Scottish & Southern Electricity Networks

TRANSMISSION

Consultation Document (Route Options)

Loch Fearna Pumped Storage Grid Connection

May 2025

REF: LT000506-507

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GLOSSARY

Term	Definition
Alignment	A centre line of an overhead line (OHL), along with location of key angle structures.
Alignment (proposed)	An alignment taken forward to consent application. It comprises a defined centre line for the overhead line and includes an indicative support structure (i.e. a tower or pole) schedule, also specifying access arrangements and any associated construction facilities.
Amenity	The natural environment, cultural heritage, landscape and visual quality. Also includes the impact of SSEN Transmission's works on communities, such as the effects of noise and disturbance from construction activities.
Ancient Woodland Inventory (AWI)	The AWI is a provisional guide to the location of Ancient Woodland. It contains three main categories of woodland, all of which are likely to be of value for their biodiversity and cultural value by virtue of their antiquity: • Ancient Woodland (1a and 2a); • Long-established woodlands of plantation origin (LEPO) (1b and 2b); and, • Other woodlands on 'Roy' woodland sites.
Biodiversity Net Gain (BNG)	A process intended to leave nature in a better state than it started using good practice principles established by the Business and Biodiversity Offset Programme (BBOP) and organisations including CIRIA, CIEEM and IEMA.
Conductor	A metallic wire strung from structure to structure, to carry electric current.
Consultation	The dynamic process of dialogue between individuals or groups, based on a genuine exchange of views and, normally, with the objective of influencing decisions, policies or programmes of action.
Corridor	A linear area which allows a continuous connection between the defined connection points. The Corridor may vary in width along its length; in unconstrained areas it may be many kilometres wide.
Environmental Appraisal (EA)	When a Proposed Development is unlikely to give rise to significant environmental effects and is not considered an Environmental Impact Assessment (EIA) development it would not be subject to an EIA and the preparation of an EIA Report. In this circumstance, an optional EA detailing the results of surveys, and any appropriate mitigation, can accompany a consent application.
Environmental Impact Assessment (EIA)	A formal process codified by EU directive 2011/92/EU, and subsequently amended by Directive 2014/52/EU. The national regulations are set out in The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017. The EIA process is set out in Regulation 4(1) of the regulations and includes the preparation of an EIA Report by the developer to systematically identify, predict, assess and report on the likely significant environmental effects of a proposed project or development.
Habitat	Term most accurately meaning the place in which a species lives, but also used to describe plant communities or agglomerations of plant communities.
Kilovolt (kV)	One thousand volts.
Listed Building	Building included on the list of buildings of special architectural or historic interest and afforded statutory protection under the 'Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997' and other planning legislation. Classified categories A – C(s).

Term	Definition
Micrositing	The process of positioning infrastructure to avoid localised environmental or technical constraints.
Mitigation	Term used to indicate avoidance, remediation or alleviation of adverse impacts.
Overhead line (OHL)	An electric line installed above ground, usually supported by steel lattice towers or wood poles.
Plantation Woodland	Woodland of any age that obviously originated from planting.
Route	A linear area of approximately 1 km width (although this may be narrower/wider in specific locations in response to identified pinch points / constraints), which provides a continuous connection between defined connection points.
Route (proposed)	A route taken forward following stakeholder consultation to the alignment selection stage of the overhead line routeing process.
Routeing	The work undertaken which leads to the selection of a proposed alignment, capable of being taken forward into the consenting process under Section 37 of the Electricity Act 1989.
Scheduled Monument	A monument which has been scheduled by the Scottish Ministers as being of national importance under the terms of the 'Ancient Monuments and Archaeological Areas Act 1979'.
Semi-natural Woodland	Woodland that does not obviously originate from planting. The distribution of species will generally reflect the variations in the site and the soil. Planted trees must account for less than 30% of the canopy composition.
Sites of Special Scientific Interest (SSSI)	Areas of national importance. The aim of the SSSI network is to maintain an adequate representation of all natural and semi-natural habitats and native species across Britain.
Special Area of Conservation (SAC)	An area designated under the EC Habitats Directive to ensure that rare, endangered or vulnerable habitats or species of community interest are either maintained at or restored to a favourable conservation status.
Special Landscape Area (SLA)	Landscapes designated by the Highland Council which are considered to be of regional/local importance for their scenic qualities.
Special Protection Area (SPA)	An area designated under the Wild Birds Directive (Directive 74/409/EEC) to protect important bird habitats. Implemented under the Wildlife and Countryside Act 1981.
Stakeholders	Organisations and individuals who can affect or are affected by SSEN Transmission works.
Study Area	The area within which the corridor, route and alignment study takes place.
The Highland Council (THC)	The Highland Council.
The National Grid	The electricity transmission network in the Great Britain.
Underground Cable (UGC)	An electric cable installed below ground, protected by insulating layers and marked closer to the surface to prevent accidental damage through later earthworks.
Volts	The international unit of electric potential and electromotive force.
Wayleave	A voluntary agreement entered into between a landowner upon whose land an overhead line is to be constructed and SSEN Transmission.

PREFACE

This Consultation Document has been prepared by ASH design+assessment Ltd. (ASH) on behalf of Scottish Hydro Electric Transmission plc ("the Applicant") who, operating and known as Scottish and Southern Electricity Networks Transmission (SSEN Transmission), owns, operates and develops the high voltage electricity transmission system in the north of Scotland and remote islands.

This Consultation Document invites comments from all interested parties on the route options identified for a new 400 kV double circuit steel lattice overhead line (OHL) connecting the proposed Fearna Pumped Storage Hydro (PSH) scheme to the electricity transmission network at the proposed Loch Lundie 400 kV substation, approximately 2 km north-west of Invergarry, within the Highlands of Scotland.

The Consultation Document is available online at the project website:

https://www.ssen-transmission.co.uk/fearna

Over the coming months, SSEN Transmission will be actively engaging with Statutory Consultees and stakeholders to further understand constraints and identify potential opportunities for the project. Public consultation events detailing the proposals described in this document will be held at the following time and location:

- 14th May 2025: 14:30 to 19:30 at Glengarry Community Hall, Invergarry, Inverness-shire, PH35 4W

Comments on this Consultation Document should be sent to:

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All comments are requested by **25th June 2025**.

EXECUTIVE SUMMARY

Scottish and Southern Electricity Networks Transmission (SSEN Transmission) operating under licence held by Scottish Hydro Electric Transmission plc, is proposing to construct a new 400 kV double circuit steel lattice overhead line (OHL) to connect an initial 300 MW of power from the proposed Fearna Pumped Storage Hydro (PSH) project to the electricity transmission network at the proposed Loch Lundie 400 kV substation, to the north of Invergarry. There will be an additional 1,500 MW of power produced from the Fearna PSH project (totalling 1,800 MW), which would also need to connect onto the transmission network. The details of connecting this additional 1,500 MW are yet to be determined and subject to ongoing system studies being carried out by SSEN Transmission.

This Consultation Document describes the route options appraisal undertaken and the alternatives considered during the identification and appraisal of route options for the Loch Fearna PSH Grid Connection project. It forms part of a consultation exercise to provide information on the project and seek comment from stakeholders and members of the public on the proposals.

An application for consent under Section 36 of the Electricity Act 1989 was submitted by Fearna Pumped Storage Ltd in February 2025 to construct and operate the 'Fearna Pumped Storage Hydro' project, located at the western end of Glengarry in the Highlands of Scotland. A decision on this application from Scottish Ministers is currently awaited. SSEN Transmission has a statutory duty under Schedule 9 of the Electricity Act 1989 to develop and maintain an efficient, co-ordinated and economical transmission system in its licenced areas. SSEN Transmission has obligations to offer non-discriminatory terms for connection to the transmission system. In line with these duties and obligations, SSEN Transmission has entered into an agreement with the PSH developer to provide a connection from the PSH scheme to the National Grid.

The approach to route selection is being informed by SSEN Transmission's guidance 'Procedures for Routeing Overhead Lines and Underground Cables of 132 kV and above' which provides a framework to ensure environmental, technical and economic considerations are identified and appraised at each stage of the routeing process. A Study Corridor ('the Corridor) was identified within which the identification and assessment of route options could be completed (see **Figure 1**). The Corridor was developed to encompass a range of feasible route options between the connection points at the proposed Fearna PSH scheme and the proposed Loch Lundie substation (see **Figure 2**).

A total of six route options were identified for appraisal, split into three 'western route options' (1a, 1b and 1c) and three 'eastern route options' (2a, 2b and 2c), as shown on **Figure 1**. Any of the western route options could join with any of the eastern route options to form a complete connection between the connection points of the Fearna PSH scheme and the proposed Loch Lundie substation. The principal findings of the appraisal are summarised here and presented in more detail in the rest of this document.

<u>Western Route Options (1a, 1b and 1c)</u>

From an environmental perspective, of the three western route options, Route Option 1a comprises good opportunities to follow existing infrastructure on the northern extent of Loch Poulary, therefore minimising the spread of new infrastructure and potential interaction with qualifying / notified features of the West Inverness-shire Lochs Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI). However, the potential for cumulative effects would be increased within this route option given the presence of existing and proposed infrastructure including the Skye Reinforcement Project, which would require careful consideration at the alignment selection stage.

Route Option 1b and 1c both have the potential to be constrained by a number of environmental factors, including the potential for collision risk to qualifying species of the West Inverness-shire Lochs SPA and SSSI. Furthermore, an OHL within these route options could increase the potential for landscape and visual constraints by introducing vertical features which may be prominent in views along the loch, which could in turn reduce some of the remote qualities of this landscape. Both Route Options 1b and 1c would need to cross the

eastern extent of Loch Cuaich, either using tall OHL towers or a Horizontal Directional Drill (HDD) cable with a Cable Sealing End (CSE) compound near the shore to facilitate transition back to OHL. Both approaches would introduce new infrastructure into visually sensitive areas and could result in additional environmental constraints. Route Option 1b would be preferable as an HDD crossing compared to an OHL Loch crossing, however, Route Option 1b also passes through an area of semi-natural woodland listed on the Ancient Woodland Inventory (AWI) to the south of the River Garry near Tomdoun, which includes Caledonian Pinewood. Additional areas of ancient woodland and Caledonian Pinewood lie to the east, near its transition with Route Option 2c. Although direct impacts on these sensitive habitats may be avoidable, their presence significantly constrains options for an OHL.

From an engineering perspective, Route Option 1a offers good access opportunities due to its proximity to the C144 minor road and relatively few road crossings. However, it presents significant challenges including steep terrain, limited suitable ground at the route option's starting point, and proximity to existing transmission infrastructure. The area also experienced a major landslip in 2018, which damaged towers on the existing Fort Augustus–Quoich 132 kV line and led to the installation of NeSTS structures. Additionally, Route Option 1a passes within 250 metres (m) of properties and requires crossing a distribution asset.

Route Option 1b avoids close proximity to residential properties and distribution assets and is expected to require fewer angle towers compared to other route options. However, it presents significant access challenges, particularly due to the remoteness of the southern side of the valley. Route Option 1c, while requiring three crossings of the C144 minor road, offers better access compared with Route Option 1b as it largely follows the C144. It also avoids steep terrain, and areas with known slope instability to the north of Loch Cuaich. Though it has some clearance constraints and a distribution asset crossing, it avoids the remote, inaccessible south side of the valley and benefits from more stable ground conditions overall. Both Route Options 1b and 1c would need to cross Loch Cuaich, where a substantial span of approximately 480 m, presenting a significant engineering undertaking, regardless of the technical solution for the crossing.

Eastern Route Options (2a, 2b and 2c)

From an environmental perspective, all the eastern route options are highly constrained across more than one topic area, with particular constraints noted for natural heritage designations, ancient woodland, protected species and visual effects. Due to existing electrical infrastructure and other known constraints on the approach to Loch Lundie substation, it is proposed that approximately 2 km of the final section of the connection be installed as underground cable.

In terms of the qualifying and notified species of the West Inverness-shire Lochs SPA and SSSI, whilst Route Option 2a follows existing transmission infrastructure which would likely minimise any 'novel' impact of a new OHL, consideration would need to be given to the potential for cumulative effects as it would follow the route of the proposed Skye Reinforcement Project. Within the Inchlaggan area, the back clothing effect of topography and the presence of tree cover may provide some opportunities to mitigate collision risk in this area, however, this would need further review at the alignment selection stage, along with other opportunities to mitigate likely significant environmental effects. The potential for cumulative effects with other electricity transmission infrastructure within Route Option 2a are also important considerations for other topic areas, in particular in terms of landscape character, visual amenity, habitats, protected species and forestry. Route Option 2a includes several areas of ancient woodland, both of semi natural and plantation origin, as well as areas of native woodland, typically upland birchwoods. Whilst there are opportunities to minimise impacts on these sensitive habitats, this would require careful consideration at the alignment selection stage if this option were taken forward, particularly given the presence of other existing and proposed electrical infrastructure within this route option.

Whilst Route Option 2b would have less of an impact on SPA and SSSI species compared to Route Option 2a (and 2c), given it is to the south of Loch Garry (with commuting flights typically heading north), this route option would pass through extensive and continuous areas of ancient woodland, Caledonian Pinewood and native woodland, requiring significant felling. The associated habitat loss, fragmentation, and disturbance would

impact a variety of protected species, including red squirrel, pine marten, and wildcat. There would also be potential for cumulative effects (including cumulative landscape and visual effects) with the proposed Coire Glas Grid connection to the eastern extent of the route near Whitebridge.

Route Option 2c has increased potential for collision risk to SPA and SSSI species compared with Route Options 2a and 2b as it travels further north and is situated on higher ground, potentially disrupting commuting flights of designated species. Route Option 2c would also run to the north of the A87, crossing the road towards its western end. Due to its scale, and the elevated views towards the mountainous landscapes to the west, an OHL within this route option has the potential to be a distracting feature. It may also be seen in combination with the turbines of the proposed Beinneun 2 Wind Farm. Route Option 2c also passes through some areas of ancient woodland of semi-natural origin.

From an engineering perspective, Route Option 2a offers good access opportunities, running close to the C144 minor road, and a network of forestry tracks. However, it crosses more elevated ground and also passes within 100 m of a property and within 750 m of a communication mast, raising the potential for constraint that would need further consideration at the alignment selection stage. Additionally, like Route Option 1a, it follows an existing transmission corridor, which may limit available space for development and increase the potential for cumulative impacts.

Route Option 2b has more limited access, relying on existing forestry tracks with limited public road access, which could raise construction costs. It sits at a generally lower elevation than Route Options 2a and 2c, but passes within 100 m of a property and within 550 m of a communication mast. Furthermore, it includes an unavoidable distribution asset crossing.

Route Option 2c presents the greatest access challenges of the eastern route options, with large sections lacking supporting infrastructure. It traverses the highest terrain of all the route options, reaching elevations up to 449 m AOD, and contains areas of steep gradient. Route Option 2c avoids properties and distribution assets, but it passes through the proposed Beinneun 2 Windfarm, posing a constraint for potential development conflict. It also has the highest estimated number of angle towers of all route options.

Potential Route Option

This route selection appraisal indicates that the combination of **Route Option 1a and Route Option 2a** is the route which offers the most balanced solution taking into account environmental, technical and cost considerations. Should this route be taken forward following consultation, it would be subject to further review during the alignment selection stage to minimise and, where practicable, mitigate likely significant environmental effects

Next Steps

The appraisal of route options presented in this document will be reviewed taking account of feedback received from key stakeholders and from the public consultation. Following the outcome of the consultation, SSEN Transmission will confirm the proposed route for the OHL project. Potential alignment options will then be explored within the proposed route, with further appraisal and consultation to be carried out in the coming months. On identification of a proposed alignment, an application for consent under Section 37 of the Electricity Act 1989 will be submitted to the Scottish Government's Energy Consents Unit for the proposed OHL infrastructure.

All comments on the route options are requested by **13th June 2025**. A Report on Consultation (RoC) will be published after the consultation period has ended, which will document the consultation responses received, how these responses have been considered, and the decisions made in light of these responses. The RoC will be made available on the project website.

