options (Section 5)**):

- Route Option 5A - follows the route of the existing steel lattice OHL east from Quoich Dam to Invergarry;
- Route Option 5B – is largely routed through forestry plantation in Glen Garry, to the south of Loch Garry;
- Route Option 5C - follows a route along Loch Cluanie and Glen Moriston;
- Route Option 5D - provides a connection between the Glen Shiel and Glen Garry route options;

- Route Option 5E - provides a connection between the Glen Moriston and Glen Garry route options, following the shore of Loch Loyne; and
- Route Option 5F - crosses the A87 below Mullach Coire Ardachaidh and hugs the northern edges of the forestry plantations which border Glen Garry, before re-joining the existing OHL route.

Summary of Route Options Appraisal

4.7.42 All routes through this Section are within the vicinity of the West Inverness-shire Lochs SPA / SSSI and surveys have been carried out to inform the assessment of potential impacts on the qualifying species of this SPA. In this respect, it is considered that following the existing steel lattice OHL would avoid any 'novel' impacts on SPA species, in contrast to routes in areas where there is currently no electricity infrastructure. From a landscape and visual perspective, Route Option 5A, following the existing OHL, is preferred as it follows a transition in landscape character between broad forested strath and rocky moorland, which is broadly accommodating of this type of development, and follows an existing wayleave which is generally well-placed.

4.7.43 From a technical perspective, Route Options 5A, 5B and 5C have good existing access opportunities, with varying degrees of upgrade requirements to the local road network or to existing forest tracks. Route Options 5D and 5E would require new access solutions. Route Option 5B would result in the greatest extent of forestry removal.

Preferred Route

4.7.44 The preferred route for Section 5 was determined to be Route Option 5A following the existing OHL.

Consultation Responses

4.7.45 Responses received from statutory and non-statutory consultees during the routeing stage of the project in relation to this Section provided general support for the preferred route identified, albeit environmental sensitivities are highlighted, particularly in relation to ornithological designations and constraints related to migrating protected bird species. Comments received from the local community focused on consultation, landslip risk, alignment and design solutions (in particular proximity to dwellings), and construction related queries, although no specific comments on route options were received.

Proposed Route

4.7.46 Following review of consultation responses (see Part 4.8 of this Chapter), SSEN Transmission determined that, subject to further consideration of environmental constraints and sensitivities at the alignment selection stage, the preferred route in this Section (Route Option 5A) was taken forward as the proposed route.

Section 6 – Invergarry / Glen Moriston to Fort Augustus

4.7.47 Within Section 6, the following route options were identified and appraised during the route selection process (see also **Figure V1-4.1g: Route Options (Section 6)**):

- Route Option 6A - follows the route of the existing steel lattice OHL from Invergarry to Fort Augustus Substation, through Auchterawe;
- Route 6B - from Glen Moriston, this route follows the Beauly – Denny wayleave corridor to Fort Augustus Substation;
- Route Option 6C - follows the route of the Fort Augustus – Skye Tee wood pole OHL which forms an alternative to Route Option 6A from the western extent of Inchnacardoch Forest to Fort Augustus Substation; and

- Route Option 6D - forms an alternative to Route Option 6A from the western extent of Inchnacardoch Forest to Fort Augustus Substation, crossing the Caledonian Canal to avoid the Auchterawe area.

Summary of Route Options Appraisal

4.7.48 Route Option 6A has the potential for constraint with respect to visual amenity and landscape character principally in the Auchterawe area. However, when the western section of Route Option 6A was combined with Route Option 6C, which avoids Auchterawe (referred to as Route 6A / 6C) these effects would be reduced, although the potential for cumulative effects would require further consideration. Route Option 6A does border the West Inverness-shire Lochs SPA. Previous survey work has not identified potential for risk to qualifying species of the SPA / SSSI in terms of flight activity to the east of Loch Lundie, although disturbance during construction would need to be considered. Route Options 6C and 6D would both require the southern extent of Route Option 6A. Route Option 6D, crosses the Caledonian Canal and would potentially result in impacts to this Scheduled Monument, and views and recreational enjoyment of this area. An alternative would be to use the Beauly – Denny wayleave corridor from Glen Moriston (Route Option 4B), but there is potential for cumulative impacts in widening this wayleave corridor further, and an increase in wirescape effects at Glen Moriston and Auchterawe.

4.7.49 From a technical perspective, most options present good access opportunities, whilst all would require some removal of forestry to accommodate a new or widened wayleave.

Preferred Route

4.7.50 On balance, it was considered that the western section of Route Option 6A combined with Route Option 6C was preferred though this Section.

Consultation Responses

4.7.51 During consultations at route option stage (see Part 4.8 of this Chapter), responses received from statutory and non-statutory consultees in relation to this Section provided general support for the preferred route identified, albeit environmental sensitivities are highlighted, particularly in relation to wirescape impacts at Auchterawe, ornithological designations and constraints, cultural heritage sites and forestry. The preferred route was also supported in this Section by the local community, albeit comments received from local residents focussed on the connection into Fort Augustus Substation, with a preference for this to be undergrounded.

Proposed Route

4.7.52 Following review of consultation responses, SSEN Transmission determined that, subject to further consideration of environmental constraints and sensitivities at the alignment selection stage, the preferred route in this Section (Route Option 6A / 6C) was taken forward as the proposed route.

4.8 Reporting of Route Option Stage and Consultation

4.8.1 The appraisal of route options was set out in greater detail in the Consultation Document[8], published in March 2020. The Consultation Document provided a summary of project need, the route option process that had been undertaken and a description of the route options appraised. The Consultation Document sought comments from stakeholders and members of the public on the route option studies undertaken, and the rationale for, and approach to, the selection of the preferred route.

[8] Skye Reinforcement Project: Consultation Document: Route Options (March 2020), produced by SSEN Transmission

4.8.2 It had been intended to hold face to face consultation events at several locations along the route following publication of the Consultation Document in March 2020. However, as a result of the Covid 19 pandemic these events had to be cancelled.

4.8.3 To continue engagement on the Skye Reinforcement Project, SSEN Transmission developed an online consultation tool and hosted virtual consultation events, to enable the local community and stakeholders to experience the full exhibition from home on a computer, tablet or mobile device.

4.8.4 The virtual consultation events took place via the project website https://www.ssen-transmission.co.uk/projects/skye-reinforcement/ at the following times:

- 9 June 2020; 14:00 – 16:00;
- 10 June 2020; 10.00 – 12.00; and
- 11 June 2020; 18:00 – 20:00.

4.8.5 Comments received from stakeholders in response to the Consultation Document (March 2020)[8], or following virtual consultation events, were documented in the Report on Consultation, published in November 2020[9].

4.8.6 The Report on Consultation also confirmed that the preferred route in Sections 0, 1, 4, 5 and 6 would be taken forward as the proposed route for the consideration of alignment options at Stage 3 of the route and alignment selection process. In Section 2 (North Sligachan to Broadford) and Section 3 (Broadford to Kyle Rhea), the Report on Consultation confirmed that given the consultation responses received and the sensitivities and challenges present within these Sections, further engineering and environmental review of the options available was required prior to identifying a proposed route, preferred alignment and design solution. This work would continue during Stage 3: Alignment Selection (as discussed in Parts 4.9 and 4.10 of this Chapter).

4.9 Alignment Selection (Stage 3)

4.9.1 The alignment selection stage of the project sought to determine an alignment (subject to indicative Limits of Deviation subject to further review during the EIA stage) within the proposed route identified during the route options stage. This also typically involved identifying the location of terminal and angle support structures, sealing end compounds for underground cables, and the definition of an access strategy. Within Sections 2 and 3 of the project, further consideration of route options was undertaken in parallel with alignment studies.

4.9.2 SSEN Transmission engaged an experienced OHL construction contractor to provide specialist technical input into the alignment stage to identify and explore the advantages, disadvantages and constructability of OHL alignment options and design solutions.

4.9.3 Subsequently, a ‘Baseline Alignment’ (overhead) was developed by the OHL contractor on the basis of it being the most technically feasible and economically viable alignment, giving due consideration to a range of technical and cost criteria over the construction and operation phases of a new OHL.

4.9.4 Alternative OHL alignment options and design solutions (referred to as ‘variants’) were also considered by the OHL contractor and project environment and engineering teams as part of the iterative alignment selection process.

4.9.5 In considering the potential environmental constraints of the Baseline Alignment and alternative variants and design solutions, the following tasks were undertaken during the alignment selection stage:

[9] Skye Reinforcement Project: Report on Consultation (November 2020), produced by SSEN Transmission

- Desk-based review and targeted site survey by project landscape architects, ecologists, ornithologists, archaeologists, geologists and hydrologists to review alignment options and provide advice on variants or micrositing opportunities for positioning of towers and indicative construction access;
- Targeted Phase 1 / National Vegetation Classification (NVC) habitat surveys and protected species surveys to supplement existing data;
- Review of ornithological survey data and records for the area, including requests for data held by RSPB, and targeted bird surveys to supplement existing survey data;
- Review of comments received from stakeholders during the route options stage;
- Workshops with SSEN Transmission, the OHL contractor and environmental consultants to discuss alignment options and variants, prior to the identification of a preferred alignment and design solution;
- Site reconnaissance visits by the SSEN Transmission engineering team and environmental consultants to review alignment options; and
- Workshops with statutory consultees to present the preferred alignment and design solution, and seek preliminary feedback, prior to more formal consultation (see Part 4.10 of this Chapter).

4.10 Summary of Alignment Selection Appraisal (Stage 3)

4.10.1 The following Part of this Chapter summarises the alignment options and design solutions appraised during the alignment selection stage of the routeing process. For each Section, a description of the Baseline Alignment[10] and Variants[11] considered is provided, together with the main environmental and technical constraints. Confirmation of the preferred alignment and design solution (i.e. taken to consultation), a summary of consultation responses, and confirmation of the proposed alignment (i.e. following consultation, and taken to the EIA stage) is provided. Further detail on the reporting of the alignment selection stage, including consultation, is provided in Part 4.11 of this Chapter.

Section 0 – Ardmore to Edinbane

Proposed Development Solution

4.10.2 Within this Section, the reinforcement strategy[5] (see **Volume 1: Chapter 2 – Project Need and Strategy**) concluded that the existing 132 kV wood pole OHL should be replaced with a new single circuit 132 kV wood pole (H pole) OHL.

Environmental Constraints

4.10.3 The key environmental constraints in this Section with respect to the consideration of alignment options and design solutions include:

- Minimising impacts on the An Cleireach SSSI, a geological SSSI featuring Tertiary igneous intrusions;
- Minimising potential significant impacts on the North West Skye SLA, landscape character and visual receptors such as properties, routes and tourist developments within the Waternish peninsula;
- Minimising potential impacts on sensitive habitats (including groundwater dependent terrestrial ecosystems), the water environment and areas of deep peat where practicable;
- Minimising potential impacts on European Protected Species such as otter, and protected bird species such as hen harrier, corncrake and white tailed eagle;
- Minimising potential impacts on cultural heritage features and designated sites, particularly Trumpan Church, Dun Hallin Broch and Annait Scheduled Monuments;

[10] The alignment identified by the OHL Contractor on the basis of it being the most technically feasible and economically viable alignment and design solution, giving due consideration to a range of technical and cost criteria over the construction and operation phases of a new OHL.
[11] An alternative alignment or design solution proposed to avoid localised constraints.

- Avoidance of properties throughout the Waternish peninsula and at Upper Feorlig and Balmeanach;
- Surface water drinking protection zone at Trumpan and Stein, and private water supply infrastructure;
- Minimising potential impacts on recreational routes e.g. the Stein to Gillen, and Loch Caroy to Glen Vic Askill Core Paths, as well as two other Rights of Way and Wider Path Network paths; and
- Effects on commercial forestry plantations.

Technical Considerations

4.10.4 The terrain throughout this Section largely comprises gently undulating open moorland, at an altitude of between sea level and approximately 160 m AOD. Construction of a new OHL within this section would likely be undertaken utilising tracked excavators and rock breaking equipment. Excavated turf and sub soils would be locally stored, and replaced upon completion.

4.10.5 The use of helicopters for the delivery of materials is likely to be utilised throughout this Section to minimise vehicular access to each pole location, and therefore reducing the requirement for new tracks. As a result, construction access to each pole location is likely to be achieved by all terrain vehicles and tracked excavators, maximising the use of existing tracks to facilitate access.

Baseline Alignment and Variants

4.10.6 The Baseline Alignment for Section 0 is shown on **Figures V1-4.2a to V1-4.2c**. Within this Section the Baseline Alignment is typically routed adjacent to the existing OHL (which would be removed), apart from at Trumpan, Hallin and Glen Heysdal whereby a departure from the existing OHL is proposed, in all cases, to move the OHL further away from properties.

4.10.7 A number of variants to the Baseline Alignment were considered to either mitigate a potential effect, or to provide an alternative for consideration by the project team during the selection of a preferred alignment and design solution. These variants are set out in **Table V1-4.1** and shown on **Figures V1-4.2a to V1-4.2c**.

Table V1-4.1: Variants: Section 0

Variant	Description	Variant Taken forward? (Y/N)
Variant 0-A (Trumpan)	Running adjacent to the existing OHL, heading northeast at Trumpan from Ardmore Substation and crossing between properties, before heading in a south easterly direction behind properties towards Halistra, where it would re-join the Baseline Alignment. It was considered that this could result in an increased effect on the setting of Trumpan Church SM in comparison to the Baseline Alignment, and could also bring the OHL closer to properties. As such, the Baseline Alignment is preferred.	N
Variant 0-B (Trumpan)	Considered as it could reduce the potential effect of poles skylining as the OHL crosses the minor (north) road to Trumpan. This variant is however located close to an area previously allocated for housing, and where planning permission in principle was approved for a property in 2013. The Baseline Alignment was therefore deemed preferable.	N
Variant 0-C (Hallin)	Running parallel to the existing OHL on its eastern side for approximately 3.5 km, where it would re-join the Baseline Alignment at Stein.	N

Variant	Description	Variant Taken forward? (Y/N)
	This variant would result in the potential for visual effects on properties at Hallin, and interaction with croft land. Also potential for increased effect on the setting of Dun Hallin Broch SM in comparison with the Baseline Alignment, which was deemed preferable.	
Variant 0-D (Hallin)	This variant is routed further to the east of Beinn na Mointich in comparison with the Baseline Alignment, closer to Gillen. It would re-join the Baseline Alignment near the Waternish Forest plantation to the east of Beinn na Mointich. This variant would increase the length of the OHL, and result in the potential for increased visual effects on properties at Gillen. No discernible benefits in comparison to Baseline Alignment, which is preferred.	N
Variant 0-E (Fairy Bridge)	Proposed to consider the different landscape and visual effects of an alignment on the western side of the existing OHL, running generally parallel to the existing OHL for approximately 4 km. It is considered that there is the potential for increased landscape and visual effect of this variant in comparison with the Baseline Alignment, due in part to proximity to the road and road users. The Baseline Alignment was therefore deemed preferable.	N
Variant 0-F (Fairy Bridge)	A short variant at Fairy Bridge that takes a more direct route across an area of peat to the west of the existing OHL, involving two crossovers of the OHL. Potential effects on peat at this location are likely to be mitigated through micrositing of poles. There is a preference in landscape and visual terms for the Baseline Alignment in comparison to this variant.	N
Variant 0-G (Glen Heysdal)	This short variant to the east of Upper Feorlig was proposed to minimise effects on sensitive habitats, and potentially limit skylining of poles from properties at Upper Feorlig. This variant would require crossing the existing OHL twice within a short distance, and could interact with land being used for crofting. As such, the Baseline Alignment is preferred.	N
Variant 0-H (Balmeanach)	This variant, running parallel to the existing OHL on its southern side for a short distance, was proposed to reduce potential effect on sensitive habitats, and reduces the length of OHL crossing the SSSI (Geological). The variant would however result in increased proximity and visual effect from properties at Balmeanach, and interaction with croft land. It would also require two crossovers of the existing OHL. On the assumption that potential effects on sensitive habitats and the SSSI (Geological) can be minimised through micrositing, the Baseline Alignment is preferred.	N

Variant	Description	Variant Taken forward? (Y/N)
Variant 0-I (Balmeanach)	This variant would be routed to the south of Balmeanach, crossing both the existing OHL and the minor road. On the south side of the valley, the variant would be routed across open moorland before passing through a commercial forestry plantation prior to reaching Edinbane Substation. This variant has been considered to avoid the SSSI (Geological) but would result in increased length of OHL, creation of a new wayleave through plantation forestry, and potential for increased landscape and visual effects. As such, the Baseline Alignment is preferred.	N

Preferred Alignment

4.10.8 On balance, it was determined that the Baseline Alignment should be taken forward as the preferred alignment and design solution within this Section.

Consultation Responses

4.10.9 During consultations at alignment selection stage (see Part 4.11 of this Chapter), responses received from statutory and non-statutory consultees provided general support for the preferred alignment and design solution identified, subject to further review of the detailed assessment to be provided in the EIA Report. NatureScot noted that the preferred alignment passes through the An Cleireach SSSI, protected for geological interests, and recommended that the siting of infrastructure is planned as to avoid direct impacts on the features of this site so that rock faces and outcrops remain accessible and undamaged.

4.10.10 There were no particular queries raised in written responses from the local community with respect to the preferred alignment and design solution in this Section of the project.

Proposed Alignment

4.10.11 Following review of consultation responses, SSEN Transmission determined that, subject to further consideration of environmental constraints and sensitivities during the EIA stage of the project, the preferred alignment and design solution in this Section was taken forward as the proposed alignment and design solution.

Section 1 – Edinbane to North of Sligachan

Proposed Development Solution

4.10.12 Within this Section, the reinforcement strategy[5] (see **Volume 1: Chapter 2 – Project Need and Strategy**) concluded that the existing 132 kV wood pole OHL should be replaced with a new double circuit steel lattice 132 kV OHL. The change from wood pole to steel lattice structure is required within this section to meet the predicted capacity and load requirements from Edinbane Substation.

Environmental Constraints

4.10.13 The key environmental constraints in this section with respect to the consideration of alignment options and design solutions include:

- The Cuillins SPA / SSSI and minimising potential impacts on golden eagle (a qualifying feature of the SPA);

- The Sligachan Peatlands SAC / SSSI, qualifying features of which comprise blanket bog, dystrophic and oligotrophic lochs, vascular plants, transition mires and quaking bogs;
- The Cullin Hills NSA and Cuillins WLA on approach to Sligachan;
- Minimising potential impacts on European Protected Species such as otter, and protected bird species such as white tailed eagle, golden eagle, hen harrier, red throated diver and greenshank;
- Minimising potential impacts on sensitive habitats (including blanket bog and groundwater dependent terrestrial ecosystems), the water environment and areas of deep peat where practicable;
- Minimising potential impacts on properties, particularly crofting properties at Glenmore and Mugeary where properties are mostly orientated to take advantage of elevated westerly views across the valley, and other visual receptors such as road users;
- Minimising potential impacts on cultural heritage features and designated sites, such as Dun Arkaig Broch Scheduled Monument;
- Minimising potential impacts on recreational routes e.g. Loch Caroy to Glen Vic Askill Core Path;
- Other development such as the consented Glen Ullinish Wind Farm; and
- Minimising effects on commercial forestry plantations at Glen Vic Askill, Glen Tungadal and Glen Varragill.

Technical Considerations

4.10.14 This Section generally comprises low lying topography, with soft / peaty soils and several watercourses. Generally, construction of stone access tracks is likely to be the preferred method of accessing each tower location within this Section as stone tracks offer the most robust means of providing access for the heavy construction plant required. Temporary trackway is not likely to be feasible for use across large areas in this section due to ground conditions, weight of construction vehicles and length of time trackway would need to be in place, all of which could result in an adverse effect on local habitats if trackway was used extensively. Temporary trackway may be used however in localised areas. Existing forestry tracks such as those in Tungadal and Glen Varragill forests would be used where practicable.