1. INTRODUCTION

1.1 Purpose of Document

1.1.1 This Consultation Document has been prepared by ASH design+assessment Ltd. (ASH) on behalf of Scottish and Southern Electricity Networks Transmission (SSEN Transmission) ("the Applicant"), under licence held by Scottish Hydro Electric Transmission plc, who own, operate and develop the high voltage electricity transmission system in the north of Scotland and remote islands.

1.1.2 This Consultation Document invites comments from all interested parties on the route[1] options for a new 400 kV double circuit steel lattice overhead line (OHL) to enable 300 MW of electricity to be exported from the proposed Fearna Pumped Storage Hydro project to the electricity transmission network at the proposed Loch Lundie 400 kV substation. The project is known as the 'Fearna Pumped Storage Grid Connection' and is referred to in this Consultation Document as the 'Proposed Development'.

1.1.3 This document forms part of a consultation exercise to provide information on the Loch Fearna Pumped Storage Grid Connection and seek comments from stakeholders and members of the public on the proposals, and route selection process.

1.1.4 All comments received will inform further consideration of the route options prior to selecting a proposed route, and subsequent alignment[2] options therein.

1.2 Document Structure

1.2.1 This report comprises seven sections as follows:

1. Introduction – setting out the purpose of the Consultation Document;
2. The Proposals – describes the need for the proposals, the proposed technology solutions and the typical construction methods;
3. Route Selection Process – sets out the process that has been applied in the selection and appraisal of route options;
4. Description of Routes – describes the route options that have been identified;
5. Environmental Baseline – describes the local context and baseline environmental and engineering context;
6. Comparative Appraisal – appraises each route option against a series of environmental, technical and cost considerations; and
7. Summary and next steps – invites comments on the route assessment process and route options and outlines the next steps.

1.2.2 The main body of this document is supported by a series of figures.

1 A linear area of approximately 1 km – 2 km width which provides a continuous connection between defined connection points.

2 A centre line of an overhead line, along with the location of key angle structures.

2. THE PROPOSALS

2.1 The Need for the Project

2.1.1 SSEN Transmission owns and maintains the electricity transmission network across the north of Scotland and holds a license under the Electricity Act 1989 to develop and maintain an efficient, co-ordinated and economical system of electricity transmission.

2.1.2 The proposed grid connection is required to connect 300 MW of power from the proposed Fearna Storage project to the National Grid at the proposed Loch Lundie substation, as shown in **Figure 1**. The proposed Fearna PSH scheme would be located approximately 25 km west of Invergarry and 10 km east of Kinloch Hourn. The connection point for the PSH scheme would be located on the shore of Loch Cuaich, immediately west of the old quarry used for the construction of the Loch Quoich Dam. SSEN Transmission are contracted to provide a grid connection to the electricity transmission network by October 2032[3].

National Planning Policy

2.1.3 Scotland's fourth National Planning Framework (NPF4) was published by the Scottish Government on 13th February 2023[4]. NPF4 is a long-term strategy for Scotland (to 2045) that guides spatial development, sets out national planning policies, designates national developments and highlights regional spatial priorities. Alongside adopted local development plans, NPF4 now forms part of the statutory development plan for decision making in Scotland. In NPF4, transmission infrastructure is supported in both National Development ND3 'Strategic Renewable Electricity Generation and Transmission Infrastructure' and in Policy 11 Energy, however proposals are required to be assessed against all relevant development plan policies.

2.1.4 The Proposed Development would form a vital element to deliver network and grid infrastructure required to deliver the UK and Scottish Government's legally binding targets for net zero emissions and renewable energy generation and energy storage objectives.

2.2 Proposed Technology Solution

2.2.1 The proposed technology solution for this connection project would be a 400 kV double circuit steel lattice OHL. The typical height for the SSE400 tower suite, the likely tower design for the Proposed Development, is approximately 60 m on average, although tower heights may vary where topography dictates in order to achieve sufficient clearance distances. The average span length between towers would be approximately 350 m.

2.2.2 The proposed steel lattice towers would support six conductors on cross arms (three on each side) and an earth wire between the peaks. **Plate 2.1** shows a photograph of a typical steel lattice tower.

[3] The contracted position is currently for 300 MW, however a second phase to facilitate the additional connection requirements has recently been agreed between the developer and SSEN Transmission

[4] Scottish Government (2023) *National Planning Framework 4*, [online] Available at: https://www.gov.scot/publications/national-planning-framework-4/, [Accessed 24th April 2025].

Plate 2.1: Example Steel Lattice Tower OHL Structure

2.2.3 For a connection of this length and scale, an UGC is not a feasible option in its entirety due to significantly increased costs in comparison with an OHL option, and the increased impact the project would have on peatlands and other sensitive habitats. This is due to the requirement for the install of a 400 kV underground cable to require the creation of a construction corridor of approximately 60 m to accommodate tracks, trenches, and excavated spoil. The larger, continuous and partially excavated working corridor also increases the risk of pollution events and watercourse contamination, and increases the requirement for watercourse crossings and/or drilling under watercourses to install cables (although best practice construction and appropriate mitigation measures can be implemented to minimise and mitigate effects).

2.2.4 However, due to the known technical and environmental (particularly ornithology) constraints in the area, a section of UGC is anticipated to be required on the final approach into the proposed Loch Lundie substation. Due to other localised constraints throughout the connection, there may also be a requirement that other sections be undergrounded. The locations and extents of the UGC sections that may be required are yet to be determined, and would be reviewed at the alignment selection stage of the project. Any undergrounding would require the construction of CSE compounds to facilitate the transition between UGC and OHL.

2.2.5 As two of the six route options would be required to cross the eastern extent of Loch Cuaich (see **Figure 1**), two technology solutions are under consideration for this crossing, as follows:

- Either two tall (up to approximately 75 m in height) steel lattice towers on either side of the loch with a double circuit OHL strung between them; or
- An HDD cable, which would require a CSE compound beyond the loch shoreline to transition back to OHL.

2.3 Proposal Overview

General Construction Activities

2.3.1 To facilitate the construction of the OHL components of the connection, the main tasks are anticipated to include:

- establishment of one or more construction compounds;
- establishment of suitable laydown areas for materials;
- construction of access tracks (both temporary and permanent) and other temporary access solutions as necessary;
- delivery of structures and materials to site;
- excavation and construction works associated with foundations, as necessary;
- assembly and erection of the OHL towers;
- stringing of conductors using pullers and tensioners;
- vegetation removal if necessary; and
- inspections and commissioning.

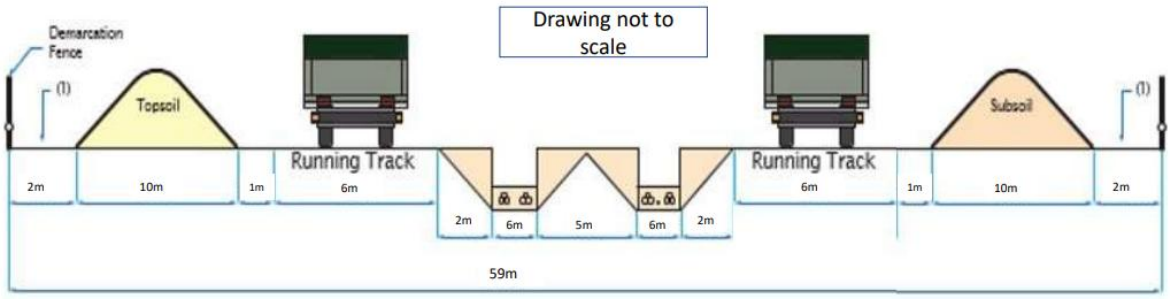
Underground Cable General Construction Activities

2.3.2 As described in **Section 2.2**, some areas of UGC may be required for the connection. Should this be the case, where required, the installation of the UGC would involve the following tasks:

- establish a working corridor approximately 60 m wide, centred on the cable centreline;
- excavate a trench up to 2 m in depth and 1 m wide, widening through benching and battering where stability and safety concerns arise;
- clear out all materials likely to damage cable ducts, e.g. clods, rocks, stones and organic debris, and employ use of pumps to remove any water;
- place cabling within the trench, surrounded by engineered backfill in suitable layers for protection, with marker boards placed above the cable line; and
- reinstate excavated surface layers in reverse order.

2.3.3 **Plate 2.2** shows a diagram of a typical UGC construction corridor.

Plate 2.2: Example of a typical UGC Construction



Forestry Removal

2.3.4 Construction of the project may require the removal of sections of commercial forest, depending on the choice of the proposed route and ultimately the proposed alignment. This would be undertaken in consultation with

affected landowners. Scottish Forestry would be consulted, and the project would comply with the Scottish Government's Control of Woodland Removal Policy[5].

2.3.5 An Operational Corridor (OC) would be required to enable the safe operation and maintenance of the OHL (or UGC) through areas of woodland or forestry. This would vary depending on the type of woodland (based on species present) in proximity to the OHL, and the height of support structures used within each woodland area. The OC that has been preliminarily assumed at this stage for the steel lattice towers is 70 m (35 m either side of the OHL).

Access Strategy

2.3.6 Vehicle access would be required to each tower location during construction to allow excavation and creation of foundations and installation. Existing tracks would be used where possible. However, both temporary and permanent stone tracks may be necessary in some areas depending on existing access conditions, terrain and altitude.

2.3.7 For any required sections of UGC, a construction haul road would be required within the UGC construction corridor to facilitate construction. Once installed, it is anticipated that the construction corridor would be reinstated, with an OC being maintained. Permanent access tracks would be required to access any associated CSE compounds.

Programme

2.3.8 It is anticipated that construction of the project would take place over a 24-month period, following the granting of consents, although detailed programming of the works would be the responsibility of the Contractor in agreement with SSEN Transmission.

2.4 Biodiversity Net Gain

2.4.1 Biodiversity Net Gain (BNG) is an approach to development that aims to leave the natural environment in a measurably better state than it was pre-development. SSEN Transmission has developed a BNG toolkit based upon the Natural England metric[6], which aims to quantify biodiversity based upon the value of habitats for nature. It is an efficient and effective method for demonstrating whether development projects have been able to maintain or increase the biodiversity value of a development site after construction works.

2.4.2 The BNG toolkit would be applied to the project to quantify the overall potential biodiversity impacts; this includes a biodiversity baseline assessment, analysis of habitat losses due to temporary works and permanent infrastructure, and analysis of biodiversity gains following reinstatement of habitats in areas of temporary construction work.

SSEN Transmission's Biodiversity Ambition

2.4.3 SSEN Transmission is committed to protecting and enhancing the environment by minimising the potential impacts from their construction and operational activities. As part of this approach, SSEN Transmission has

[5] Forestry Commission Scotland (2009) Control of Woodland Removal Policy [online] Available at: https://www.forestry.gov.scot/publications/support-and-regulations/control-of-woodland-removal/285-the-scottish-government-s-policy-on-control-of-woodland-removal [Accessed: February 2025].

[6] Natural England Biodiversity Metric 3.1. [online] Available at: https://publications.naturalengland.org.uk/file/5450039124819968 [Accessed: February 2025]

made commitments within its Sustainability Strategy (2018)[7] , Sustainability Plan (2019)[8] and RIIO-T2 Business Plan[9], for new infrastructure projects to:

- Ensure natural environment considerations are included in decision making at each stage of a project's development;
- Utilise the mitigation hierarchy to avoid impacts by consideration of biodiversity in project design;
- Positively contribute to the UN and Scottish Government Biodiversity strategies by achieving an overall 'No Net Loss' on new infrastructure projects gaining consent in 2020 onwards and achieving Net Gain on all new projects gaining consent in 2023 onwards; and
- Work with their supply chain to gain the maximum benefit during asset replacement and upgrades.

2.4.4 The design and evolution of this grid connection project will be carried out in line with these commitments.

[7] Delivering a smart, sustainable energy future: The Scottish Hydro Electric Transmission Sustainability Strategy (2018) [online] Available at: https://www.ssen-transmission.co.uk/media/2701/sustainability-strategy.pdf [Accessed: February 2025]

[8] Our Sustainability Plan: Turning Ambition into Action. (2019) SHE Transmission. [online] Available at: https://www.ssen-transmission.co.uk/media/3215/our-sustainability-plan-consultation-report.pdf [Accessed: February 2025]

[9] A Network for Net Zero - SSEN Transmission (2022) [online] Available at: https://www.ssen-transmission.co.uk/information-centre/riio-t2-plan-and-uncertainty-mechanisms/ [Accessed: February 2025]

3. ROUTE SELECTION PROCESS

3.1 Background

3.1.1 The approach to route selection was informed by SSEN Transmission's guidance 'Procedures for Routeing Overhead Lines and Underground Cables of 132 kV and above'[10] which provides a framework to ensure environmental, technical and economic considerations are identified and appraised throughout the route options process.

3.1.2 The guidance splits the routeing stage of a project into four principal stages, as follows:

- Stage 0: Routeing strategy development;
- Stage 1: Corridor Selection;
- Stage 2: Route Selection; and
- Stage 3: Alignment Selection.

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

3.1.4 The Proposed Development is currently at Stage 2: Route Selection, the objective of which is to identify a proposed route prior to commencing the alignment selection stage.

3.2 Stage 1: Corridor Selection

3.2.1 No corridor options were identified due to the limited scale of the project and the identified connection points between the PSH scheme and the proposed Loch Lundie substation, which constrain any alternative corridor options.

3.3 Stage 2: Route Selection

3.3.1 Route options were initially identified following desk-based review, informed by prior knowledge and experience of the area and making use of landform. The area is well known by SSEN Transmission and ASH from previous projects in the area, including the Skye Reinforcement Project, for which a Section 37 application was submitted to the Energy Consents Unit (ECU) and Scottish Ministers in 2022 (ref: ECU00003395).

3.3.2 The Corridor for this project encompasses an area that formed part of the Skye Reinforcement Project OHL. Thus, the route options identified were initially based on those identified as part of the Skye Reinforcement Project for this same area, and adapted in line with the connection points for this project and to account for additionally known constraints in the area, including other proposed electrical infrastructure including the Skye Reinforcement Project and Coire Glas Grid Connection (ref: ECU00004736).

3.3.3 Route options were also generated in a software trial with Gilytics AG "Pathfinder" software[11]. Pathfinder offers an approach to optimise and provide alternative route options by combining spatial data and modelling multiple scenarios at once for comparison. Ultimately this tool was not used to generate new route options, but its findings helped to reinforce the selection and identification of route options.

3.3.4 A total of six route options have been identified for appraisal, as described in **Section 4** and shown on **Figure 1**.

[10] SSEN Transmission (2020). Procedures for Routeing Overhead Lines and Underground Cables of 132 kV and above, Revision 2.
[11] Gilytics [online] Available at: https://www.gilytics.com/ [Accessed: February 2025]

3.3.5 In accordance with the steps outlined in the Holford Rules[12] and SSEN Transmission's guidance 'Procedures for Routeing Overhead Lines and Underground Cables of 132 kV and above'[10], the following principles have been taken into account as far as is practicable at this routeing stage and will be considered in more detail during Stage 3 (Alignment Selection):

- 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 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.

3.3.6 Appraisal of the route options was undertaken against a number of environmental, engineering and cost criteria set out within the SSEN Transmission guidance[10]:

Environmental Criteria

- Natural Heritage – designations, protected species, habitats, ornithology, hydrology, geology and hydrogeology;
- Cultural Heritage – designations and cultural heritage assets;
- People – proximity to dwellings;
- Landscape and visual – designations, landscape character and visual;
- Land Use – agriculture, forestry, recreation and infrastructure; and
- Planning – policy and proposals.

Engineering Criteria

- Infrastructure Crossings – major crossings (overhead lines, rail, river, navigable canal, gas or hydro pipeline) and road crossings;
- Environmental Design – elevation, contaminated land, pollution and flooding;
- Ground Conditions – terrain and peatland;
- Construction and Maintenance – access and angle support; and
- Proximity – clearance distance, windfarms, communication masts, urban areas and metallic pipes.