Baseline Alignment and Variants

4.10.15 The Baseline Alignment for Section 1 is shown on **Figures V1-4.2d to V1-4.2e.** Within this Section the Baseline Alignment is typically routed adjacent to the existing OHL (which would be removed) apart from at Loch Conan where, due to local landform and topography, the Baseline Alignment deviates by approximately 250 m from the existing OHL, and at Glenmore / Mugeary, where the Baseline Alignment deviates from the existing 132 kV OHL across open moorland at Achaleathan before following the eastern edge of Tungadal Forest. The primary driver for this deviation has been to reduce landscape and visual effects, particularly from properties at Glenmore and Mugeary.

4.10.16 A number of variants to the Baseline Alignment were considered either to mitigate a potential significant effect, or to provide an alternative for consideration by the project team during the selection of a preferred alignment and design solution. These variants are set out in **Table V1-4.2** and shown on **Figures V1-4.2d to V1-4.2e.**

Table V1-4.2: Variants: Section 1

Variant	Description	Variant Taken forward? (Y/N)
Variant 1-A (Edinbane to Glen Vik Askill Forest)	This variant was proposed to maintain sufficient clearance distances from the consented Glen Ullinish Wind Farm which are not achieved with the Baseline Alignment. This would require a new wayleave to be created through forestry at Glen Vic Askill.	Y

Variant	Description	Variant Taken forward? (Y/N)
	Given the technical requirement to maintain sufficient clearance distances from the consented Glen Ullinish Wind Farm, this variant was preferred.	
Variant 1-B (Achaleathan)	This variant was proposed to minimise effects on peatland habitats and avoidance of areas of deeper peat where practicable across moorland at Achaleathan. Subject to potential further refinement during the EIA process, this variant was preferred over the Baseline Alignment.	Y
Variant 1-C (Glenmore / Mugeary)	This variant would run adjacent, and to the west of the existing OHL, passing in front of properties at Glenmore and Mugeary. Would reduce potential significant effects on sensitive habitats and areas of deeper peat at Achaleathan but would result in likely significant landscape and visual effects at Glenmore and Mugeary. As such the Baseline Alignment was preferred.	N
Variant 1-D (Glenmore / Mugeary)	This variant, to the east and to the rear of properties at Glenmore and Mugeary, was primarily considered in relation to the potential landscape and visual effects of an OHL alignment in this area. It was deemed that such an alignment would result in likely significant landscape and visual effects at Glenmore and Mugeary. As such, the Baseline Alignment was preferred.	N
Variant 1-E (Glen Varragill Forest)	This variant was considered as it takes a shorter and more direct route through the Glen Varragill Forest plantation, either side of the A87. This variant would require the creation of a new wayleave. The Baseline Alignment was preferred as it would minimise felling.	N

Preferred Alignment

4.10.17 On balance, it was determined that Variant's 1-A and 1-B would be taken forward given the requirement to ensure sufficient clearance distances to the consented Glen Ullinish Wind Farm (Variant 1-A) and minimising effects on deeper areas of peat where practicable (Variant 1-B), in combination with the Baseline Alignment in all other areas.

Consultation Responses

4.10.18 During consultations at alignment selection stage (see Part 4.11 of this Chapter), NatureScot noted proximity to the nearby Sligachan Peatlands SSSI and SAC, and the requirement for mitigation, as well as ornithological sensitivities, both north of the B885 and close to the Mugeary/Tungadal Forest. From an ornithology perspective, NatureScot suggested that it may be preferable to use an alignment either closer to, or east of, the existing OHL. However, that decision should be informed by further ornithological data, and the consideration of other receptors (e.g. landscape and peat).

4.10.19 RSPB noted that the preferred alignment and design solution would have serious adverse impacts on two white-tailed eagle territories, one golden eagle territory, two hen harrier territories, numerous immature white-tailed eagles, breeding curlew, greenshank and golden plover. RSPB also note that the preferred alignment

travels through active blanket bog, with peat depths up to 4 m and more, which could be impacted by hydrology changes caused by the construction of stone access roads. RSPB suggest that Section 1 be undergrounded along Variants 1C and 1A in order to minimise effects on habitats and peatland, and minimise impacts on the listed conservation species, as well as reduce the landscape and visual effects cited as reasoning to use the preferred alignment.

4.10.20 No particular concerns were raised by other statutory and non-statutory consultees with respect to the preferred alignment and design solution in Section 1, subject to further review of the detailed assessment to be provided in the EIA Report.

4.10.21 Comments received from the local community in relation to Section 1 focused on the potential impact and disruption to golden eagle and white-tailed eagle, in particular a white tailed eagle nest near Mugeary. Responders noted that the glen in general is a hunting ground for these species (Curlew also present). Furthermore, responses also noted the visual impact of steel lattice towers through this section, particularly from properties at Glenmore and Mugeary, and queried whether undergrounding the OHL here would be considered.

4.10.22 In response to the comments made, SSEN Transmission highlighted that moorland breeding bird surveys, flight activity surveys for white-tailed eagle and golden eagle, and searches for nest sites have been undertaken throughout 2021, to supplement existing data and have informed the selection of the preferred alignment to minimise effects on ornithology. Furthermore, the preferred alignment, situated along the edge of the forest, has been selected to minimise potential significant visual effects from receptors at Glenmore and Mugeary, given the distance and the backcloth effect of the forest, despite being in the main view. Peat probing surveys have also been undertaken to inform the siting of tower positions and minimise disruption to peatlands as far as practicable.

4.10.23 In response to RSPB's request that consideration be given to undergrounding the OHL in this Section, SSEN Transmission further explained that installing large sections of underground cable on the network not only comes at a significant additional cost, 2-3 times the cost of overhead solutions, but also creates network performance issues that need to be addressed using specific technical and engineering solutions. SSEN Transmission confirmed that given the commitment to underground approximately 24 km of the 160 km OHL within Sections 2 and 6 of the project, proposed by the Applicant to mitigate likely significant landscape and visual effects, and as a means of rationalising the existing OHL network (discussed further in this Part of the Chapter in relation to Sections 2 and 6), SSEN Transmission would not propose to extend the areas of proposed undergrounding any further. Due to the lengths of cable proposed on the Skye Reinforcement Project, large reactive compensatory equipment is needed at both Broadford and Edinbane Substations to rebalance the system issues created by underground cable in order to allow operation of the transmission network in compliance with the required codes and standards. This has meant that the size of these Substation sites has had to increase substantially to accommodate the footprints of the necessary additional equipment. Any extension to the proposed cable lengths would require further system studies to assess the feasibility of the system to remain compliant and operate properly under this scenario. Even if feasible, such an approach would lead to further increases in the size of the Substation sites to accommodate the greater footprint of larger and additional equipment needed to run the network in accordance with relevant standards, as well as substantially increasing the cost of delivering the project.

Proposed Alignment and Design Solution

4.10.24 Following review of consultation responses, and considering the need to balance cost, technical and environmental factors when developing a project, SSEN Transmission determined that the preferred alignment and design solution in this Section was taken forward as the proposed alignment and design solution. This

would be subject to further consideration of environmental constraints and sensitivities during the EIA stage of the project.

Section 2 – North of Sligachan to Broadford

Proposed Development Solution

4.10.25 Within this Section, the reinforcement strategy[5] (see **Volume 1: Chapter 2 – Project Need and Strategy**) concluded that the existing 132 kV wood pole OHL should be replaced with a new double circuit steel lattice 132 kV OHL. The change from wood pole to steel lattice structure is required within this Section to meet the predicted capacity and load requirements from Edinbane Substation.

Environmental Constraints

4.10.26 The key environmental constraints in this Section with respect to the consideration of alignment options and design solutions include:

- Minimising potential landscape and visual impacts, particularly in relation to the Cuillin Hills NSA, the Cuillins WLA and other sensitive receptors e.g. at Sligachan, Peinachorrain, Sconser and along the A87;
- The Cuillins SPA / SSSI and minimising potential impacts on golden eagle (a qualifying feature of the SPA);
- Minimising potential impacts on sensitive habitats (including groundwater dependent terrestrial ecosystems), the water environment and areas of deep peat where practicable;
- Minimising potential impacts on European Protected Species such as otter, and protected bird species such as greenshank, merlin, white tailed eagle, waders, waterfowl and gulls;
- Minimising potential impacts on properties, visual receptors and recreational interests, particularly at Sligachan which is an important tourist hub and the start of a large number of hill walking routes;
- Minimising potential impacts on cultural heritage features;
- Potential impacts on private water supply infrastructure; and
- Minimising impacts on commercial woodland at Broadford.

Technical Considerations

4.10.27 Section 2 comprises hilly terrain, with steep hillsides and rock encountered at shallow depths. Construction of stone access tracks would likely be the preferred method of accessing each tower location within this Section as they offer the most robust means of providing access for the heavy construction plant required. Temporary trackway is not likely to be feasible for use across large areas in this Section due to ground conditions, weight of construction vehicles and length of time trackway would need to be in place, all of which could result in an adverse effect on local habitats if trackway was used extensively. Temporary trackway may however be utilised in localised areas. Proximity to the A87 provides opportunities to minimise the length of new tracks from the local road network. Existing accesses would be utilised where possible.

4.10.28 The use of helicopters is not currently being considered for installation of OHL towers within this Section of the project due predominantly to the proximity to the A87.

Alternative Technology Options and Design Solutions

4.10.29 As concluded at route options stage (see paragraph 4.7.24), given the sensitive nature of this Section, and to mitigate likely significant landscape and visual effects, further review into alternative design solutions was undertaken in order to find an acceptable route, alignment and design solution through this Section. This has included investigating the feasibility of cabling options within this Section (both subsea and land), as well as the

potential to use alternative steel structures (NeSTS) in targeted areas (e.g. at the heads of lochs). This review, summarised in **Appendix V1-4.1**, enabled a fuller understanding of the technical viability, environmental impact and cost of such options, in comparison with a steel lattice OHL.

4.10.30 To replace the existing 132 kV wood pole with another wood pole solution that met the capacity requirements of the Skye Reinforcement Project through this Section would require the construction of four double trident wood poles. This was not deemed a practicable alternative on technical or environmental grounds due to topography, the constrained nature of this Section and likely significant environmental effects (in particular landscape and visual effects). This alternative design solution was therefore not considered further.

Consideration of Alternative Route Option

4.10.31 In parallel with the review of alternative design solutions noted above, consideration was also given to how such solutions could be applied to an alternative route option; Route Option 2B (see Part 4.7 of this Chapter). The potential for an alternative crossing point at Loch Ainort was also given consideration.

4.10.32 The focus of considering Route Option 2B and the alternative crossing point at Loch Ainort was the crossing of Loch Sligachan and Loch Ainort, given that these would be the most technically and environmentally challenging aspects of this alternative route option.

4.10.33 Two types of technology were considered to cross the lochs. Firstly, using large steel crossing towers in order to span the entire distance with OHL, and secondly, with use of Hydraulic Directional Drill (HDD) in order to install cables under the sea loch bed and connect to OHL towers at each side. Direct burial via laying of subsea cables into the sea floor was not considered as feasible due to the shallow water depth (<20m) presented at the loch crossings, with large areas of the seabed graded as unsuitable in these areas.

Loch Crossing Using Towers

4.10.34 The crossing of Loch Sligachan for the alternative route option (Route Option 2B) would be close to the mouth of the loch making use of two prominent elevated positions on either side at Peinachorrain and Sconser to allow for clearances to be maintained that allow vessels to pass safely under the conductors. The towers would have to be of a specialist design in order to meet the crossing requirements of the loch, with the span being around 1200 m. The towers would need to be circa 90 m in height at either side of the loch, with a smaller reinforced anchor tower situated behind the crossing towers to provide the required support. The indicative location for crossing Loch Sligachan as part of Route Option 2B is shown in **Plate 4.1**.

4.10.35 An alternative crossing of Loch Ainort has been considered near to the mouth of the loch. This is the narrowest point of the loch but would require a crossing of approximately 1500 m in length. This would require larger crossing towers of around 106 m in height. The indicative location for crossing Loch Ainort as part of an alternative crossing of the loch is shown in **Plate 4.2**.

4.10.36 Due to the size of crossing towers, large foundations would be needed in the form of concrete pours for each leg. In order to erect the towers a crane pad would also need to be constructed, meaning a flat area on either side of the lochs would need to be constructed to allow for a crane to lift the tower parts into place from a stable platform. Finally, the conductors would likely be installed with the help of cable drums, towing vessels and helicopters.

Plate 4.1 – Potential Overhead Crossing of Loch Sligachan

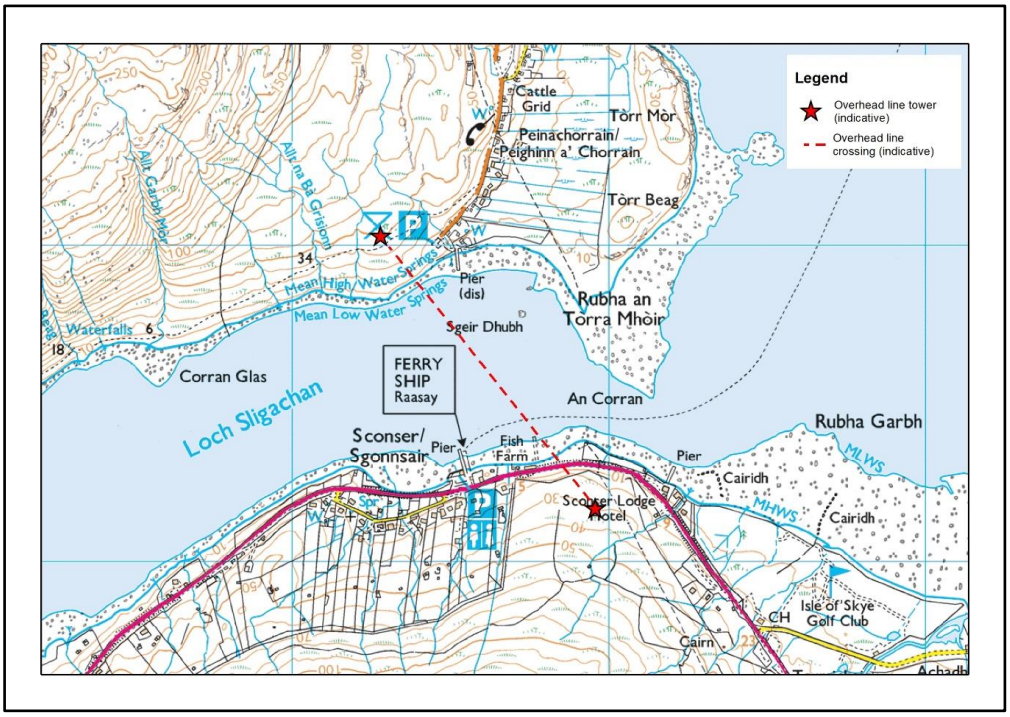
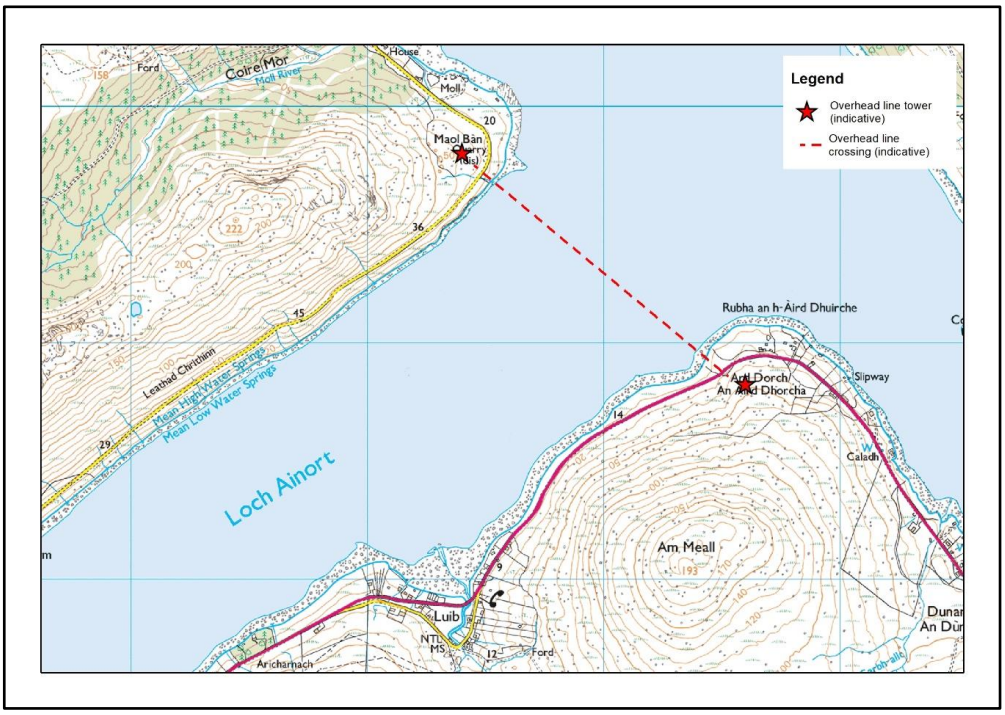


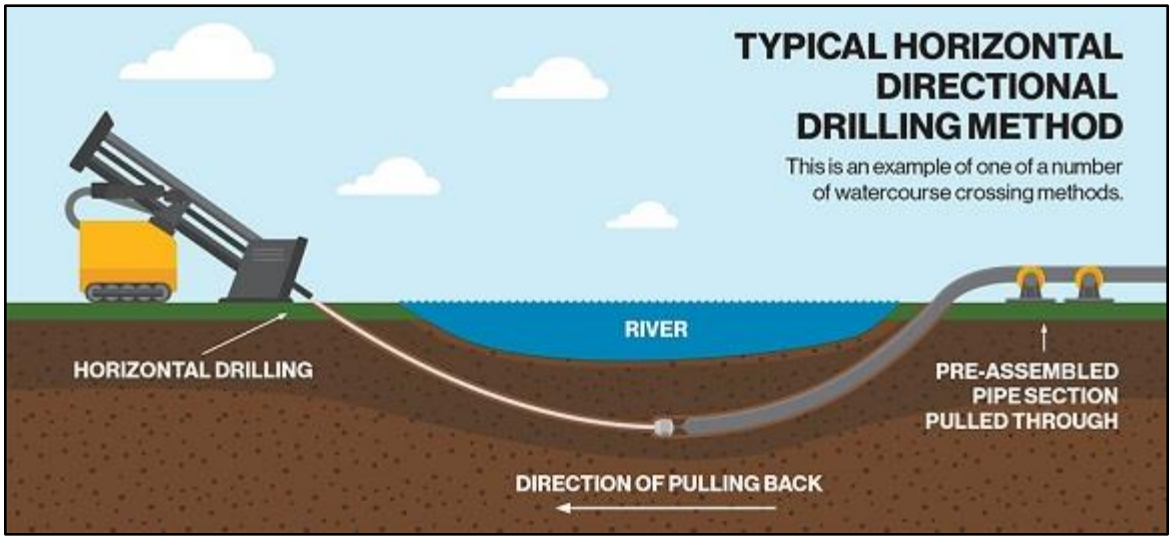
Plate 4.2 – Potential Overhead Crossing of Loch Ainort



Loch Crossing Using HDD

4.10.37 Horizontal Directional Drilling (HDD) is a method of installing underground pipelines, cables and service conduit through trenchless methods. It involves the use of a directional drilling machine, and associated attachments, to accurately drill along the chosen bore path and back ream the required pipe. See **Plate 4.3** below.