Economic Criteria

- Capital – construction costs; and
- Operational – inspections and maintenance costs.

3.3.7 Although **Section 2.2** outlines that there may be a requirement for some sections of the connection to be undergrounded, each route option has been assumed as an OHL connection for the purposes of this appraisal. This is with the exception of the final approach into the proposed Loch Lundie substation, where, due to the known technical and environmental (particularly ornithology) constraints, a section of UGC has been assumed for the appraisal. The exact extent of undergrounding is yet to be determined and would be reviewed in further detail at the alignment selection stage of the project. For Route Option 1b and 1c, where there is potential for an HDD option to be used instead of an OHL crossing, it has been highlighted if a reduced RAG rating might be expected.

[12] 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* [Accessed: February 2025]

RAG Rating

3.3.8 For each route option, a RAG rating has been applied to each topic area following appraisal, indicating potential constraint to development. A high-level convention for assigning RAG ratings is shown in **Plate 3.1** below. More detailed guidance for topic specific considerations is included in **Annex 9** (for OHL connections) of SSEN Transmission's approach to routeing.

Plate 3.1: RAG Ratings

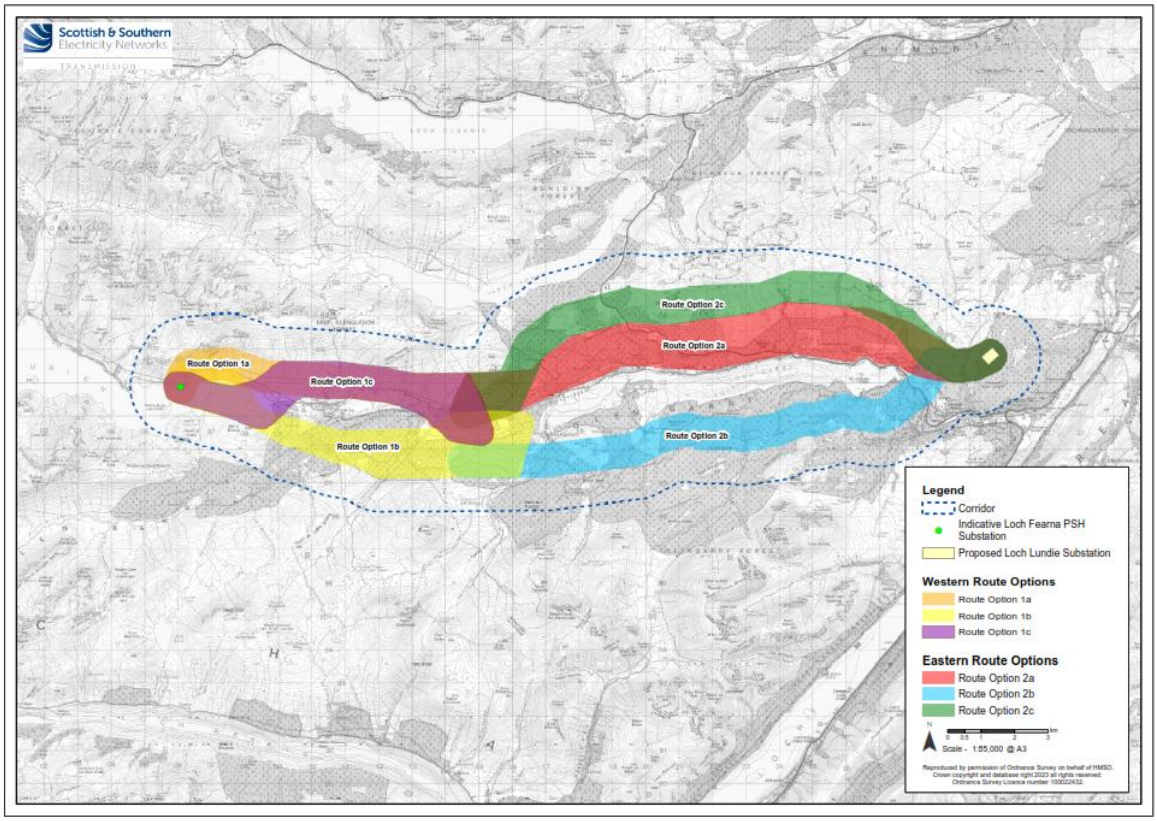
Performance	Comparative Appraisal
Most Preferred  **Least Preferred**	Low potential for the development to be constrained.
	Intermediate potential for the development to be constrained.
	High potential for the development to be constrained.

4. DESCRIPTION OF ROUTE OPTIONS

4.1 Overview

4.1.1 The route options appraised for the Proposed Development are shown on **Plate 4.1** (see also **Figure 1**) and are described in this section of the report. There are six route options in total; split into three 'western route options' (1a, 1b and 1c) and three 'eastern route options' (2a, 2b and 2c). Any of the western route options could join with any of the eastern route options to form a complete connection between the connection points at Fearna PSH and the proposed Loch Lundie substation.

Plate 4.1: Route Options



Western Route Options

4.2 Route Option 1a

4.2.1 Route Option 1a represents the most northerly route option of the western route options and is approximately 10 km in total length. It is generally 1 km in width, though it expands to approximately 1.5 km in width where a connection into the eastern route options would be required.

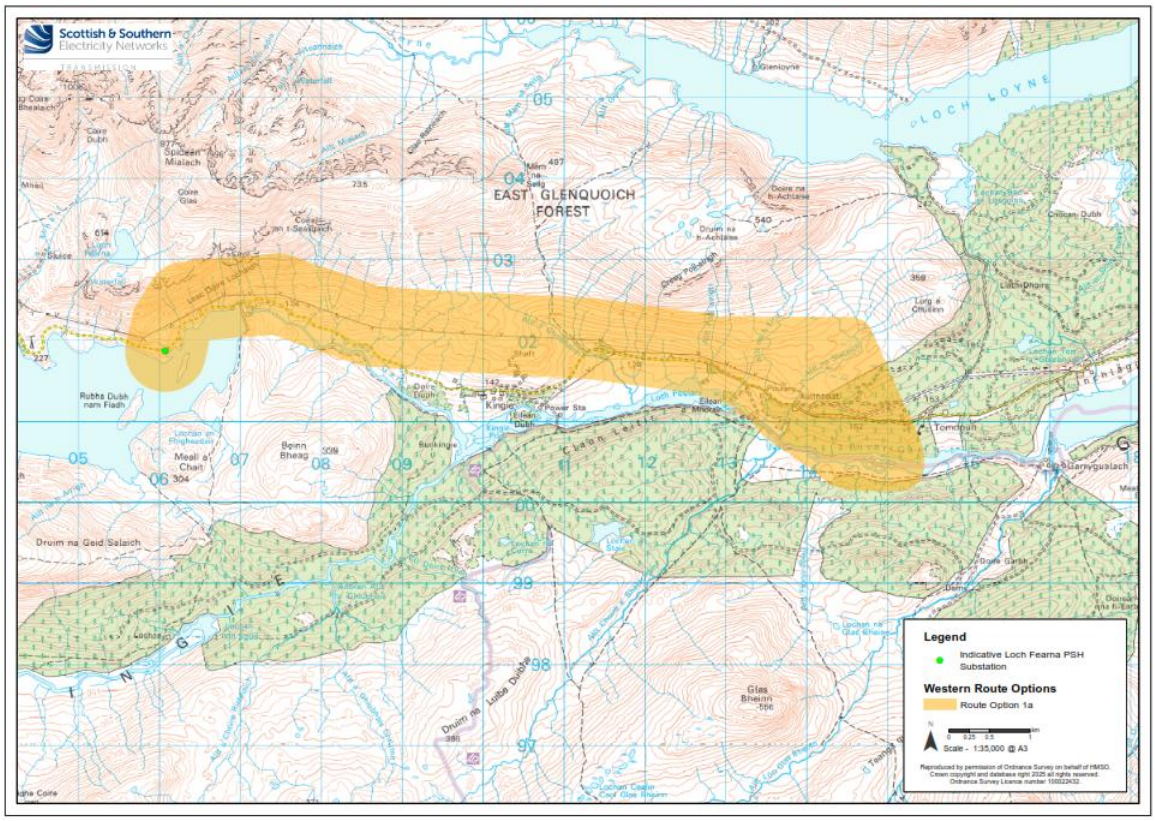
4.2.2 Route Option 1a would commence from the connection point at Fearna PSH substation to the north of Loch Quoich Dam. The route option travels east, passing within the vicinity of the C1144 public road to Kinlochhourn and Gearr Garry, and to the north of Kingie and Loch Poulary. The route option then continues south-eastwards for approximately 2 km where it terminates within an area of forestry west of Tomdoun.

4.2.3 The route option broadly follows the route of existing electrical infrastructure in the form of the existing 132 kV steel lattice OHL between Loch Quoich Dam and Kingie, and the 132 kV wood pole OHL between Kingie and Aberchalder (itself a replacement for the previous 132 kV steel lattice OHL). These OHLs are proposed to be dismantled once the proposed Skye Reinforcement Project has been constructed and energised. At Loch

Quoich Dam, three New Suite of Transmission Structures (NeSTS)[13] form a permanent replacement to the existing towers in this location following a landslip in 2018[14]. Other low voltage distribution electrical infrastructure is also present within this area.

4.2.4 The location of Route Option 1a is shown in **Plate 4.2** (see also **Figure 1**), whilst photographs of the route option are provided in **Plate 4.3** below.

Plate 4.2: Route Option 1a



[13] A project to create and implement a new design of overhead transmission line structures.

[14] Highland Council (2018) Loch Quoich Landslip Update [online] Available at: https://www.highland.gov.uk/news/article/11500/loch_quoich_landslip_update#:~:text=On%20Monday%2012%20November%20a%20very%20significant%201km,spillway%2C%20forcing%20power%20station%20operations%20to%20be%20stopped [Accessed: February 2025]

Plate 4.3: Route Option 1a Photographs

Photo 1: View from C1144 along the northern edge of Loch Cuaich looking south at the proposed site of the Fearna PSH substation where Route Option 1a would commence.

Photo 2: View beside C1144 at the northern edge of Loch Cuaich looking east.

Photo 3: View south of C1144 looking west towards Loch Quoich Dam where Route Option 1a would travel from.

Photo 4: View from C1144 looking southeast along the northern edge of Loch Poulary where Route Option 1a would continue east for approximately 4 km before termination.

4.3 Route Option 1b

4.3.1 Route Option 1b represents the more southerly route option of the western route options and is approximately 10 km in total length. It is generally 1 km in width, though it expands to approximately 2 km in width where a connection into the eastern route options would be required.

4.3.2 Route Option 1b commences from the connection point at Fearna PSH substation and travels south-west, encompassing the eastern extent of Loch Cuaich, Loch Quoich Dam, and the northeastern edge of Loch Cuaich. It would continue southeast, crossing the Gearr Garry, passing to the north of the summit of Beinn Bheag to then remain on the south side of Gearr Garry, Kingie and Loch Poulary. The route option then continues for approximately 2.5 km south-east, crossing through an area of forestry and over the River Garry. Route Option 1b continues east before terminating within an area of forestry by Tomdoun.

Loch Cuaich Crossing

4.3.3 As shown on **Figure 1**, this route option requires to cross the eastern extent of Loch Cuaich. As discussed in **Section 2.2**, there are two options to complete this crossing, either by tall OHL towers or via an HDD cable and construction of a CSE compound close to the shore to facilitate transition back to OHL. Both options are considered in this report.

4.3.4 The location of Route Option 1b is shown in **Plate 4.4** (see also **Figure 1**), whilst photographs of the route option are provided in **Plate 4.5** below.

Plate 4.4: Route Option 1b

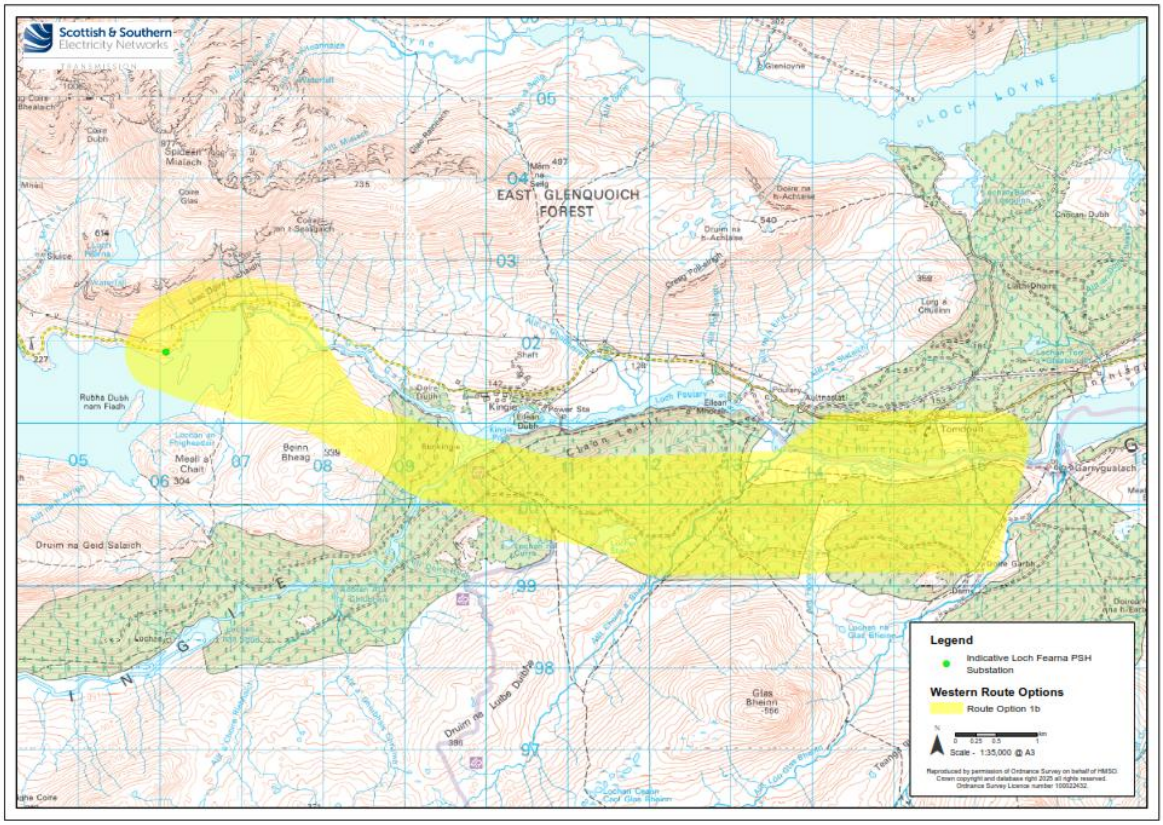


Plate 4.5: Route Option 1b Photographs

Photo 1: View from track along the northern edge of Loch Cuaich looking southeast at the proposed site of the Fearna PSH substation where Route Option 1b would originate and require to cross the loch.

Photo 2: View from track to the northeast of Loch Cuaich looking west where Route Option 1b would travel from west to east.

4.4 Route Option 1c

4.4.1 Route Option 1c represents the most central route option of the western route options and is approximately 10 km in total length. It is generally 1 km in width, though it expands to approximately 2 km in width where it crosses Loch Cuaich and Gearr Garry glen.

4.4.2 Route Option 1c commences from the connection point at Fearna PSH substation and travels south-west, encompassing the eastern extent of Loch Cuaich and Loch Quoich Dam before travelling northeast, passing to the north of the summit of Beinn Bheag and travelling the same route as Route Option 1b.

4.4.3 Route Option 1c then differs from Route Option 1b by turning north-east to cross the Gearr Garry glen, the Gearr Garry river and the C1144 public road before continuing on the northern side of Gearr Garry, Kingie and Loch Poulary. Route Option 1c would then continue south eastwards along the northern edge of Gearr Garry following the same route as Route Option 1a before terminating within an area of forestry west of Tomdoun.

4.4.4 To the north of the River Garry, as per Route Option 1a, Route Option 1c broadly follows the route of existing electrical infrastructure in the area.

Loch Cuaich Crossing

4.4.5 As per Route Option 1b, this route option would also require crossing the eastern extent of Loch Cuaich, with both OHL and HDD options under consideration in this report.

4.4.6 The location of Route Option 1c is shown in **Plate 4.6** (see also **Figure 1**), whilst photographs of the route option are provided in **Plate 4.7** below.

Plate 4.6: Route Option 1c

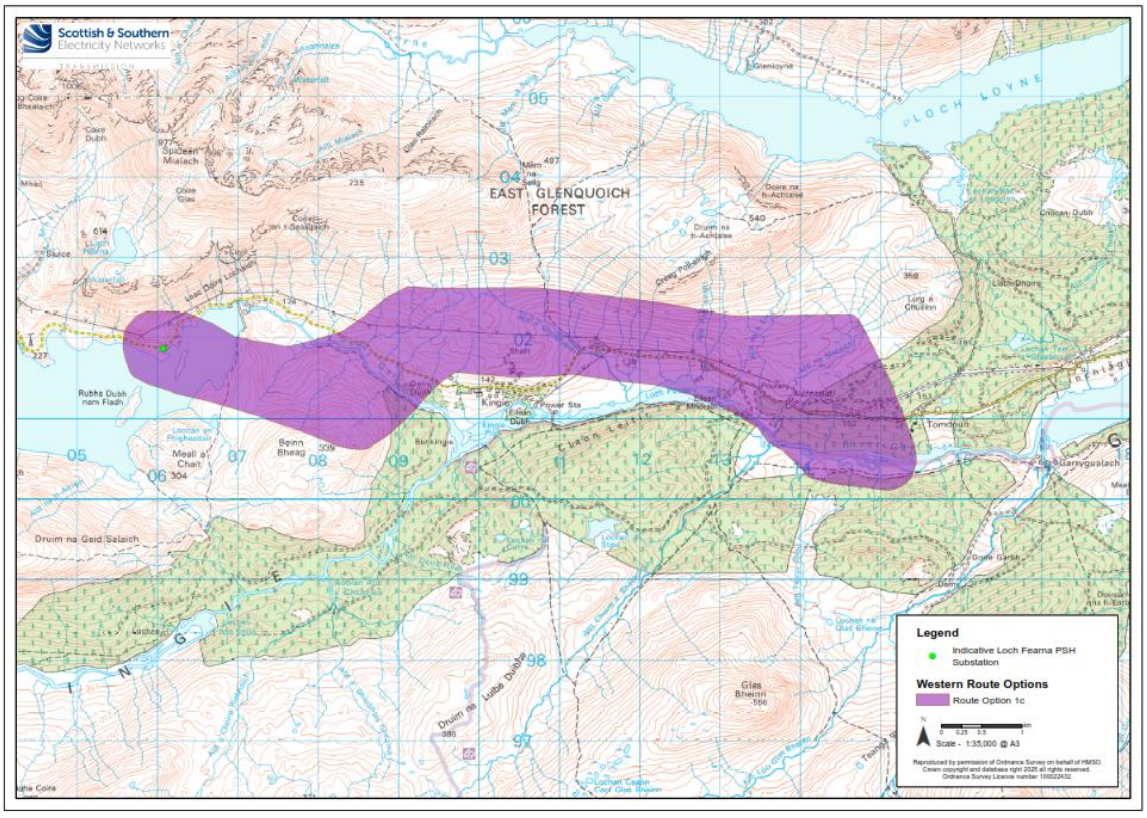


Plate 4.7: Route Option 1c Photographs

Photo 1: View south of C1144 along the northern edge of Loch Cuaich looking east from the proposed site of the Fearna PSH substation where Route Option 1c would originate and require to cross the loch.

Photo 2: View from C1144 north of Loch Poulary where Route Option 1c would travel from following the crossing over Gearr Garry Glen, looking west towards Loch Cuaich.

Eastern Route Options

4.5 Route Option 2a

4.5.1 Route Option 2a passes to the north of Loch Garry and is approximately 17 km in length. Route Option 2a would travel in an easterly direction to the north of Loch Garry and the minor road to Kinlochhourn. The route option would require crossing the A87 before continuing towards Loch Lundie. This route option is largely routed through commercial forestry plantations and areas of woodland, and comprises the 132 kV wood pole OHL between Kingie and Aberchalder. Route Option 2a would then continue to travel in a south-easterly direction to the south of Loch Lundie, before connecting into the proposed Loch Lundie substation.

4.5.1 Due to the existing electrical infrastructure in the area, as well as the proposed Skye Reinforcement Project, the route option extends to approximately 1.5 km in width in places to allow flexibility in the consideration of route and alignment options if this option were progressed. Additionally, due to the existing electrical infrastructure and other known constraints on the approach to Loch Lundie substation, a section of approximately 2 km of UGC would be anticipated to complete the connection.

4.5.2 The location of Route Option 2a is shown in **Plate 4.8** (see also **Figure 1**), whilst photographs of the route option are provided in **Plate 4.9** below.

Plate 4.8: Route Option 2a

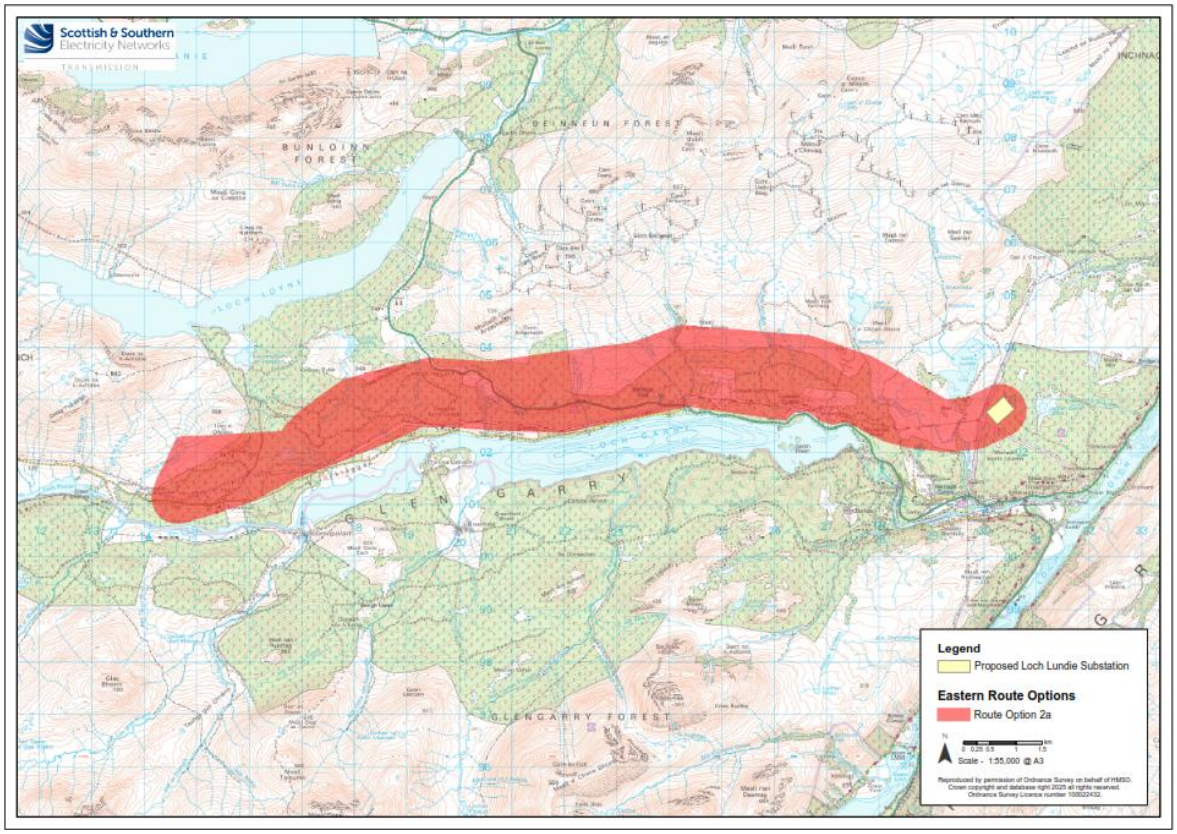


Plate 4.9: Route Option 2a Photographs

Photo 1: View from track to the north of Loch Garry looking southwest where Route Option 2a would travel northeast towards the proposed Loch Lundie substation.

Photo 2: View from the bridge crossing Loch Garry looking northeast where Route Option 2a would travel along the northern edge of Loch Garry.

4.6 Route Option 2b

4.6.1 Route Option 2b is approximately 17 km in length and is predominantly routed through forestry plantation and areas of native woodland (including Caledonian Pinewood) in Glen Garry, to the south of Loch Garry.

4.6.2 From the south of Tomdoun, Route Option 2b travels east through areas of forestry and some open pasture. Near Glenluie and Whitebridge, at the south-eastern extent of Loch Garry, Route Option 2b travels in a north-easterly direction for approximately 2.5 km, where it would cross the A87, the River Garry and popular walking routes. Route Option 2b then passes Faichem to the north-west before travelling in an easterly direction for approximately 2 km where it would connect into the proposed Loch Lundie substation. Due to the existing

electrical infrastructure and other known constraints on the approach to Loch Lundie substation, a short section of approximately 2 km UGC would be anticipated to complete the connection into Loch Lundie substation.

4.6.3 The location of Route Option 2b is shown in **Plate 4.10** (see also **Figure 1**), whilst photographs of the route option are provided in **Plate 4.11** below.

Plate 4.10: Route Option 2b

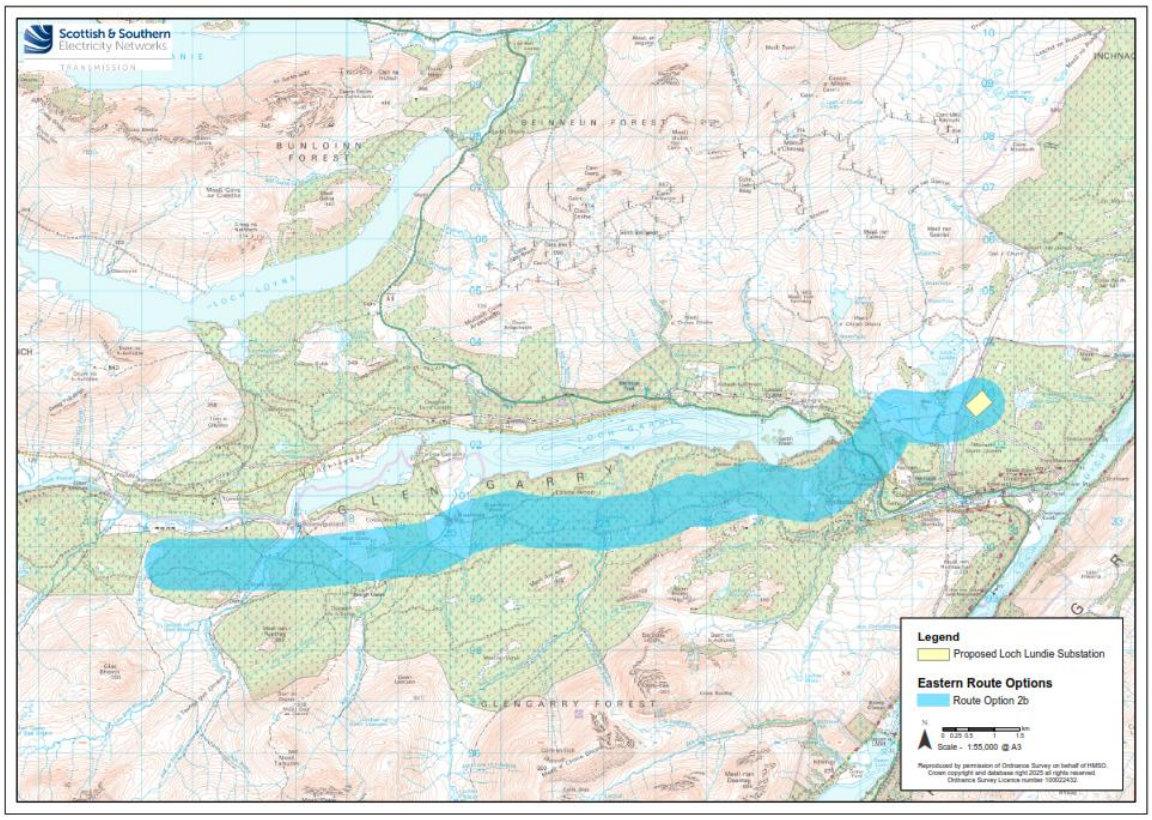


Plate 4.11: Route Option 2b Photographs

Photo 1: View from track along northern edge of Loch Garry looking south across the loch, where Route Option 2b would follow along the southern banks of Loch Garry.

Photo 2: View from track looking southwest towards Route Option 2b.

Photo 3: View from the track looking northeast where Route Option 2b would travel in the same direction for approximately 11 km before terminating at the proposed Loch Lundie substation.

Photo 4: View from the proposed Loch Lundie substation location looking southwest where Route Option 2b would continue travelling northeast.

4.7 Route Option 2c

4.7.1 Route Option 2c represents the most northerly of the three eastern route options and is approximately 18 km in length.

4.7.2 From Tomdoun, Route Option 2c would ascend the forested slopes in a north-easterly direction towards Cnocan Dubh and the A87. After crossing the A87, Route Option 2c would then travel eastwards to the south of the existing Beinneun Wind Farm across often steep and hilly terrain. Route Option 2c would continue to travel in a south-easterly direction to the south of Loch Lundie, before connecting with the proposed Loch Lundie substation. Due to the existing electrical infrastructure and other known constraints on the approach to Loch Lundie substation, a short section of UGC would be anticipated to complete the connection into Loch Lundie substation.

4.7.3 The location of Route Option 2c is shown in **Plate 4.12** (see also **Figure 1**), whilst photographs of the route option are provided in **Plate 4.13** below.

Plate 4.12: Route Option 2c

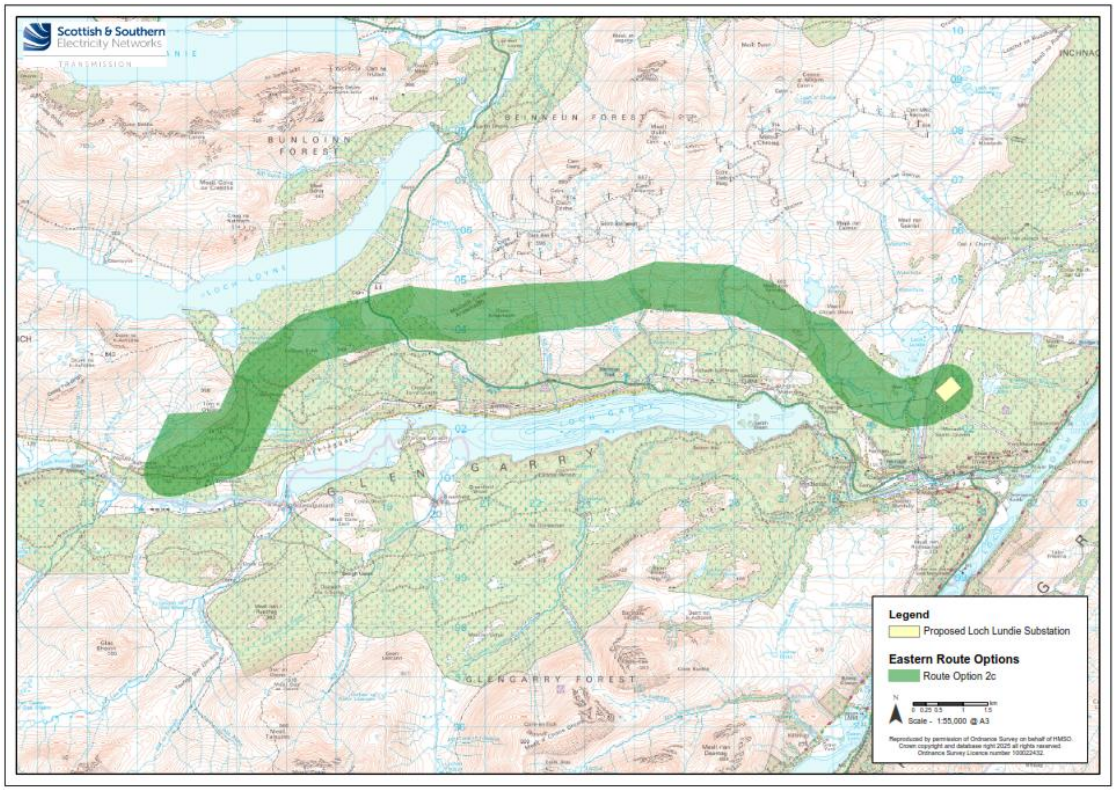


Plate 4.13: Route Option 2c Photographs

Photo 1: View from A82 looking southwest towards the direction of Loch Cuach.