Plate 4.3 – Typical HDD method



4.10.38 The scale and complexity of undertaking this work at these loch crossings is a significant challenge. The crossing of Loch Sligachan at its narrowest point would mean that the HDD would surface on the north side of the loch in front of the settlement of Peinchorrain. From here there was little by way of a feasible method for routeing an OHL or cable out of this location without having a direct impact on the settlement itself. The crossing of Loch Ainort is even more complex, requiring an HDD of approximately 1500 m, far beyond the scale of previous HDD works SSEN Transmission has undertaken on previous projects. Other key considerations to have regard in relation to an HDD option for crossing the lochs is the competency of bedrock presented for drilling and the risk of frack out of drilling fluids into the marine ecosystem, which would be very difficult to seal quickly with such long drilling lengths.

4.10.39 With respect to the crossing of both of these locations by tall OHL towers, while technically feasible, it is considered that the scale of these support structures would have a dominating effect in the local area and would undoubtedly result in likely significant effects on the NSA and other landscape and visual receptors throughout Section 2, and particularly for receptors at Peinchorrain, Sconser and Loch Ainort.

4.10.40 In terms of HDD use, given the distance of the loch crossings that have been considered, there are technical complexities, high risk and high cost involved in utilising this solution in these locations. For these reasons the use of such alternative technology was not supported on both technical, economic and environmental considerations. The transition to OHL also presents technical challenges at these locations, and does not offer the opportunity to mitigate likely significant landscape and visual effects on the NSA and other landscape and visual receptors within Section 2.

4.10.41 The review and study of alternative design solutions and route option within Section 2 to mitigate likely significant effects on the NSA and other landscape and visual receptors helped inform a decision by SSEN Transmission to proceed with Route 2A as the proposed route within this Section. This decision has been taken due to a lack of other viable 'route' options through this Section.

Baseline Alignment and Variants

4.10.42 The Baseline Alignment within the proposed route (Route Option 2A), developed as an OHL solution in parallel with the consideration of alternative design solutions (see **Appendix V1-4.1**), is typically routed adjacent to the existing OHL (which would be removed), reflecting the topography and constrained nature of this Section. The OHL crossing at the head of Loch Sligachan, the descent towards Loch Ainort and a short section to the south

of Luib all necessitated a slight departure between the Baseline Alignment and the existing OHL to facilitate the most technically viable option.

4.10.43 A number of variants to the Baseline Alignment were considered to either mitigate a potential effect, or to provide an alternative for consideration by the project team during the selection of a preferred alignment and design solution. These variants are set out in **Table V1-4.3** and shown on **Figures V1-4.2f to V1-4.2g**.

Table V1-4.3: Variants: Section 2

Variant	Description	Variant Taken forward? (Y/N)
Variant 2-A (Underground Cable; North of Sligachan to Luib)	This variant comprises approximately 15 km of underground cable from the north of Sligachan to Luib. The underground cable would follow a similar alignment to that of the Baseline Alignment, with a cable sealing end compound required at either end of the underground cable. Reactive compensation would be required at Broadford Substation. This variant and alternative design solution was proposed to mitigate the likely significant effects on landscape and visual receptors within this Section, including the Cuillin Hills NSA and Cuillins WLA. As a result, this variant was deemed to be preferred in comparison with the Baseline Alignment (OHL).	Y
Variant 2-B (Sligachan Hotel)	This variant diverges from the Baseline Alignment to the south of Glen Varragill Forest, and heads in a southerly direction toward Sligachan Hotel, crossing the A87 before reaching the hotel. The variant is routed to the rear of the hotel, crosses the A863 before heading northeast on the south side of the A87 where it would re-join the Baseline Alignment. The variant was considered to minimise landscape and visual effects in easterly views of the Baseline Alignment from Sligachan. However, the variant is anticipated to result in likely significant environmental effects, particularly landscape and visual effects on receptors at Sligachan, and on the NSA. As such, this variant was not preferred.	N
Variant 2-C (Sligachan)	This variant crosses the tidal area closer to the existing OHL and was proposed to increase the distance between a new OHL and receptors at Sligachan. It was considered that this would result in some improvement from a landscape and visual perspective, but unlikely to mitigate the likelihood for significant effect. There are also technical challenges with routeing a new OHL through the tidal area. This variant was therefore not preferred.	N
Variant 2-D (Sconser)	This variant was considered to minimise potential landscape and visual effects of a new OHL, particularly from receptors at Peinnachorran. Whilst this would result in an improvement in appearance of a new OHL for receptors at Peinnachorran in landscape and visual terms, it would increase proximity and likelihood for significant effect for receptors at Sconser. This variant was therefore not preferred.	N
Variant 2-E (Gleann Torra-	This variant, to the west of the existing OHL through Gleann Torra-mhichaig for approximately 2 km, was considered as it would result in a	N

Variant	Description	Variant Taken forward? (Y/N)
mhichaig - West)	slight improvement from a landscape and visual perspective through Gleann Torra-mhichaig. However, significant landscape and visual effects are still likely and therefore this variant was not preferred.	
Variant 2-F (Gleann Torra-mhichaig - East)	This variant crosses the A87 at Sconser and passes to the east of the A87 and Gleann Torra-mhichaig, past Druim Nan Cleochd, before re-joining the Baseline Alignment around the head of Loch Ainort. It was considered as it would remove the OHL from much of Gleann Torra-mhichaig. There is however potential for skylining of some towers, and likely significant landscape and visual effects around Sconser and Loch Ainort would remain. This variant was therefore not preferred.	N

Preferred Alignment and Design Solution

4.10.44 In selecting the preferred alignment and design solution, consideration has been given to a variety of environmental, technical and cost considerations relevant to this Section, as well as previous consultation responses (see Part 4.8 of this Chapter).

4.10.45 The preferred alignment and design solution selected comprises an underground cable solution (Variant 2-A) from the North of Sligachan to Luib. At Luib, the design solution reverts to OHL and continues along the Baseline Alignment to Broadford Substation.

Consultation Responses

4.10.46 During consultations at alignment selection stage (see Part 4.11 of this Chapter), responses received from statutory and non-statutory consultees provided general support for the preferred alignment and design solution identified, in particular the decision to underground approximately 15 km of the OHL through the Cuillin Hills NSA. Nevertheless, The Highland Council, NatureScot and other consultees did highlight the potential for significant environmental effects as a result of the installation of an underground cable through this Section, and the requirement for suitable mitigation measures to ensure the success of this solution. NatureScot also highlighted the sensitivities associated with proximity to the Cuillin Hills SPA.

4.10.47 There was a positive response from the local community with respect to the proposed undergrounding.

4.10.48 The Highland Council and some community responses questioned whether the underground cable could be extended to Broadford. In response, SSEN Transmission confirmed that it is a balance between cost, technical and environmental factors when developing a project. This is discussed further in **Appendix V1-4.1**.

Proposed Alignment and Design Solution

4.10.49 Following review of consultation responses, and considering the need to balance cost, technical and environmental factors when developing a project, SSEN Transmission determined that the preferred alignment and design solution in this Section was taken forward as the proposed alignment and design solution.

Section 3 – Broadford to Kyle Rhea

Proposed Development Solution

4.10.50 Within this Section, the reinforcement strategy[5] (see **Volume 1: Chapter 2 – Project Need and Strategy**) concluded that the existing 132 kV steel lattice OHL (single circuit) should be replaced with a new double circuit steel lattice 132 kV OHL.

Environmental Constraints

4.10.51 The key environmental constraints in this Section with respect to the consideration of alignment options and design solutions include:

- Minimising potential impacts on the Kinloch and Kyleakin Hills SAC / SSSI;
- Minimising potential impacts on the qualifying features of the Mointeach nan Lochain Dubha SAC / SSSI, and indirect impacts on the Lochs Duich, Long and Alsh reefs SAC, a marine protected area;
- Minimising potential impacts on other sensitive habitats (including groundwater dependent terrestrial ecosystems), the water environment and areas of deep peat where practicable;
- Minimising potential impacts on otter, a qualifying feature of the Kinloch and Kyleakin Hills SAC, other European Protected Species including bats, other protected species such as badger, pine marten, red squirrel, water vole and reptiles, and protected bird species such as golden eagle and white tailed eagle;
- Minimising potential landscape and visual impacts, including indirect effects on The Cuillin Hills NSA;
- Minimising potential impacts on cultural heritage features and designated sites, including Old Corry Cairns Scheduled Monument;
- Minimising impacts on the Loch Ashaig SSSI (geological) / GCR, Bealach Udal SSSI and Kylerhea Glen Geological Conservation Review site;
- Minimising impacts on residents and tourists within the vicinity of Broadford, Harrapool, Skulamus, Breakish, Glen Arroch and Kylerhea; and
- Minimising impacts on commercial forestry and woodland.

Technical Considerations

4.10.52 From Broadford Substation to the minor road to Glen Arroch, access is within the vicinity of the existing steel lattice 132 kV OHL and crosses generally clear, open and undulating terrain. For Route Options 3A (eastern extent), through the SAC, construction access becomes more challenging, with difficult terrain, side slopes and gradients.

4.10.53 Review of construction access requirements for an OHL alignment within Route Option 3B determined that the current minor road is not suitable for construction access traffic. Therefore, a new construction haul road would be required along an OHL alignment to facilitate construction for much of Route Option 3B. The new haul route would typically run parallel to the OHL alignment, be of stone construction, and would require to be used throughout the construction phase through this part of the route. It is likely that this track would require to be made permanent to facilitate operational access, albeit reinstated to a track suitable for all-terrain vehicles. Public road improvements are also likely to be required.

Alternative Technology Options and Design Solutions

4.10.54 The consideration of alternative technology options within Section 3 of the Skye Reinforcement Project focussed on viable and practicable alternative solutions to a steel lattice OHL that could mitigate likely significant effects on the SAC, as well as landscape and visual effects. This primarily focussed on investigating

the feasibility of underground cabling options within this Section (both subsea and land) and is discussed further in **Appendix V1-4.1**. The review enabled a fuller understanding of the technical viability, environmental impact and cost of such options, in comparison with a steel lattice OHL. Ultimately, it deemed that neither underground cable nor subsea cable provide viable alternative design solutions within this Section of the project.