Photo 2: View from the proposed Loch Lundie substation location (behind) looking southwest where Route Option 2c would travel.

5. ENVIRONMENTAL BASELINE

5.1 Introduction

5.1.1 This section of the report describes the environmental baseline and key constraints within, and within the vicinity of, the Corridor, with a particular focus on those constraints relevant to the route options under consideration. This section makes reference to **Figures 2** to **12** which display the various designations and environmental features discussed throughout.

5.2 Local Context

5.2.1 The Corridor (illustrated in **Figure 1**) is located within the local authority area of The Highland Council (THC). Extending eastwards from the eastern extent of Loch Cuaich, the Corridor encompasses Loch Garry and the Glen Garry valley, with Invergarry and Loch Lundie located near its eastern extent.

5.2.2 The landscape of this area is characterised by large expanses of coniferous forest plantation which cloth the slopes to the east and west of the large open waterbodies of Loch Garry and Loch Poulary. At the western end of the Corridor, open, moorland slopes with small clumps of native woodland characterise a steep-sided valley which contains the Loch Quoich Dam with panoramic views towards the western mountains. Dispersed, rural properties are scattered throughout the Corridor, alongside the lochs and within the edges of the forest (including Tomdoun, Poulary, Inchlaggan and Garrygualach), reached by narrow single-track roads and tracks leading from the A87 and rural road alongside Loch Garry.

5.2.3 Within the Corridor, the presence of other electrical and renewable infrastructure such as wind and hydropower generation is clearly apparent. Loch Quoich Dam to the west of the Corridor stores water for release through tunnels that connect with Quoich Power Station to generate hydroelectric power, whilst other hydropower infrastructure is also present within the Corridor. The presence of wind turbines is noticeable within the eastern parts of the Corridor, with the existing Beinneun Wind Farm and the existing Beinneun Extension Wind Farm, extending within the Corridor to the north and east of the A87. Just outside of the Corridor to the northeast is also the turbines of the Millennium Wind Farm and the Millennium South Wind Farm (see **Figure 12**).

5.2.4 In terms of electrical infrastructure, the existing 132 kV steel lattice OHL between Loch Quoich Dam and Kingie, and the 132 kV wood pole OHL between Kingie and Aberchalder (itself a replacement for the previous 132 kV steel lattice OHL) are noticeable features throughout the Corridor, and it is proposed that these OHLs would be replaced by the Skye Reinforcement Project. Other electrical infrastructure includes the connection from Quoich Power Station to a switching station near Kingie, and other low distribution lines throughout. The Coire Glas Grid Connection is proposed to the eastern extent of the Corridor, which also comprises the existing Fort Augustus to Fort William OHL and the existing Invergarry Tee OHL.

5.3 Environmental Designations

5.3.1 Within the Corridor, the following environmentally designated sites are present (see also **Figure 2** and **Figure 9a/b**):

- West Inverness-shire Lochs Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI), separated across five waterbodies, including Lochs Garry, Loyne, Cluanie, and Lundie, as well as Lochan Bad an Losguinn. Loch Garry is situated at the centre of the Corridor, with Loch Lundie in the north-east corner and Loch Loyne/ Lochan Bad an Losguinn at the northern boundary. Loch Cluanie is approximately 4 km north-west of the Corridor. These sites are designated for their breeding populations of black-throated diver (*Gavia arctica*) and common scoter (*Melanitta nigra*).
- Quoich Spillway SSSI and Geological Conservation Review (GCR) (Code: 1321) site is located within the western extent of the Corridor, along the banks of the River Garry at the outfall of Loch Cuaich. The SSSI and GCR has been designated for excellent exposures of the Quoich Granite Gneiss and its

contacts with the Moine meta sedimentary rocks which it is intruded. The SSSI and GCR site is considered internationally important.

- The Garry Falls SSSI would be within the eastern extent of the Corridor. This small woodland site of 1.83 ha on steep banking on the south side of the River Garry is designated for upland mixed ash woodland with ground flora indicative of base-rich soils, and a rich bryophyte assemblage including nationally scarce species.

5.3.2 In addition, the following environmentally designated sites or areas are present within the wider area (see also **Figure 2**):

- South Laggan Fen SSSI is situated approximately 2.4 km south-east of the Corridor on the shoreline of Loch Cuaich, and is designated for transition open fen habitat.
- River Moriston Special Area of Conservation (SAC) is situated approximately 4 km north of the Corridor, adjoining Loch Cluanie of the West Inverness-shire Lochs SSSI/ SPA, with the River Moriston designated for Atlantic salmon (*Salmo salar*) and freshwater pearl mussel (*Margaritifera margaritifera*).

5.3.3 There are areas of designated or protected woodland throughout the Corridor, including:

- Native Woodland, defined as woodlands where the canopy cover is composed mainly of native species (i.e. over 50 %). Native woodland is identified through the Native Woodland Survey of Scotland (NWSS): a survey of all native woodlands, nearly native woodlands and non-native Plantations on Ancient Woodland Sites (PAWS) in Scotland. NWSS within the Corridor include areas of PAWS with Native pinewood featuring with other Native Woodland categories. The concentrations of NWSS within the corridor occur within the Forestry Land Scotland (FLS) Glengarry woodland;
- In Scotland, Ancient Woodland is defined as land that is currently wooded and has been continually wooded since at least 1750, generally based on the Roy maps. Ancient Woodland Inventory (AWI) is the dataset indicating the areas and categories. Within the Corridor AWI overlaps with NWSS in many areas with the most significant presence within the FLS Glengarry woodland (AWI 1860) and Ardochy wood (Long-established woodlands of plantation origin (LEPO) 1860 & AWI 1860); and
- The Caledonian Pinewood Inventory (CPI) are native Scots pinewoods regarded as surviving (ex-Caledonian Forest) Pinewoods. They are protected under the European Habitats Directive[15] and are included in the UK Biodiversity Action Plan (UKBAP)[16] as a priority habitat. Within the FLS Glengarry Forest, there are 3 recorded sites; Glen Garry, Glen Buck and Bunloyne.

5.4 Natural Heritage

Protected Species

5.4.1 Based upon the presence of suitable habitats and the protected and notable species records returned via the Highland Biological Record Centre (HBRC), the following protected species have been considered:

- A number of buildings are present across the Corridor, primarily along the northern shoreline of Loch Garry and associated with Invergarry village, with extensive native woodland throughout the Corridor likely containing mature and veteran trees with Potential Roosting Features (PRFs). These features are likely to provide suitability for roosting bats, with the wider habitat, particularly woodland edge, scrubland, and well-vegetated watercourses, providing a high level of suitability for commuting and foraging bats. Records of common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle

[15] European Commission, *The Habitats Directive* [online] Available at: https://environment.ec.europa.eu/topics/nature-and-biodiversity/habitats-directive_en [Accessed: February 2025]
[16] JNCC (2019) UK BAP Priority Habitats. [online] Available at: https://jncc.gov.uk/our-work/uk-bap-priority-habitats/ [Accessed: February 2025]

(*Pipistrellys pygmaeus*) within the Corridor were returned via the desk study, identified between 2018 and 2019 within Invergarry village[17].

The distribution, abundance, and connectivity of watercourses and waterbodies within the Corridor and wider landscape indicates there is likely to be otter (*Lutra lutra*) present, with commuting, foraging, and sheltering opportunities present throughout. One record of otter from 2016 was located within the Corridor in the Greenfield Burn to the south of Loch Garry[18].

- This hydrological network and the surrounding riparian habitats provide extensive suitable habitat for water vole (*Arvicola amphibius)* within the Corridor. No records of this species were returned via the desk study. One record of American mink (*Neovison vision*) (an INNS) was returned via the desk study, identified in 2014 where Loch Garry flows into the River Garry in the east.
- The well-connected woodland corridors, comprising both coniferous plantation and native pinewoods (including Caledonian forests), surrounding Loch Garry, provide extensive suitable habitat for red squirrel (*Sciurus vulgaris*) within the Corridor. Several records of red squirrels were returned via the desk study within a 2 km radius of the route options, identified between 2015 to 2021 across the northern shoreline of Loch Garry and within Invergarry village. Records of grey squirrel (*Sciurus carolinensis*) are also notably absent from the Corridor.
- This extensive woodland habitat surrounding Loch Garry provides further suitable habitat for pine marten (*Martes martes*), badger (*Meles meles*), wildcat (*Felis sylvestris*), and hedgehog (*Erinaceus europeaus)*, with these woodlands connecting through to equivalent habitats in the wider landscape. Several records of pine marten were returned via the desk study within a 10 km-radius from between 2013 to 2018, the closest of which was identified in the extensive pinewoods to the south of Loch Garry. No records of badger, wildcat, or hedgehog were returned via the desk study.
- The swathes of open heathland extending across the north and west of the Corridor provide suitable habitat for mountain hare (*Lepus timidus*), particularly in areas of higher elevations.
- Suitable habitat exists for amphibians and reptiles across the Corridor, including the upland heathland, grassland, inland rock and scree habitats, woodland, and wetland. Records of common lizard (*Zootoca vivipara*), common frog (*Rana temporaria*), and common toad (*Bufo bufo*) were returned via the desk study, all identified in 2016 within the heathland and riparian habitats surrounding the River Garry in the east of the Corridor.
- The Corridor is not situated within a Buglife B-Line – a series of invertebrate pathways running through countryside and towns, along which habitat restoration and creation for the purpose of invertebrates is prioritised; nor is it situated within an Important Invertebrate Area (IIA). However, the habitats within the Corridor, including the heathland, grassland, woodland, wetland, and freshwater habitats, all provide a high level of suitability for a range of invertebrate species present in the locale. Hundreds of invertebrate records were returned via the desk study, identified throughout the Corridor and wider locale, notably including odonates, hymenopterans, lepidopterans, and coleopterans.
- The main rivers of the hydrological network within the Corridor, specifically the rivers Garry and Kingie, are recognised as Atlantic salmon rivers, with suitable habitat existing for brown trout (*Salmo trutta*) and Arctic charr (*Salvelinus alpinus*) throughout this network.

[17] Field records (2018-2019) provided by Inverness Bat Group and Katy Marten via the Highland Biological Record Centre.

[18] Field record (2016) provided by Wild Surveys via NBN Atlas, [online] available at: https://records.nbnatlas.org/occurrences/483be7eb-b8bd-4a61-ade7-f932c50a797d [Accessed: February 2025]

Habitats

5.4.2 Desk-based review of available habitat data, including the AWI[19], NWSS[20], Caledonian Pinewood Inventory[21], Carbon and Peatland Map 2016[22], Habitat Map of Scotland (HABMOS) 2017[23], and Ordnance Survey (OS) 1:25,000 maps[24], together with aerial imagery, was used to identify habitat types within the respective route options under the UK Habitat Classification (UKHab) in accordance with the user manual[25]. **Figure 3** displays Annex I habitats and potential Groundwater Dependent Terrestrial Ecosystems (GWDTE) habitats.

5.4.3 Hill ground within the Corridor is dominated by an upland habitat mosaic typical of western Scotland. Wet heathland (UKHab code: h1b6) is the predominant component of this mosaic and is ubiquitous across low to steep gradient ground to the west and northeast of the Corridor, particularly on Beinn Bheag, the East Glenquoich forest area, Glas Bheinn, Beinneun Wind Farm and expansive hill ground to the east terminating at Loch Lundie.

5.4.4 Blanket bog (UKHab code: f1a5) accounts for less ground cover and is concentrated around areas of deep peat which have formed in valleys between prominent topography, as well as across larger expanses of flat ground, typically surrounded by wet heath where the slope gradient increases. Notable extensive bogs occurs surrounding Loch Fearna to the west, northwest of Loch Poulary, within the drainage basin of the Allt na Slataich watercourse, east of Inchlaggan, on the Beinneun Wind Farm plateau, and around Loch Lundie. Blanket bog was under recorded during the desk study and is undoubtedly more prevalent within the upland mosaic where local topography allows for deeper peat accumulation. Degraded blanket bog (UKHab code: f1a6) is present within the Corridor and likely represented by ground cover dominated by purple moor-grass. This habitat is underrepresented and is likely to be a common occurrence where historical management practices and overgrazing has reduced the condition of deep peat habitat.

5.4.5 Upland flushes, fens and swamp (UKHab code: f2c) habitat is displayed as present with the largest extent surrounding Lochan Torr a' Gharbh-uillt. This habitat is likely present on flushed slopes and surrounding watercourses across the upland mosaic and is represented by rush and sedge dominated habitats. Wet heathland and blanket bog are Annex 1 priority habitats of International importance. Degraded blanket bog is a constituent part of the upland heathland mosaic as a subset of Annex 1 blanket bog and is therefore considered to be of Regional importance. Upland flushes, fens and swamp is a priority habitat listed in the Scottish Biodiversity List (SBL) habitat and is of National (Scotland) importance.

5.4.6 Inland rock and scree habitat (UKHab code: s1a) is a common occurrence across steeper ground to the east of Spidean Mialach, south of Druim na h-Achlaise, and on Meall nam Fairneag and is typically encompassed by upland heathland habitats. Inland rock and scree habitat is a priority habitat listed in the SBL habitat and is of National (Scotland) importance.

5.4.7 Dry heath (UKHab code: h1b5) occurs on free-draining soils on steep ground and on exposed hummocks and is likely under recorded during the desk study.

[19] Scottish Government (2024). Ancient Woodland Inventory. [online] Available at: https://data.gov.uk/dataset/c2f57ed9-5601-4864-af5f-a6e73e977f54/ancient-woodland-inventory-scotland- [Accessed: February 2025]
[20] Scottish Government (2024). Native Woodland Survey of Scotland (NWSS). [online] Available at: https://www.data.gov.uk/dataset/da3f8548-a130-4a0d-8ddd-45019adcf1f3/native-woodland-survey-of-scotland-nwss [Accessed: February 2025]
[21] Scottish Government (2024). Caledonian Pinewood Inventory. [online] Available at: https://www.data.gov.uk/dataset/9fe00904-da11-44f7-97c3-f4e617e34ec7/caledonian-pinewood-inventory [Accessed: February 2025]
[22] NatureScot (2024) Carbon and peatland 2016 map. [online] Available at: https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/ [Accessed: February 2025]
[23] NatureScot (2024) The Habitat Map of Scotland. [online] Available at: https://www.nature.scot/landscapes-and-habitats/habitat-data-and-habitat-map-scotland [Accessed: February 2025]
[24] Ordnance Survey (2024) The Habitat Map of Scotland. [online] Available at: https://www.nature.scot/landscapes-and-habitats/habitat-data-and-habitat-map-scotland [Accessed: February 2025]
[25] UKHab Ltd (2023). UK Habitat Classification Version 2.0 [online] Available at: https://www.ukhab.org [Accessed: February 2025]

5.4.8 Alpine and subalpine heath (UKHab code: h1c5) is a restricted to the upper elevations within the Corridor such as the ridge of Spidean Mialach and likely on other altitudinal high points where exposure is greatest. Alpine and subalpine heath and dry heathland are Annex 1 priority habitats of international importance.

5.4.9 Non-native conifer plantation (UKHab code: w2c) is the most common habitat type and land use with the Corridor, encompassing Loch Garry and extending far on all aspects where ground condition is suitable for planting. This woodland cover displays variation in maturity with large parcels of clear-fell associated with rotational management. The non-native other coniferous plantation woodland are not covered by the Highland LBAP, but still provide connectivity across the woodland mosaic and are therefore considered to be of Local importance.

5.4.10 Native conifer woodlands are represented by semi-natural native pinewoods and Caledonian forests (UKHab code: w2a & w2a6) which are interspaced within the non-native cover particularly to the south of Loch Garry. Larger parcels of native pinewoods are present outside of this woodland mosaic, situated on the higher elevations on the south-facing slopes of Cruim na h-Achlaise, and to the north of the Corridor adjacent to Loch Loyne. Caledonian Pinewood woodland is an Annex I habitat of international importance. Native pinewoods are an SBL priority habitat of National (Scotland) importance.

5.4.11 Semi-natural broadleaved woodlands occur within the woodland mosaic within the expansive forestry mosaic to the south of Loch Garry, along the northern shore of Loch Garry, and surrounding the upper reaches of tributaries. Upland birchwoods (UKHab code: w1e) is the most prevalent native woodland type and are scattered across the south of the Corridor and along the River Garry. Upland oakwood (UKHab code: w1a) is well represented on the northern shore of Loch Garry but is sporadic elsewhere, with limited cover to the southeast of Loch Garry and along the eastern portion of the River Garry. A small amount of the upland oakwood is considered to be western acid oak woodland (UKHab code: w1a5) which exists in a mosaic with the woodland cover on the north shore of Loch Garry. Native broadleaved woodland which does not meet the criteria set for the aforementioned woodland habitats has been assigned as other broadleaved woodland (UKHab code: w1g) and is present intermittently across the Corridor, often associated with river and tributary corridors but also in isolated areas to the east of Loch a' Bhainne. Wet woodland (UKHab code: w1d) is present on the western shore of Loch Garry and south of the Lochan Torr a' Gharbh-uillt waterbody. Western acid oak woodland is an Annex I habitat of international importance. Upland birchwood, upland oakwood, and wet woodland are SBL priority habitats of National (Scotland) importance. Other broadleaved woodland cover is likely to correspond to one of the aforementioned native woodland types following field survey.

5.4.12 Upland acid grassland (UKHab code: g1b) is the main grassland habitat type present within the Corridor and occurs within non-native conifer forestry clearings and as an infrequent component of the upland heathland mosaic, situated on free-draining ground. Bracken (UKHab code: g1c) dominated grassland occurs across the Corridor at low to moderate altitude in dry to damp, free-draining mineral soils, often in a mosaic with upland heathland and acid grassland, and in open glades within native woodlands. Other neutral grassland (UKHab code: g3c) is displayed as occurring sporadically across the central and eastern section of the route, particularly associated with estate and farm grounds, including Achadh Luachrach and Greenfield. Upland acid grassland is a common and widespread habitat in the Scottish uplands and is typically of site importance however, where this habitat is considered to be a Nationally (Scottish) important SBL priority habitat where the sward is dominated by mat-grass at higher altitudes. Bracken dominated habitat is considered to of site importance. Other neutral grassland can be of national (Scottish importance) where it is dominated Floristically rich semi-natural species-rich grasslands are listed in the Highland Local Biodiversity Action Plan (LBAP)[26] and are

26 Highland Nature Biodiversity Action Plan (2021-2026) [online]. Available at: Https://Www.Highlandenvironmentforum.Info/Wp-Content/Uploads/2022/01/Highland-Nature-Biodiversity-Action-Plan-2021-2026-_Compressed-.Pdf [Accessed: February 2025]

considered to be of regional importance. Where neutral grasslands are less floristically diverse, they are likely to be of local importance.

5.4.13 An extensive hydrological network is present throughout the Corridor which is located within the River Garry Catchment which includes the River Garry watercourse and a large number of associated tributaries. The River Garry connects four established waterbodies, the Loch Cuaich, Loch Poulary, Doch Doire Aoidheil, and Loch Garry. Loch a' Bhainne and Loch Lundie are present in the northeast of the Corridor and drain into the River Garry. The River Garry is an SBL priority habitat of National (Scotland) importance, with associated tributaries, specifically streams and burns, classified as priorities within the Highland LBAP, and therefore considered also to be of Regional importance. Small upland waterbodies present across the Corridor are likely to constitute Annex 1 habitats and are considered to be of international importance.

5.4.14 The following internationally important Annex 1 habitats (which are afforded greater protection through their inclusion in Annex 1 of the EU Habitats Directive 92/43/EEC) have been identified within the Corridor, as part of the UKHab classification survey conducted as part of the desk study:

- 4010 Northern Atlantic wet heaths with *Erica tetralix*;
- 4030 European dry heath;
- 4060 Alpine and boreal heaths;
- 91A0 Old sessile oak woods with *Ilex* and *Blechnum*;
- 91C0 Caledonian forest; and
- 7130 Blanket bog.

5.4.15 Small waterbodies identified across the Corridor, including Lochan an Staic, Lochan Bad an Lasguinn, Lochan Dubha, and Lochan a' Bhainne are likely to constitute Annex 1 habitats. 3130 Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea* and 3160 Natural Dystrophic Lakes and Ponds are considered to be the most likely Annex 1 freshwater habitats present.

5.4.16 The NWSS indicates that a large portion of the woodland within the Corridor is of native origin (approximately 1566 ha), including the upland birchwoods, upland oakwoods, wet woodland and native pinewoods, and is concentrated on hill ground south of Loch Garry. Woodlands listed as nearly-native comprise a smaller proportion of woodland sites within the Corridor (approximately 94 ha). Woodlands planted on ancient woodland sites (PAWS) are also present within the Corridor (approximately 961 ha), and are interspersed between areas of native woodland, particularly to the south of Loch Garry.

5.4.17 Potential GWDTE habitats are present within the Corridor. Habitats classified as having a moderate dependency on groundwater include wet heathland, which is a dominant habitat across the extensive upland heathland mosaic through the Corridor. Upland flushes, fens, and swamps can have a moderate to high dependency on groundwater. These habitats are restricted and limited in their extent, occurring near watercourses, seepage lines, and around waterbodies. These habitats were likely under recorded during the desk study and may occur with more prevalence where conditions are suitable. Wet woodlands, an uncommon habitat type within the Corridor can have moderate groundwater dependency and occur occasionally adjacent to waterbodies and watercourses.

Peatlands

5.4.18 The Carbon And Peatland Map 2016[22] indicates that Class 1 and Class 2 peatland habitats are present within the Corridor. These peatlands are solely, or dominated by, land with peat soil defined as nationally important carbon-rich soils, deep peat, and priority peatland (see **Figure 4**).

- Class 1 peat is nationally important carbon-rich soils, deep peat and priority peatland. These areas are likely to be of high conservation value. This class covers approximately 2% of the ground cover within

the Corridor and is displayed as occurring at its greatest extent to the east within the River Garry valley floor and at the Allt na Slataich watercourse catchment basin.

- Class 2 peat is nationally important carbon-rich soils, deep peat and priority peatland habitat. These areas have the potential to be high conservation value and restoration potential. This class is extensive across the Corridor (approximately 29% ground cover) and is the main superficial deposit category type listed in the carbon and peatland map 2016[22]. Class 2 peat deposits are most abundant to the northeast and west of the Corridor on moderate gradient hill ground, particularly on south-facing slopes.
- Class 3 soils are mostly carbon-rich soils with some areas of deep peat. The dominant vegetation cover is not priority peatland, but occasional peat forming vegetation can be found. This class covers approximately 8% of the ground cover within the Corridor, occupying plateaus and moderate slopes within the hill ground to the north of the corridor.
- Class 4 soils are not associated with peatland habitats and unlikely to include carbon-rich soils. Class 5 soils have had no peatland habitat recorded. Together with mineral soils (Class 0), unknown soil types (Class -1), and non-soils (Class -2), ground cover not associated with peatland habitats comprises approximately 61% of the Corridor.

5.4.19 Policy 5 of the National Planning Framework 4 (NPF4) 2023 is intended to protect carbon-rich soils, restore peatlands and minimise disturbance to soils from development, which must demonstrate compliance with the mitigation hierarchy in informing project design.

Habitat Management Plans

5.4.20 The Beinneun Wind Farm Outline Habitat Management Plan[27] (OHMP) area is located within the north of the Corridor and has been agreed with the local planning authority prior to development commencing. Mitigation and enhancement of upland heath and mire communities including blanket bog, wet heath, dry heath, and montane heath is the aim of the OHMP.

Ornithology

5.4.21 As noted in the above Environmental Designations Section (**Section 5.2**), the West Inverness-shire Lochs SPA is located within, and within 10 km of the Corridor. The SPA is designated for breeding black-throated diver (*Gavia arctica*) and common scoter (*Melanitta nigra*) and includes Loch Garry and Loch Lundie, the entirety of both waterbodies are within the Corridor, and Loch Loyne which is outwith the Corridor.

5.4.22 There is the potential for black-throated diver and common scoter to commute between Loch Garry and Loch Loyne, both constituent lochs of the SPA, which could pose a risk of collision to some of the route options. There is the potential for cumulative collision impacts along these routes with other similar developments in this area.

5.4.23 Open moorland habitats in the northern part of the Corridor, could support opportunities for breeding and foraging Schedule 1 species including hen harrier (*Circus cyaneus*), merlin (*Falco columbarius*), peregrine (*Falco peregrinus*), greenshank (*Tringa nebularia*), wood sandpiper (*Tringa glareola*) and golden eagle (*Aquila chrysaetos*). Other species that may be found breeding in these habitats include short-eared owl (*Asio flammeus*), ring ouzel (*Turdus torquatus*) and skylark (*Alauda arvensis*); and waders such as golden plover (*Pluvialis apricaria*), dunlin (*Calidris alpina*) and curlew (*Numenius arquata*). There are lochans within the Corridor that could hold breeding red-throated diver (*Gavia stellata*).

[27] Arcus (2014) Beinneun Wind Farm Outline Habitat Management Plan [online] Available at: https://wam.highland.gov.uk/wam/files/2EAFB5DAC8F6552C6F187F4827ED2D06/pdf/11_04152_S36-OUTLINE_HABITAT_MGMT_PLAN-709227.pdf [Accessed: February 2025]

5.4.24 Mature woodland within the Corridor, particularly to the north of Loch Garry provides potential breeding habitat for Schedule 1 species such as white-tailed eagle (*Haliaeetus* albicilla), goshawk (*Accipiter gentilis*), osprey (*Pandion haliaetus*), honey buzzard (*Pernis apivorus*), hobby (*Falco subbuteo*), crested tit (*Lophophanes cristatus*) and crossbill (*Loxia spp.*). There are areas of mature heather that may also be suitable for nesting hen harrier and merlin. During previous surveys of the area for the proposed Skye Reinforcement Project, two osprey nests were located on the south side of Loch Garry. In February 2024 during a site visit a pair of white-tailed eagles were seen in potential breeding habitat within the Corridor, though no breeding activity was recorded. There is a known black grouse (*Lyrurus tetrix*) lek within the Corridor to the north of Loch Lundie and during previous surveys for the Skye Reinforcement Project black grouse were recorded close to the west. During the site visit for this project in February 2024, two female black grouse were observed towards the west end of the Corridor, and two males were observed in the centre.

5.4.25 Other Red-listed Birds of Conservation Concern likely to be found in woodland and scrub habitats within the Corridor include cuckoo (*Cuculus canorus*), grasshopper warbler (*Locustella naevia*), wood warbler (*Phylloscopus sibilatrix*), starling (*Sturnus vulgaris*), mistle thrush (*Turdus viscivorus*), spotted flycatcher (*Muscicapa striata*), whinchat (*Saxicola rubetra*), tree pipit (*Anthus trivialis*), greenfinch (*Carduelis chloris*), linnet (*Carduelis cannabina*) and lesser redpoll (*Carduelis cabaret*).

Soils, Geology and Environment

5.4.26 There are numerous watercourses and lochs within the Corridor. The main watercourse is the River Garry which flows west to east through the centre of the Corridor and is fed by tributaries which drain northwards and southwards. There are several lochs within the Corridor, including Loch Cuaich in the west, Loch Garry which occupies a large proportion of the central and eastern part of the Corridor and Loch Lundie in the east. Loch Garry and Loch Lundie are part of the West Inverness-shire Lochs SPA / SSSI.

5.4.27 The surface water catchments of an unnamed tributary of the River Garry, Garbh Allt and Aldernaig Burn (both of which are tributaries of River Garry) have been designated as Drinking Water Protected Areas (DWPA). The bedrock has also been classified by SEPA as a DWPA, across Scotland. Published geological mapping[28] suggests large scale groundwater storage and movement is unlikely to occur, however, the bedrock might be able to support local and small water abstractions.

5.4.28 SEPA mapping[29] shows floodplains associated with larger watercourses and lochs, although flood extents are generally confined to the watercourse channels and loch banks. Slightly wider flood extents are noted near the confluences of these larger watercourses with smaller tributaries or lochs.

5.4.29 A number of watercourse crossings would be necessary for each route option in the Corridor. Some of these would require crossings over larger watercourses and waterbodies, including Loch Cuaich and the River Garry (see **Figure 5**).

5.4.30 Review of THC private water supplies (PWS) dataset[30] and information obtained from previous surveys associated with the Skye Reinforcement project and Coire Glas Grid Connection project, indicates that there are several PWS located within the Corridor. SEPA also has records of several CAR licences within the Corridor.

[28] British Geological Survey. GeoIndex Onshore. [online] Available at: https://mapapps2.bgs.ac.uk/geoindex/home.html?_ga=2.241931841.2139958313.1715331451-1070663617.1715331451 [Accessed: February 2025].

[29] Scottish Environmental Protection Agency. (2024). SEPA Flood Maps [online] Available at: http://map.sepa.org.uk/floodmap/map.htm [Accessed: February 2025]

[30] The Highland Council. Highland Council Open Map Data Private Water Supplies [online] Available at: https://map-highland.opendata.arcgis.com/datasets/ded172bbade24650bb2c1baec5e0d318/explore [Accessed: February 2025].

5.4.31 Superficial geology within the Corridor is shown by the British Geological Survey to mostly comprise of hummocky glacial deposits with areas of peat[28]. Alluvium is noted adjacent to the larger watercourses particularly the River Garry and the areas of higher elevations are shown to be absent of any superficial deposits.

5.4.32 Areas, particularly towards the west and north, are classified by NatureScot to contain Class 1 or Class 2 peatland (high priority peatland)[22]. Areas of deep peat have been proven by peat probing associated with Fearna PSH Scheme, Coire Glas Grid Connection and the Skye Reinforcement Project OHL.

5.4.33 The bedrock geology comprises metamorphic rocks of psammites and pelites. Igneous intrusions comprising granites and granodiorites are noted across the Corridor, particularly toward the centre and east and are associated with the West Highland Granite Gneiss Intrusions.

5.4.34 With the exception of peat, the Garry Falls SSSI and Quoich Spillway GCR, neither the superficial or solid geology are rare or considered of high value.

5.5 Cultural Heritage

5.5.1 Baseline information on known cultural heritage assets recorded within the Corridor was obtained from datasets curated by Historic Environment Scotland and the Highland Historic Environment Record (HER) as well as obtained from previous surveys for other grid connection projects in the area such as Skye Reinforcement Project OHL and Coire Glas Grid Connection. **Figure 6** shows identified cultural heritage constraints.

Designated Cultural Heritage

5.5.2 Designated cultural heritage assets include those protected by statute (Scheduled Monuments, Listed Buildings, Conservation Areas), or included in national (or international) inventories (World Heritage Sites, Inventory Gardens and Designed Landscapes, and Inventory Historic Battlefields). Designation is the legal recognition of some of our most important historic sites and places[31] and all such sites or places are recognised as being of national (or international) heritage value.