4.10.55 The use of alternative steel structures (NeSTS) was not considered within this Section as it was determined that this alternative technology would not mitigate the site specific likely significant effects of this Section; i.e. the likely significant effects on qualifying features of the SAC, and landscape and visual effects.

Consideration of Route Options

4.10.56 Whilst both route options (3A and 3B) cross the Kinloch and Kyleakin Hills SAC, one of the key differences between the two route options is that Route Option 3B would reduce the extent of areas of woodland and larger areas of blanket bog (Annex 1 priority habitats and qualifying features of the SAC), primarily traversing wet heath habitats and smaller pockets of dry heath (Annex 1 habitats and also qualifying features of the SAC).

4.10.57 Distinct OHL alignment options within Route Option 3B are very limited due to topography. The presence of the minor road through Glen Arroch and the community at Kylerhea are also factors. Given the restrictions to viable OHL alignment options within Route Option 3B, there is a limit to what can be achieved to minimise, or mitigate, likely significant landscape and visual effects of a new steel lattice OHL within this landscape. Suggestions were made to aid in this objective where possible, although it was clear that to mitigate such effects could only be achieved through the consideration of undergrounding parts of the route which, as discussed in **Appendix V1-4.1,** is not feasible.

4.10.58 Within Route Option 3A (eastern extent), the existing OHL is routed within the vicinity of this route option, following a route which is in part very close to the coastline of Loch na Beiste. Built before the SAC was designated, the existing OHL requires the management of a wayleave corridor through dense ancient woodland prevalent along part of its route. Route Option 3A is located further to the south, and typically at a higher elevation to the existing OHL due primarily to technical constraints of building a new OHL immediately adjacent to the existing OHL, as well as the impact this would have on ancient woodland. The existing OHL would be dismantled upon completion of the Skye Reinforcement Project, with the managed wayleave allowed to regenerate.

4.10.59 With respect to Route Option 3A (eastern extent), SSEN Transmission needed to determine if there is a viable and constructable OHL alignment, and if so, what are the likely effects on the Kinloch and Kyleakin Hills SAC / SSSI.

4.10.60 To help address the first of these points, SSEN Transmission commissioned an OHL contractor to investigate OHL alignment options. Following multiple site visits, helicopter fly through and detailed desk-based review, the OHL contractor was able to establish that there is a viable OHL alignment within Route Option 3A.

4.10.61 This resulted in SSEN Transmission's environmental and engineering teams working with the OHL contractor to review on an iterative basis, the alignment options and tower positions to minimise adverse effects on the qualifying features of the SAC as far as practicable. A key objective to this was identifying an OHL alignment that keeps felling of ancient woodland within the SAC, noted as a primary qualifying feature of the SAC and an Annex 1 Priority Habitat, to an absolute minimum, both during the construction phase and as the operational phase to maintain the wayleave corridor safety clearances. A further objective was to develop an access strategy that also minimised adverse effects on the SAC as far as practicable.

4.10.62 To minimise construction traffic within the SAC for Route Option 3A, it is proposed that a number of towers would be constructed by helicopter. Whilst this construction technique does not avoid the requirement for track

infrastructure, it does considerably reduce the frequency of track use by construction vehicles, thus minimising potential damage to habitats. To further minimise adverse effects on habitats within the SAC, it is proposed to reduce the construction time within the SAC to as short as practicable. As such, it is estimated this could be completed in 6 to 9 months.

Identification of Proposed Route

4.10.63 Having considered the potential constraints and opportunities of both route options, SSEN Transmission concluded that Route Option 3A should be progressed as the proposed route. This decision to change from the previously preferred route (Route Option 3B) was made following a review of both route options from an engineering and environmental perspective, and consideration of the consultation responses received during the previous consultation exercise at route options stage.

4.10.64 Notwithstanding these conclusions, it was acknowledged at the conclusion of the alignment selection stage (Stage 3) that the sensitivities of Section 3 of the project through the Kinloch and Kyleakin Hills SAC are such that both options should remain under consideration during the EIA stage of the project. This has been undertaken, the approach to which is set out within **Volume 1, Chapter 1: Introduction and Background** of this EIA Report.

Baseline Alignment and Variants

4.10.65 The Baseline Alignment of the proposed route (Route Option 3A) is initially routed adjacent to the existing 132 kV OHL (which would be removed) past Broadford, Harrapool, Sculamus and Breakish. As the Baseline Alignment continues east, it travels up to approximately 0.8 km to the south of the existing OHL through Kinloch and Kyleakin Hills SAC / SSSI. The existing OHL is also routed through this part of the SAC / SSSI, often very close to the coastline and requiring a managed wayleave through ancient woodland. By remaining to the south of the existing OHL, the Baseline Alignment remains generally to the south of the ancient woodland at Mudalach. Where woodland is within the vicinity of the Baseline Alignment, it is anticipated that the OHL could span across it, with felling kept to an absolute minimum. After Mudalach, the Baseline Alignment runs parallel once again to the existing OHL to the existing towers crossing Kyle Rhea.

4.10.66 The eastern extent of Route Option 3A was subject to a number of iterations during the alignment selection process. Given the technical challenges of constructing an OHL through this route, alignment variants were extremely limited. Instead, the iterations focussed on potential tower locations, micro-siting these to minimise effects on the higher sensitivity habitats within the SAC where practicable (i.e. the woodland and blanket bog habitats, qualifying features of the SAC and Annex 1 Priority Habitats). As these were inherently minor changes, they are not shown as variants in the table below as they did not constitute a notable change to the Baseline Alignment. Any notable changes to the Baseline Alignment within the eastern extent of Route Option 3A were either not possible due to technical restrictions, or would have resulted in woodland removal.

4.10.67 Only one variant to the Baseline Alignment within this Section was therefore considered to either mitigate a potential effect, or to provide an alternative for consideration by the project team during the selection of a preferred alignment and design solution. This variant is set out in **Table V1-4.4** and shown on **Figures V1-4.2h to V1-4.2i**.

Table V1-4.4: Variants: Section 3

Variant	Description	Variant Taken forward? (Y/N)
Variant 3-A (Broadford)	This variant is routed to the north side of the existing OHL on departure from Broadford Substation, and has been proposed to facilitate the connection of the OHL infrastructure with Broadford Substation.	Y

Variant	Description	Variant Taken forward? (Y/N)
	It also has the benefit in comparison to the Baseline Alignment and the existing OHL of being further from the Old Corry Cairns Scheduled Monument.	

Preferred Alignment and Design Solution

4.10.68 The preferred alignment and design solution comprises an OHL connection, utilising a combination of Variant 3A and the Baseline Alignment.

Consultation Responses

4.10.69 During consultations at alignment selection stage (see Part 4.11 of this Chapter), there were contrasting views expressed by statutory and non-statutory consultees in this Section.

4.10.70 NatureScot continued to advise that a new OHL within the currently proposed route has the potential to adversely affect the Kinloch and Kyleakin Hills SAC and SSSI, and all options should continue to be kept open for consideration and weighted according to the legislative and policy context. NatureScot's preliminary view, subject to further information being provided, was that Route Option 3B would traverse the lesser amount of the most sensitive habitats (blanket bog and broadleaved woodlands) in the SAC, and therefore result in less damage to the SAC.

4.10.71 The Highland Council note that both route options would cross the Kinloch and Kyleakin Hills SAC / SSSI and could result in an adverse effect on site integrity, whilst also giving rise to likely significant landscape and visual effects. The Highland Council note that for Route Option 3A (the preferred alignment) there is already the presence of the existing OHL in the view, and whilst the proposed alignment would be at a higher elevation, it should not be skylining and its visibility could potentially be mitigated by further woodland planting. In contrast, should Route Option 3B be selected, this would introduce new visibility for Kylerhea and from the mainland settlements of Glenelg as well as from the small ferry crossing, with construction of the OHL here also requiring tree felling. Nevertheless, The Highland Council suggests that in Section 3 weight in the decision-making process should be attributed to the European importance of the protected habitats of the Kinloch and Kyleakin Hills SAC, and to what degree these effects can be mitigated for both routing options. RSPB reiterated their serious concern over Route Option 3B through Glen Arroch, as it considered that it could have on-going long-term negative impacts for several Schedule 1 and Annex 1 species including white-tailed eagle, golden eagle and hen harrier.

4.10.72 There was an overwhelming response from the local community in favour of the preferred alignment and design solution in this Section. The community provided numerous responses, including a 3,000 signatory petition, supporting the preferred alignment, and stating their opposition to Route Option 3B through Glen Arroch and Kylerhea. Responses referred to the natural beauty of the area, the ferry route across Kyle Rhea and route through Glen Arroch, and potential impact on habitats and species that are present and frequent the area, as key reasons in their opposition of Route Option 3B, and support for the preferred alignment.

Proposed Alignment and Design Solution

4.10.73 At the conclusion of the alignment stage, SSEN Transmission recognised the significant level of support from the local community toward the Applicant's preferred alignment for the Proposed Development, as opposed to the Alternative Alignment. The potential impact of an OHL on the community, and landscape and visual receptors through this sensitive landscape, have been a key reason in the decision to route the preferred alignment within Route Option 3A. However, whilst a preferred alignment and design solution was identified at

the alignment selection stage, the Alternative Alignment via Glen Arroch is assessed in this EIA Report for the reasons set out in **Volume 1: Chapter 1 – Introduction and Background**. The Scottish Ministers are asked to consent either the Proposed Development without the Alternative Alignment (SSEN Transmission's preference) or excluding Route 3A in favour of the Alternative Alignment. This decision will be informed through the Habitats Regulation Appraisal and EIA process. The environmental impact assessment work in relation to the Alternative Alignment is contained in Volume 6 of this EIA Report.