5.5.3 There are no Scheduled Monuments, Conservation Areas, World Heritage Sites, Inventory Gardens and Designed Landscapes, or Inventory Historic Battlefields within the Corridor.

5.5.4 There are six Listed Buildings within the Corridor including:

- Two of Category B:
  - Invergarry Tigh-Mhonaidh (Former Hospital) (LB 6858);
  - Great Glen Hydro Electric Scheme, Quoich Dam and Intake Gatehouse Towers (LB 51704);
- Four of Category C:
  - Greenfield Farm, Cruck Framed Barn (LB 50834);
  - Invergarry Post Office and Shop (LB 6859);
  - Invergarry Old Mill by Post Office/Shop (LB 6860); and
  - Invergarry Suspension Footbridge over River Garry by Hydro Dam (LB 6828).

5.5.5 Only three of these (one Category B Listed and two Category C Listed) lie within any of the route options.

[31] Historic Environment Scotland (2019) 'Designation Policy and Selection Guidance' Historic Environment Scotland (HES), Edinburgh.

Cultural Heritage Assets

5.5.6 Other cultural heritage assets include those that are not protected by statute or included in national (or international) inventories, but which nevertheless have archaeological of historic interest and are valued at national, regional or local levels. Records of these assets are held within the Local Authority HER.

5.5.7 The Highland HER holds records for 66 non-designated heritage assets within the Corridor, and one entry for a general photographic view of Tomdoun that has no heritage value.

5.5.8 The HER sites recorded cover a wide range of monument types from a variety of archaeological periods; from cairns and crannogs, likely to be of prehistoric date, to abandoned or cleared townships, farmsteads and field systems of medieval or post-medieval date. Also recorded are modern, 20th century features associated with the Quoich Hydroelectric Power Station. Three sites are recorded as findspots: all are artefacts of prehistoric date. Artefact findspots are not a constraint but hint at archaeological potential in the vicinity.

5.6 People

Proximity to Dwellings

5.6.1 Within the Corridor, dispersed, rural properties are scattered throughout, alongside the lochs and within the edges of the forest (including Tomdoun, Poulary, Inchlaggan and Garrygualach), reached by narrow single-track roads and tracks leading from the A87 and the minor road alongside Loch Garry that leads to Kinlochhourn. Invergarry forms the largest concentration of dwellings within the Corridor, to the east.

5.7 Landscape and Visual

Context

5.7.1 The Corridor is located within a wider landscape of rugged mountain ranges and moorland plateaus. These larger scale landscapes are cut through by broad low-lying straths, often featuring lochs and meandering rivers, which form corridors cutting through the upland landscape and form a focus for settlement, and often have a more intimate, small-scale character. Hydro and wind development is found within the surrounding areas particularly to the north whereas the upland moorland to the south and west is more undeveloped.

5.7.2 The Corridor encompasses much of Glen Garry, which is characterised by a mosaic of coniferous forestry, woodland and open pasture, with coniferous forestry being particularly dominant on the southern side of the glen, interspersed with remnants of Caledonian Pinewood and patches of native woodland. Water forms a central feature, with the River Garry flowing through Loch Garry and Loch Poulary. Settlement is relatively sparse, consisting of scattered crofts and estate houses, many of which are situated in a linear pattern along transport routes which run along the valley floor, with a larger settlement cluster at the eastern end around Invergarry.

5.7.3 To the west the landscape opens up around Loch Cuaich, where the more intimate and enclosed character within Glen Garry gives way to open moorland and extensive views across the loch towards the surrounding hill ranges. Although there is an increasing sense of remoteness, the Loch Quoich Dam at the western end of the loch and the existing 132 kV OHL which runs above the minor road on the northern side of the loch contribute to a sense of development.

5.7.4 To the east the landscape is defined by the dramatic landform of the Great Glen which cuts across the landscape in a south-west to north-east direction. The presence of the A82, A87 and the Caledonian Canal, as well as the settlement of Invergarry and the presence of electrical infrastructure contribute to a more developed character within this part of the landscape.

Protected and Designated Landscapes

5.7.5 The western end of the Corridor is situated within the Moidart, Morar and Glen Shiel Special Landscape Area (SLA), which is a regional level designation identified and designated by The Highland Council in its document 'Assessment of Highland Special Landscape Areas'[32]. The special qualities of this landscape include a pattern of east-west-aligned mountain ridges, deep glens and lochs typical of the West Highland landscape and the description notes that the "*quiet, uninhabited glens and isolated peaks create a landscape experience where the sense of wildness, and tranquillity are key qualities*".

5.7.6 A small part of the Corridor would also be located within the Kinlochhourn - Knoydart - Morar Wild Land Area (WLA 18) (see **Figure 7**). WLAs have been defined by NatureScot as those areas comprising the greatest and most extensive areas of wild characteristics within Scotland. Although not a designation, these areas are given protection within the Planning System through Scottish Planning Policy (SPP).

5.7.7 The Key Qualities of WLA 18 are identified by NatureScot[33] and are detailed in **Table 5.1**.

Table 5.1: Qualities of Designated and Protected Landscapes

Designation / Protected Landscape	Special / Key Qualities relevant to the Proposed Development
Moidart, Morar and Glen Shiel SLA	• Distinctive West Highland Composition, including: ○ The pattern of east-west-aligned mountain ridges, deep glens and lochs [which] typifies the West Highland landscape. This is popular with visitors world-wide, and images of the landscape are often used to represent and promote some of the distinctive qualities of Scotland. The opportunity to reach many high peaks and to sustain height over long distances makes this area particularly popular for hill walking and climbing. ○ Much of the area represents the "back door" into Knoydart, Glenshiel and Kintail. At Kinlochhourn and the junction of Glen Dessary and Glen Pean at Strathan, long distance walking routes proceed west. Apart from the sporting estates and a limited number of forestry and hydro workers, the main users of this area are hillwalkers and wilderness enthusiasts who typically engage in multi-day treks. ○ Loch Morar is something of a hidden gem, a very large, deep freshwater loch with attractive wooded islands at its eastern end, and a shoreline with many small bays and headlands which is almost completely undeveloped. ○ The area is very sparsely populated, particularly in the central and northern areas, with most communities lying close to the A830 road from Glenfinnan to Mallaig and around the southern end of Loch Shiel. ○ Quiet, uninhabited glens and isolated peaks create a landscape experience where the sense of wildness, and tranquillity are key qualities. ○ Appreciation of the landscape is strongly influenced by the weather with the pattern of systems strongly affected by the Atlantic to the west and able to change rapidly. Spectacular sunsets are often obtained from areas of high ground and coastal locations looking west.

[32] Horner + Maclennan and Wood, M. (2011). Assessment of Highland Special Landscape Areas. Commissioned by The Highland Council in partnership with Scottish Natural Heritage. June 2011.

[33] NatureScot (2017). Description of Wild Land Area 34. Reay – Cassley [ONLINE] Available at: https://www.nature.scot/sites/default/files/2021-06/Wild%20land%20Description%20Reay-Cassley-July-2016-34.pdf [Accessed: February 2025]

Designation / Protected Landscape	Special / Key Qualities relevant to the Proposed Development
	○ Within the landscape there is a rich local heritage of battle sites, places of refuge, and historical associations with the Jacobite uprisings and their aftermath, this creates a strong sense of historic connection between the past and present landscape. ○ The A830 (Fort William – Mallaig) 'Road to the Isles' follows a well-defined glen which forms a major dividing line through the West Highlands - between the higher mountains to the north and the lower, yet still rugged, peaks of Moidart to the south. Running approximately parallel is the West Highland Railway line which crosses Glen Finnan on an iconic viaduct. In the north, the A87 (Invergarry – Kyle of Lochalsh) road hugs the shore of Loch Cluanie before winding through the remote Glen Shiel. ○ There is an intricate coastline both diverse, and intimate with rocky promontories containing white sandy beaches, impressive dunes and machair habitats, interspersed with scattered crofting and fishing settlements and fringed by rich native woodlands. Popular for its sand beaches and superb vistas, an integral feature of these views is the foreground detail provided by large numbers of skerries. Loch nan Ceall is particularly notable in this regard. ○ This provides a stimulating sense of place and strong contrast of scale with the mountains. It also offers expansive views to the sea and distinctive profiles of the mountainous islands to the west.
WLA 18: Kinlochhourn - Knoydart - Morar	• High, remote, rugged and rocky mountains with a strong sense of naturalness and awe – some angular in profile with sweeping peaks, and some more massive in form; • A very remote interior drawing adventurous and experienced hillwalkers; • Spectacular deep glens and lochs cut through the high mountains and hills, strongly influencing visibility, remoteness and access through the landscape; and • Secluded and elevated rocky cnocan and plateaux, containing hidden depressions and lochs with a strong sense of sanctuary.

Landscape Character Types (LCTs)

5.7.8 The Landscape Character Assessment of Scotland, undertaken by NatureScot[34] identifies the following Landscape Character Types within the Corridor, as illustrated on **Figure 8**.

- LCT 220: Rugged Massif – Inverness;
- LCT 235: Broad Forested Strath;
- LCT 237: Rocky Moorland – Lochaber; and
- LCT 239: Interlocking Sweeping Peaks – Lochaber.

5.7.9 Baseline descriptions of these LCTs are summarised in **Table 5.2** below:

[34] Scottish Natural Heritage. (2019). Scottish Landscape Character Types Map and Descriptions [online] Available at: https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions [Accessed: February 2025]

Table 5.2: LCT Sensitivity

LCT	Summary	Sensitivity Rating
LCT 220: Rugged Massif – Inverness	This landscape is valued for its wild upland character and scenic qualities, although its sensitivity is reduced by the presence of existing large scale infrastructure, mainly Beinneun Wind Farm.	Medium
LCT 235: Broad Forested Strath	This landscape is somewhat valued for its scenic views and recreational opportunities, although its sensitivity is reduced by the presence of forestry as well as existing OHL infrastructure and wayleaves. Commercial forestry is potentially able to accommodate this type of development, although some smaller scale settled landscapes would be more sensitive to change. Existing communication corridors also offer potential to accommodate new development, although can be susceptible to cumulative impacts unless sensitively designed.	Low-Medium
LCT 237: Rocky Moorland – Lochaber	This LCT is somewhat valued for its upland character, and a part of it falls within the Kinlochhour, Knoydart and Morar WLA. Its main sensitivities relate to its rugged and remote character and open slopes which are sensitive to vertical elements such as overhead lines. However, sensitivity is reduced locally by the presence of existing infrastructure such as OHLs, dams, commercial forestry and major roads.	Medium
LCT 239: Interlocking Sweeping Peaks – Lochaber	This LCT is valued for its scenic quality, montane character and sense of wildness The presence of an existing overhead line and roads compromise perceptions of wildness locally to some extent. However, the open, montane character, valued views and predominantly wild characteristics mean this LCT is of high susceptibility to change of the type proposed. Where existing overhead lines are present there is also a high susceptibility to cumulative change.	Medium-High

Potential Visual Receptors

5.7.10 Visual receptors within and around the Corridor comprise individuals obtaining views from building locations, routes and other popular and promoted outdoor viewing locations.

5.7.11 Settlement is mostly focused towards the east of the Corridor around Invergarry, with some scattered properties and smaller clusters located within Glen Garry. Within the glen, settlement is largely focused on a linear pattern following the minor public road on the northern side of the glen, including properties at Tomdoun, Kingie, Poulary and Aultnaslat, with a few scattered properties south of Loch Garry.

5.7.12 Views of the route options in the Corridor may be obtained from the A87 which passes through Invergarry and follows the northern shore of Loch Garry before turning north towards Loch Loyne, as well as from the C1144 minor public road which runs along the northern side of Glen Garry to Kinlochhourn.

5.7.13 Potential, views may also be obtained by users of Core Paths, Scottish Hill Tracks and other walking routes within the Corridor, including Scottish Hill Track 257a from Glen Garry to Loch Shiel, Scottish Hill Track 247 to Strathan (Loch Arkaig), Scottish Hill Track 259 which passes by Loch Lundie as well as recreational routes around Whitebridge. Other paths and forest tracks within the Corridor may also be used recreationally and be sensitive to views of the Proposed Development. Recreation is discussed further in **Section 5.8** below.

5.8 Land Use and Recreation

5.8.1 This section considers land use and recreation within the Corridor, specifically commercial forestry and agriculture, and recreational use and amenity. Woodland and forestry designations and protected areas can be seen on **Figure 9a** and **9b**, and these are discussed in **Section 5.3**, above. Agriculture can be seen in **Figure 10**, and recreational use and amenity can be seen on **Figure 11**. In addition to this, the existing overhead line infrastructure within the Corridor and other proposed developments have been included on **Figure 12**.

Forestry

5.8.2 Forestry is an extensive land use within the Corridor. The forests and woodlands within the Corridor are both privately and publicly owned. The woodland areas are largely actively managed and are within a period of felling and replanting. All stages of woodland from bare ground awaiting replanting through to mature forest are present. The woodland objectives appear to vary from regenerating Native Pinewoods to productive conifer plantations.

5.8.3 There are several Core Paths and Scottish Hill Tracks that pass through the Glengarry commercial forestry, especially in close proximity to the town of Invergarry. The woodlands are used by walkers and mountain bikers, including a network of forestry tracks that stretch the length of the Glengarry Forest.

5.8.4 The private woodlands are mainly regulated under Scottish Forestry (SF) approved management plans or expired felling licences and replanting conditions. Forestry and Land Scotland (FLS) manage the public forests covered by a Land Management Plan (LMP) currently under review for Glengarry covering the period 2013 to 2023.

5.8.5 AWI and NWSS are discussed in the **Environmental Designations Section (Section 5.3)**.

Agriculture

5.8.6 Areas of agricultural land are classified by The Macaulay System of Land Capability for Agriculture[35] which ranks land based on its potential for productivity and cropping flexibility. There are seven classes in total, where Class 1 has the highest potential for agriculture and Class 7 has the lowest.

5.8.7 Rough grazing is the predominant agricultural land use within the Corridor, with small areas of improved grassland along the glen floor.

5.8.8 The majority of the land in the Corridor, is land capable of use as rough grazing with low quality plants (Class 6.3), with pockets of land capable of use as rough grazing with moderate quality plants (6.2). Along the glen floor within the eastern part of the Corridor there is some Class 5.3 land, which is land capable of use as improved grassland. No grade 1, 2 or 3 agricultural land is present within the Corridor.

Recreation

5.8.9 There are a number of walking routes within the Corridor, particularly around Whitebridge, including:

- Allt na Calliche Trail and Ciste Dubh Trails;
- Core Path LO11.01, LO11.08 and LO11.09 by the River Garry;
- Scottish Hill Track (SHT) 259 / LO11.02 from Aldernaig Burn to Loch Lundy;
- SHT 238a and SHT 239, which pass through the forestry areas south of Loch Garry;
- SHT 257a and SHT 247 at the western end of the glen, which come off the minor road, heading north-west through Glen Loyne and south-west towards Glen Kingie;

[35] The Macaulay Land Use Research Institute. (2010). Land Capability for Agriculture in Scotland [online] Available at: https://www.hutton.ac.uk/sites/default/files/files/soils/lca_map_hutton.pdf [Accessed: February 2025]

- Mountain route, heading to the Gairich summit (summit itself is outside of the Corridor); and
- Heritage Trail, with some trails passing by waterfalls and other tourism attractions.

5.8.10 The River Garry is popular for water sports including kayaking and white water rafting, particularly in the area near Whitebridge. The river, as well as Loch Garry, contain salmon and trout, and provide opportunities for fishing and angling. Commercialised boat hire is also available on Loch Garry.

5.8.11 Tourist accommodation is available, primarily in and around Invergarry, towards the eastern end of the Corridor. There is a caravan and camping ground situated just north of Invergarry, and the Glengarry Heritage Centre at Glengarry Community Hall is also located within the Corridor to the southeast.