Section 4 – Kyle Rhea to Loch Cuaich

Proposed Development Solution

4.10.74 Within this Section, the reinforcement strategy[5] (see **Volume 1: Chapter 2 – Project Need and Strategy**) concluded that the existing 132 kV steel lattice OHL should be replaced with a new double circuit 132 kV OHL supported by steel lattice structures.

Environmental Constraints

4.10.75 The key environmental constraints in this Section with respect to the consideration of alignment options and design solutions include:

- Minimising potential landscape and visual impacts, particularly in relation to Knoydart NSA, Kinloch Hourn, Knoydart and Morar WLA and Moidart, Morar and Glen Shiel SLA;
- Minimising potential impacts on Druim Iosal SSSI (geological) and GCR, Kinloch Hourn GCR and Quoich spillway SSSI (geological);
- Potential impacts on cultural heritage features and designated sites, including scheduled monuments near Balvraid in Gleann Beag;
- Minimising potential impacts on European Protected Species such as otter and bats, other protected species such as badger, pine marten, water vole, red squirrel and reptiles, and protected bird species such as white tailed eagle, golden eagle, red-throated diver, black-throated diver and greenshank;
- Minimising potential impacts on sensitive habitats (including groundwater dependent terrestrial ecosystems), the water environment and areas of deep peat where practicable;
- Potential impacts on native woodland and commercial forestry; and
- Recreational interests, including core paths, Scottish hill tracks and long-distance walking routes.

Technical Considerations

4.10.76 The terrain throughout this Section is technically challenging for construction of an OHL, dominated by extensive areas of mountainous topography, with exposed steep to very steep rock. Access is restricted to a small number of existing single track minor roads at Glenelg and Kinloch Hourn. The area between Balvraid and Kinloch Hourn has no public road access at all, although there are some forestry and estate tracks, as well as walkers paths through this remote part of the route.

4.10.77 In general, new stone tracks are likely to be required to access many of the towers within this Section. However, there are a number of forestry and estate tracks, as well as walkers paths through the more remote section between Balvraid and Kinloch Hourn, and the construction access strategy has focussed on utilising existing tracks and paths where possible. Some of these would require upgrading but would be reinstated (either fully or partially) upon completion. Where access to tower positions is difficult due to steep terrain, of particular consideration in this Section, alternative methods would be proposed such as using smaller items of plant, specialist tracked plant and in some cases using helicopters for moving materials.

Baseline Alignment and Variants

4.10.78 The Baseline Alignment for Section 4 is shown on **Figures V1-4.2j to V1-4.2l.** Within this Section the Baseline Alignment is typically routed adjacent, or close to, the existing OHL (which would be removed), apart from at Scallisaig (Glen More) given proximity to properties, Loch Coire Shubh (near Kinloch Hourn) due to extremely steep gradient and limited opportunities for construction access adjacent to the existing OHL, and at Glen Quoich due to constructability preferences.

4.10.79 A number of variants to the Baseline Alignment have been considered to either mitigate a potential effect, or to provide an alternative for consideration by the project team. These variants are set out in **Table V1-4.5** and shown on **Figures V1-4.2j to V1-4.2l**.

Table V1-4.5: Variants: Section 4

Variant	Description	Variant Taken forward? (Y/N)
Variant 4-A (Druim na Leitire)	This short deviation to the Baseline Alignment at Druim na Leitire was proposed to minimise potential landscape and visual effects of one prominent tower. This variant offered advantages over the Baseline Alignment, but was superseded by Variant 4C.	N
Variant 4-B (Bernera forestry track)	Diverges from the Baseline Alignment, in the forestry to the north of Galtair and would keep to the south side of the Bernera forestry track (which is a core path) before re-joining the Baseline Alignment upon leaving the eastern edge of the forest. This variant would bring the OHL lower down the hill and minimise landscape and visual effects from Glen Bernera in comparison with the Baseline Alignment. This variant offered advantages over the Baseline Alignment, but was superseded by Variant 4C.	N
Variant 4-C (Glenmore)	This variant has been proposed to more closely follow the existing OHL from the Kyle Rhea crossing point to Glen More and avoid potential land use constraints associated with the Baseline Alignment at Scallisaig. This variant offers some advantages over the Baseline Alignment in that the landscape and visual effects will be similar to that of the existing OHL. There is potential for some removal of native woodland, albeit the existing OHL wayleave corridor through the same woodland would be reinstated. On balance, given the land use constraints associated with the Baseline Alignment, this variant is preferred.	Y
Variant 4-D (Glenmore)	A short deviation from the Baseline Alignment to follow flatter ground through Coire a' Bheoil-airigh before re-joining the Baseline Alignment near Loch a' Mhuilinn. This was proposed to minimise landscape effects, but was superseded by Variant 4C.	N
Variant 4-E (Druim losal)	This variant at to the south of Druim losal was proposed to minimise the likely prominence of one tower.	N

Variant	Description	Variant Taken forward? (Y/N)
	However, this is a particular pinch point and it was considered by the OHL contractor that the only viable solution is to build on the current alignment of the existing OHL, with new towers built adjacent to existing towers. This would require an outage of the transmission network. Given technical constraints, this variant is not preferred.	
Variant 4-F (Druim Eileasaig)	This variant was proposed on landscape and visual grounds between Bealach Aoidhdailean and Gleandubhlochain as it was felt that an alignment to the north of the existing OHL would be better back clothed and close to ground already disturbed by the existing rough argo track, in comparison with the Baseline Alignment. As a result, this variant is preferred.	Y
Variant 4-G (Kinlochhourn Forest)	This variant stemmed from the consideration of towers skylining above Kinlochhourn as the Baseline Alignment rose up and over the hillside. The variant reduces the effects of skylining in this location by keeping to the south side of the existing OHL. By remaining on the south side of the existing OHL, this variant is also at a lower elevation in parts and follows the existing argo track more closely. It is therefore considered preferable to the Baseline Alignment.	Y
Variant 4-H (Loch Coire Shubh)	This variant has been put forward to minimise landscape and visual effects within this area as far as practicable. It aims to do this by taking an alignment that crosses, and is then routed to the west of the minor road for approximately 2 km, prior to crossing the road again to re-join the Baseline Alignment. In comparison to the Baseline Alignment this variant was considered preferable on landscape and visual grounds.	Y
Variant 4-I (Loch Cuaich)	This variant was considered to minimise landscape and visual effects from the minor road and Glen Quoich bridge. Whilst the Baseline Alignment is technically easier to build in this location, it was considered the adverse effects on views of Loch Cuaich from the minor road and bridge warranted a change to the Baseline Alignment in this location. This variant is therefore preferred.	Y

Preferred Alignment

4.10.80 In selecting the preferred alignment, consideration has been given to a variety of environmental, technical and cost considerations relevant to this Section, as detailed above. As a result of the technical challenges and environmental sensitivities of this Section, alignment selection has been through numerous iterations to achieve the right balance between technical viability and due consideration to the sensitive environment. A focus during the alignment selection process has been to minimise potential landscape and visual effects through the Knoydart NSA, Kinloch Hourn, Knoydart and Morar WLA, and Moidart, Morar and Glen SLA. As such, the preferred alignment comprises the Baseline Alignment, with Variants 4-C, 4-F, 4-G, 4-H and 4-I.

Consultation Responses

4.10.81 During consultations at alignment selection stage (see Part 4.11 of this Chapter), responses from The Highland Council and NatureScot focussed on the alignment at Loch Coire Shubh, near Kinloch Hourn, and the special

landscape qualities of this area. Whilst acknowledging the health and safety concerns associated with developing towers along the existing OHL alignment, The Highland Council suggested a design workshop take place to agree the finalised alignment and tower positions, given the landscape and visual sensitivities of this part of Section 4.

4.10.82 Historic Environment Scotland noted that care should be taken in relation to the siting of tower positions within the vicinity of scheduled monuments at the western extent of this Section, but believe that with care the preferred alignment would not increase the level of impact in comparison to the existing OHL. The Woodland Trust identified a number of ancient woodlands that could be impacted by the preferred alignment and design solution in this Section.

4.10.83 Responses from the local community and relevant landowners in Section 4 also focussed on the alignment at Loch Coire Shubh, near Kinloch Hourn. Responders felt that the preferred alignment and design solution would impact on this dramatic and beautiful landscape, noting that the existing OHL is set back from the main view toward Kinloch Hourn.

4.10.84 In response to the comments raised, SSEN Transmission recognise the sensitivities of the landscape within Section 4, and the concerns noted with regard to the preferred alignment at Loch Coire Shubh. The preferred alignment has sought to minimise landscape and visual impacts where possible, whilst also ensuring the constructability of the OHL in accordance with health and safety requirements and legislation. A design workshop has been held with NatureScot and The Highland Council during January 2022, concluding that the preferred alignment offers the best balance between environmental and technical considerations in this area given the limited options available in terms of constructability.

Proposed Alignment and Design Solution

4.10.85 On balance, it is considered that the preferred alignment and design solution in this Section is taken forward as the proposed alignment and design solution.

Section 5 – Loch Cuaich to Invergarry

Proposed Development Solution

4.10.86 Within this Section, the reinforcement strategy[5] (see **Volume 1: Chapter 2 – Project Need and Strategy**) concluded the existing 132 kV OHL should be replaced with a new double circuit 132 kV OHL supported by steel lattice structures. The existing 132 kV steel lattice OHL through this Section would be dismantled, part of which has been undertaken through 2021 and 2022 as the existing OHL is deemed to have come to the end of its operational life. A short term replacement in the form of a new wood pole OHL has recently been constructed to maintain supply through this area. The remaining parts of the existing steel lattice OHL, and the recently constructed wood pole OHL would both be removed upon completion of the new OHL.

4.10.87 Three new NeSTS poles have also been constructed near Quoich dam as a permanent replacement to the existing towers following a landslip in 2018. The new OHL would connect with these NeSTS poles.

Environmental Constraints

4.10.88 The key environmental constraints in this Section with respect to the consideration of alignment options and design solutions include:

- Minimise potential impacts on black throated diver and common scoter, qualifying features of the West Inverness-shire Lochs SPA / SSSI;
- Minimising potential impacts on the Quoich Spillway SSSI (Geological) and GCR;

- Minimise potential landscape and visual impacts on sensitive receptors, including the Kinlochhourn - Knoydart - Morar WLA and Moidart, Morar and Glen Shiel SLA;
- Minimising potential impacts on sensitive habitats (including groundwater dependent terrestrial ecosystems), the water environment and areas of deep peat where practicable;
- Minimising potential impacts on European Protected Species such as otter and bats, other protected species such as badger, pine marten, red squirrel, water vole and reptiles, and protected bird species such as golden eagle, black grouse, greenshank and osprey;
- Potential impacts on cultural heritage features and designated sites;
- Proximity to dwellings along Glen Garry, at Tomdoun and Poulary and at Munerigie and Achadh Luachrach; and
- Minimising potential impacts on native woodland and commercial forestry.

Baseline Alignment and Variants

4.10.89 The Baseline Alignment for Section 5 is shown on **Figures V1-4.2m to V1-4.2o.** Within this Section the Baseline Alignment generally follows close to the routes of the existing wood pole OHL and / or the existing 132 kV steel lattice OHL (which would both be removed). Exceptions to this include at Inchlaggan, whereby the Baseline Alignment is routed to the rear of properties, as opposed to in front of properties as per the existing OHL, and at Achadh-luachrach, north of Loch Garry, where land use constraints require a deviation to the south of the existing OHL.

4.10.90 Given that the Baseline Alignment closely follows the route of the existing OHL, this is generally deemed to be the most appropriate alignment. As such there were no notable variants to the Baseline Alignment considered to either mitigate a potential likely significant effect, or to provide an alternative for consideration by the project team.

Preferred Alignment

4.10.91 Given that the Baseline Alignment closely follows the route of the existing OHL, this is generally deemed to be the most appropriate alignment and was therefore put forward as the preferred alignment and design solution in this section.

Consultation Responses

4.10.92 During consultations at alignment selection stage (see Part 4.11 of this Chapter), NatureScot highlighted the proximity to the Kinlochhourn - Knoydart - Morar WLA at the far western part of this Section, and the West Inverness-shire Lochs SPA, which is protected for breeding common scoters and black-throated divers. There is potential here for a significant effect from disturbance, displacement and collision risk. RSPB also expressed concern regarding the OHL construction between Loch Garry and Loch Loyne, and the potential impact on qualifying features of the West-Inverness-shire Lochs SPA. The Woodland Trust identified a number of ancient woodlands that could be impacted by the preferred alignment and design solution in this Section.

4.10.93 There were no specific written responses received for Section 5 from the local community.

Proposed Alignment and Design Solution

4.10.94 Subject to further review and assessment through the EIA stage of the project, SSEN Transmission determined that on balance, the preferred alignment and design solution in this Section is taken forward as the proposed alignment and design solution.

Section 6 – Invergarry to Fort Augustus

Proposed Development Solution

4.10.95 Within this Section, the reinforcement strategy[5] (see **Volume 1: Chapter 2 – Project Need and Strategy**) concluded the existing 132 kV wood pole OHL should be replaced with a new double circuit 132 kV OHL supported by steel lattice structures. The existing 132 kV wood pole OHL would be removed upon completion of the new OHL.

Environmental Constraints

4.10.96 The key environmental constraints in this Section with respect to the consideration of alignment options and design solutions include:

- Minimise potential impacts on black throated diver and common scoter, qualifying features of the West Inverness-shire Lochs SPA;
- Minimise potential landscape and visual impacts on sensitive receptors, e.g. residents in Auchterawe, where possible;
- Minimising potential impacts on sensitive habitats (including groundwater dependent terrestrial ecosystems), the water environment and areas of deep peat where practicable;
- Minimise potential impacts on European Protected Species such as otter and bats, other protected species such as water vole, red squirrel, badger, pine marten and reptiles, and protected bird species such as black-throated diver and black grouse;
- Potential impacts on commercial woodland and the use of existing forestry tracks; and
- Minimising potential impacts on cultural heritage features and designated sites, such as the Caledonian Canal and Torr Dhuinn Fort scheduled monuments.

Baseline Alignment and Variants

4.10.97 The Baseline Alignment for Section 6 is shown on **Figure V1-4.2p**. Within this Section the Baseline Alignment generally follows that of the existing Fort Augustus to Skye Tee 132 kV wood pole OHL (which would be removed), past Loch Lundie before entering Inchnacardoch Forest. An underground cable connection into Fort Augustus Substation would be required for the final few hundred metres.

4.10.98 A number of variants to the Baseline Alignment have been considered to either mitigate a potential likely significant effect, or to provide an alternative for consideration by the project team. These variants are set out in **Table V1-4.6** and shown on **Figure V1-4.2p**.

Table V1-4.6: Variants: Section 6

Variant	Description	Variant Taken forward? (Y/N)
Variant 6-A (Loch Lundie)	This variant was suggested to minimise potential effects on the qualifying species of the West Inverness-shire Lochs SPA present at Loch Lundie. This variant follows more closely the alignment of the existing OHL, in comparison to the Baseline Alignment. As such, this variant is preferred.	Y
Variant 6-B (Auchterawe)	Approximately 6 km of underground cable to connect into Fort Augustus Substation.	Y

Variant	Description	Variant Taken forward? (Y/N)
	This variant has been put forward to facilitate rationalisation of existing OHL infrastructure within the area, and in light of likely future connection requirements. This variant is preferred.	

Preferred Alignment

4.10.99 In selecting the preferred alignment, consideration has been given to a variety of environmental, technical and cost considerations relevant to this Section. It was proposed that the Baseline Alignment with Variant 6-A and 6-B (underground cable) is taken forward as the preferred alignment and design solution in Section 6.

Consultation Responses

4.10.100 The Highland Council, Forestry and Land Scotland, and Historic Environment Scotland all shared concerns with respect to an OHL connection within Section 6, particularly on approach to and connection into Fort Augustus Substation. Similarly, responses from the local community were also focussed on the potential impact at Auchterawe of further OHLs. NatureScot highlighted proximity to the West Inverness-shire Lochs SPA.

Proposed Alignment and Design Solution

4.10.101 SSEN Transmission noted the concerns raised during previous consultation responses with respect to an OHL connection within Section 6, including the potential for cumulative effects of future OHLs. As a result, it is now proposed to extend the extent of underground cabling in Section 6 to approximately 9 km to facilitate rationalisation of the electricity network in this area.

4.11 Reporting of Alignment Selection Stage and Consultation

4.11.1 The appraisal of the alignment selection stage of the project was set out in a Consultation Document: Alignment Selection[12], published in September 2021. The Consultation Document sought comments from stakeholders and members of the public on the alignment selection studies undertaken, including the reasons for the design decisions taken during the alignment selection stage in the selection of the preferred alignment and design solution.

4.11.2 Public consultation events detailing the preferred alignment and design solution described in the Consultation Document [12]: were held on the dates and at the locations listed below:

- Dunvegan Community Hall, Dunvegan, 28 September 2021
- Broadford Village Hall, Broadford, 29 September 2021
- Glenelg Village Hall, Glenelg, 30 September 2021
- Kyleakin Village Hall, Kyleakin, 04 October 2021
- Glengarry Community Hall, Invergarry, 05 October 2021
- Fort Augustus Village Hall, Fort Augustus, 06 October 2021

4.11.3 Virtual consultation events were also held via the project web page https://www.ssen-transmission.co.uk/projects/skye-reinforcement/ on 13 October 2021.

[12] Skye Reinforcement Project: Consultation Document: Alignment Selection (September 2021), produced by SSEN Transmission

4.11.4 Comments received from stakeholders in response to the Consultation Document [12], or following virtual consultation events, were documented in a Report on Consultation, published in March 2022[13].

4.11.5 The Report on Consultation also confirmed how SSEN Transmission have responded to comments received by stakeholders on the preferred alignment and design solution, and detailed the actions that would be taken forward as the project progresses through to the EIA and consenting stage.

4.12 Further Consideration of Alternatives during the EIA Process

4.12.1 The work that was undertaken during the route and alignment stages of the project enabled a rigorous consideration of reasonable alternatives with respect to route options, alignment selection and the consideration of different detailed design solutions available for the project. In particular, the decision by the Applicant to underground approximately 15 km of the transmission connection within Section 2 of the project through the Cuillin Hills NSA was taken in order to mitigate likely significant landscape and visual effects on receptors within this part of the route. Also it was considered that the proposed undergrounding in Section 6 would address concerns over potential cumulative effects and provide some rationalisation of existing and future OHLs in this area, particularly in the approach to Fort Augustus Substation.

4.12.2 The consideration of alternatives during the EIA stage of the project focussed on pole and tower positions and the siting of ancillary infrastructure as a result of more detailed environmental and engineering information, including NVC habitat survey, peat probing and ground investigation results.

4.12.3 Changes to the design of the alignment of the route for the Proposed Development during the EIA stage of the Skye Reinforcement Project were generally minor in nature given the work undertaken during the alignment selection stage. It included the siting of infrastructure away from sensitive habitats or deeper areas of peat where practicable, whilst given cognisance to the technical requirements for constructing and operating the Proposed Development in often remote areas, and in challenging terrain.

4.12.4 A particular focus centred upon the siting of infrastructure within the Kinloch and Kyleakin Hills SAC / SSSI. Given the sensitivities of this site, the environmental and engineering teams worked closely to achieve an alignment and tower locations that minimised impacts on priority habitats, and other qualifying features of the designated site where possible. Access considerations were also an important part of the design process through the SAC / SSSI. NVC habitat and peat probing results were used in tandem with engineering analysis and expertise to establish the most appropriate form of access through this sensitive area during both construction and operation. A combination of cut and floating access tracks have been designed through the SAC / SSSI, dependent on habitat type, terrain and slope. The determination of track type during the EIA stage of the project within the SAC / SSSI helped to inform the iterative EIA and HRA process through this part of the route.

[13] Skye Reinforcement Project: Report on Consultation (March 2022), produced by SSEN Transmission