5.9 Planning

National Policy

5.9.1 Scotland's fourth National Planning Framework (NPF4) was published by the Scottish Government on 13th February 2023. NPF4 is a long-term strategy for Scotland and is the spatial expression of the Government's Economic Strategy and plans for development and investment in infrastructure.

5.9.2 The successor of NPF3, NPF4 contains specific policies that relate to development of prioritised areas to fulfil Scotland's potential through guiding RSS and LDPs to protect, improve and support Scotland. NPF4 contains Policy 11, supporting opportunities for renewable energy and electrical infrastructure development.

5.9.3 This project is recognised as a National Development (ND3) in NPF4 as the electricity transmission grid requires "substantial reinforcement". Moreover, the project aims to enable grid connection for a Pumped Hydro Storage, which is also recognised as a National Development priority under ND2 'Pumped Hydro Storage', as developing pumped hydro storage "will play a significant role in balancing and optimising electricity generation and maintaining the operability if the electricity system as part of our transition to net zero." The combination of the two recognised National Developments shows that the proposed development is crucial in the Scottish Government's net zero targets and objectives.

Regional and Local Policy

5.9.4 The Scottish Development Plan system is composed of Strategic Development Plans (SDPs) and Local Development Plans (LDPs). While the SDPs offer policy guidance regarding land use and new development for the four major city regions, the LDPs furnish detailed and site-specific planning policies for an area, encompassing all local authority areas and aligning with the SDP where relevant.

5.9.5 The existing Development Plan for the region involving the proposed development, is the Highland-wide Local Development Plan (HwLDP).

5.9.6 The HwLDP is a strategic planning document created by the Highland Council, which covers the entire Highland Council area in Scotland. It sets out the broad strategic themes alongside local land use planning policies and proposals. The HwLDP includes policies concerning the preservation of natural and cultural heritage, residential quality of life, flood prevention, and other matters pertinent to this project.

5.9.7 The HwLDP notes "*additional electricity transmission and distribution infrastructure will need to be developed in Highland in order to realise the region's potential contribution to renewable electricity generation and serve local needs*" (pg. 121). Policy 69 in the Highland-wide local Development Plan outlines the Highland Council's policy on Electricity Transmission Infrastructure, detailing that projects will be considered on the "*strategic significance in transmitting electricity from areas of generation to areas of consumption*." This recognises pumped storage as fulfilling this requirement due to the supporting electrical infrastructure aligning with Policy 69.

Planning Proposals

5.9.8 The identification of planning proposals has been limited to those within or adjacent to the route options under consideration, rather than the full Corridor, as applications outwith the route options are not likely to be affected by a new OHL (see **Figure 12**).

Current Applications

5.9.9 **Table 5.3** below summarises current applications and consented developments within proximity to the Proposed Development.

Table 5.3: Current Applications and Consented Developments

Project	Consent Status	Reference Number
Consented		
Coire Glas Pumped Storage Scheme	Revised Scheme Section 36 Application received consent from ECU in October 2020.	ECU00000577
Bunloinn Wind Farm	Section 36 application received consent from ECU in April 2024	ECU00003304
Proposed		
Skye Reinforcement Project OHL	Section 37 application submitted to ECU in September 2022 and is currently awaiting determination.	ECU00003395
Tomchrasky Wind Farm	Section 36 application submitted to THC in December 2022 and is currently awaiting determination.	22/05955/S36
Quoich Tee Switching Station works and replacement of OHL to Quoich Power Station	Section 37 application submitted to ECU in July 2024, currently awaiting determination.	ECU00005024
Fearna Pumped Storage Hydro project	Section 37 application submitted to ECU in February 2025 and is currently awaiting determination.	ECU00005061
Pre-application		
Beinneun 2 Wind Farm [36]	At pre-application stage. Scoping Report submitted to ECU in November 2023.	ECU00004972
Beinn Bheag Wind Farm [36]	At Scoping stage. Scoping Report submitted to ECU in August 2024	ECU00005186
Loch Lundie Substation	At pre-application stage. Town and Country Planning Application due to be submitted in May 2025.	24/04649/PAN
Coire Glas 400 kV Grid Connection	At pre-application stage. Section 37 application submitted in April 2023, but subsequently withdrawn in March 2025. A new Section 37 application anticipated to be submitted Autumn 2025.	ECU00004736
Peatland Restoration south of the River Garry and Loch Garry	Two applications with no prior approval required, validated in December 2023.	23/05838/PNO and 23/05840/PNO

[36] This Wind Farm is at pre-application stage has not yet applied for a connection to the National Grid via SSEN Transmission.

6. COMPARATIVE APPRAISAL

6.1 Introduction

6.1.1 This section provides a summary of the potential environmental, technical and economic constraints identified for each route option. Reference should also be made to **Figures 2** to **12**.

Environmental Topic Areas

6.2 Natural Heritage

6.2.1 In accordance with SSEN Transmission's guidance 'Procedures for Routeing Overhead Lines and Underground Cables of 132 kV and above',[10] the topic of 'Designations' includes consideration of sites designated for nature conservation, and ancient woodland. The RAG rating is typically applied to the topic as a whole, but for the purposes of this appraisal, given the relevance of both sites designated for nature conservation and presence of ancient woodland across the Corridor, a separate RAG rating is applied to designated sites and ancient woodland. Reference should be made to **Figure 2** and **Figure 9a/b**.

Environmental Designations

West Inverness-shire Lochs SPA / SSSI – Western Route Options

6.2.2 As noted within **Section 5.2**, the West Inverness-shire Lochs SPA / SSSI comprises Loch Garry (including Loch Poulary), Loch Loyne (including Lochan Bad an Losguinn), Loch Cluanie, Loch Affric, Loch Blair and Loch Lundie. These lochs are designated for their breeding populations of black-throated diver (*Gavia arctica*) and common scoter (*Melanitta nigra*). Black-throated divers and common scoters may fly between the constituent lochs of the SPA and so could be vulnerable to collision from OHLs between the lochs, particularly where these constituent lochs are located in close proximity to each other. Furthermore, due to the proximity to the SPA and SSSI, black-throated diver and common scoter may be affected by disturbance during the breeding season. Hydrological connectivity between the designated sites and nearby watercourses is also a consideration given black-throated diver and common scoter are sensitive to changes in water quality associated with subsequent changes to macroinvertebrate abundance.

6.2.3 **Route Options 1a**, intersects the SPA / SSSI at the western extent of Loch Garry. There is some potential for disturbance to black-throated diver and common scoter however, this route option avoids key commuting flight paths between the lochs and poses the least constraint of the western route options. There is also hydrological connectivity with this route option Given the potential for ornithological and hydrological impacts, an **Amber** RAG rating has been applied. However, should this route option cross Loch Poulary to enable a potential connection with Route Option 2b, the RAG rating would be increased to **Red** given potential for increased collision risk.

6.2.4 **Route Option 1b** also intersects the SPA/SSSI at the western extent of Loch Garry but follows a route that increases the risk of disturbance and hydrological connectivity impacts. This route option crosses upstream watercourses associated with the SPA/SSSI, which could affect water quality and food availability for SPA species. Additionally, the proximity of the route to known commuting flight paths may increase the potential for collision risk. Given these constraints, a **Red** RAG rating has been applied. If an HDD cabled solution is implemented for crossing Loch Cuaich, the collision risk would be significantly reduced and thus a revised **Amber** RAG rating would be given for this topic area. However, should this route option cross Loch Poulary, with or without the HDD solution, to enable a potential connection with Route Options 2a or 2c, the RAG rating would be increased to **Red** given potential for increased collision risk.

6.2.5 **Route Option 1c** initially follows a similar route to Route Option 1b by crossing over Loch Cuaich, with comparable risks regarding disturbance, collision potential, and hydrological connectivity impacts. Like Route

Option 1b, this route crosses upstream watercourses associated with the SPA/SSSI, posing a potential risk to water quality and food availability for SPA species. The route is also within proximity to key commuting flight paths, further increasing the potential for collision risk. As a result, a **Red** RAG rating has been applied. This RAG rating would apply to both OHL and HDD crossing options, as well any connection with Route Option 2b given potential collision risk crossing Gearr Garry glen.

West Inverness-shire Lochs SPA / SSSI – Eastern Route Options

6.2.6 **Route Option 2a** is situated directly to the north of Loch Garry for much of its length, and to the south of Loch Lundie at its eastern extent. Route Option 2a would follow the route of existing electrical infrastructure, including the existing 132 kV OHL that is proposed to be replaced by the Skye Reinforcement Project. In relation to potential commuting flights between Loch Garry and Loch Loyne (and vice versa), flights are likely to take the shortest flight path where the intervening topography is lowest. This theoretical flight corridor lies within the vicinity of Inchlaggan, and it is this area that poses the greatest potential for collision risk to these SPA species were this route option taken forward. Whilst following existing transmission infrastructure would likely minimise any 'novel' impact of a new OHL, consideration would also need to be given to the potential for cumulative effects with a new OHL within this route option given the presence of existing and proposed infrastructure. Within the Inchlaggan area, the back clothing effect of topography and the presence of tree cover may provide some opportunities to mitigate collision risk in this area, but this would need further review at the alignment selection stage given the height of the proposed OHL towers and potential for sky lining, as well as the presence of other proposed electrical infrastructure in the form of the Skye Reinforcement Project. On final approach into Loch Lundie substation, as the connection is expected to be UGC, the potential for collision risk associated with SPA species commuting to and from Loch Lundie would be removed. There would also be hydrological connectivity between watercourses within these routes and the designated sites. Given these constraints, a **Red** RAG rating has been applied. Mitigation to potentially reduce this RAG rating would be explored at the alignment selection stage.

6.2.7 **Route Option 2b** is situated to the south of Loch Garry. Loch Blair lies to the southwest of Loch Poulary but given the distance and topography between these lochs there is unlikely to be any risk of collision of SPA species commuting between the lochs. Birds migrating to and from Loch Blair in the spring and autumn are likely to follow Loch Morar and Loch Arkaig to the west and away from any of the route options. Given the greatest potential for collision risk lies between Loch Garry and Loch Loyne (as noted in the paragraph above), an OHL within Route Option 2b would likely have considerably less risk of collision in relation to SPA species. Furthermore, as the final connection approaching the proposed Loch Lundie substation would be UGC, the risk of collision between Loch Garry and Loch Lundie would be removed. In relation to potential impacts on the SPA therefore, this route option would be preferred in comparison with other eastern route options. Given the proximity to the SPA / SSSI however, and the potential for disturbance, an **Amber** RAG rating in relation to the SPA / SSSI has been applied.

6.2.8 **Route Option 2c** is situated to the north of Loch Garry, forming a route across the high ground at Cnocan Dubh between Loch Loyne to the north and Lochan Bad an Losguinn, and Loch Garry to the south. As noted for Route Option 2a, any commuting flights of SPA species would likely utilise a theoretical flight corridor within the vicinity of Inchlaggan and Cnocan Dubh. Given Route Option 2c is located across the high ground within the vicinity of Cnocan Dubh, there is the potential that an OHL within this route option would be sky-lined, which could increase the potential for collision risk for SPA species. Within the vicinity of Cnocan Dubh there are also areas of open ground which, coupled with the requirement to create an OC in forested areas, reduces the amount of tree cover that could serve to minimise collision risk on the higher ground. To the east, Route Option 2c would pass to the south of Loch Lundie as Route Options 2a and 2b do, and like these route options would be undergrounded for the final connection into Loch Lundie substation, removing the potential for collision risk here. The potential for disturbance to SPA species during the breeding season is also likely for this route option

given proximity to the lochs part of the SPA / SSSI. Therefore, given the highly likely potential for disturbance and collision risk associated with this route option, a **Red** RAG rating has been applied.

Ancient Woodland – Western Route Options

6.2.9 The western extents of Route Options 1a, 1b and 1c, near Loch Cuaich, are largely absent of AWI.

6.2.10 The eastern extent of Route Options 1a and 1c comprise small areas of semi-natural woodland along the public road on the north side of Loch Poulary recorded on the AWI that should be easily avoidable. An **Amber** RAG rating has therefore been applied to both of these route options. This rating applies to both OHL and HDD crossing options for Route Option 1c.

6.2.11 Route Option 1b comprises an area of semi-natural woodland recorded on the AWI to the south of the River Garry near Tomdoun. This area also includes Caledonian Pinewood. Further ancient woodland and Caledonian Pinewood is located to the east of the route in its transition with Route Option 2c. Whilst there should be opportunities to avoid areas of ancient woodland, these features could constrain the selection of an appropriate OHL alignment within this route considerably, therefore a **Red** RAG rating has been applied to Route Option 1b. This rating applies to both OHL and HDD crossing options for Route Option 1b.

Ancient Woodland – Eastern Route Options

6.2.12 Route Option 2a contains a number of areas of ancient woodland, both of semi natural and plantation origin, with much of the commercial plantation (LEPO) having undergone felling in recent years. There are also areas of native woodland within the route recorded by the NWSS as typically upland birchwoods (see also paragraph 6.2.21). Whilst there are opportunities within the route option to minimise impacts on ancient woodland, this would need careful consideration at alignment selection stage if this option were taken forward, particularly given the presence of other existing and proposed electrical infrastructure within this route option. As such, a **Red** RAG rating has been applied.

6.2.13 Route Option 2b runs through the Forestry and Land Scotland Glengarry woodland to the south of Loch Garry. Here, large sections of this woodland include Caledonian Pinewood, ancient woodland recorded on the AWI as semi-natural origin, and native pinewoods recorded within the NWSS (see also paragraph 6.2.21). As the route crosses the A87 into Munerigie Wood, further areas of semi-natural ancient woodland are present, typically upland oakwood. An OHL and its associated OC within this route option would require significant felling of Caledonian Pinewood, ancient woodland and native woodland. This route option would be the least preferable in relation to ancient woodland, and is therefore allocated a **Red** RAG rating.

6.2.14 For Route Option 2c, areas of ancient woodland of semi-natural origin are mapped to the west of the route option, southwest of Cnocan Dubh, and towards the eastern extent near Allt Daingean. There may be some opportunities to minimise impact on these areas of ancient woodland at the alignment selection stage should this route option be taken forward, including spanning over areas of AWI where they are present within river gullies. Given the potential to impact ancient woodland, a **Red** RAG rating has been applied.

Other Natural Heritage Designations – All Route Options

6.2.15 There are other sites in the area designated for their nature conservation and geology, namely the Quoich Spillway SSSI (located within Route Option 1a and 1b), the South Laggan Fen SSSI (located within approximately 3.7 km of Route Options 2a, 2b, and 2c) and the Garry Falls SSSI (located within Route Option 2c). For all of these designated sites, it is anticipated that potential impacts would be avoidable through design at the alignment selection stage, and any indirect effects (e.g. through pollution and hydrological connectivity) could be controlled with appropriate mitigation. As such, a **Green** RAG rating has been applied to other natural heritage designations for all route options.

Protected Species

6.2.16 All route options pass through a similar mix of habitats, comprising a mosaic of upland heathland habitats, particularly across the western extent of the Corridor and at higher elevations, with a further mosaic of woodlands of both plantation and semi-natural origins surrounding Loch Garry.

6.2.17 An extensive hydrological network is also present, comprising larger rivers, Garry and Kingie, as well as a series of associated tributaries, extending across all route options. These habitats provide optimal suitable habitat for mammals, including bats, badger, otter, water vole, hedgehog, pine marten, and red squirrel, as well as birds, amphibians, reptiles, fish, invertebrates, and vascular plants/bryophytes. Records of all these species, excluding badger, water vole, and hedgehog were returned via the desk study, identified within a 2 km radius of the respective route options from between 2013 to present. Wildcat may be present; however, the Corridor is located outside of known wildcat priority areas and no records were returned during the desk study.

6.2.18 Potential impacts on suitable habitats for protected and notable species are present within all route options. While both Route Options 2a and 2b are noted for their extensive coverage of woodland habitat, Route Option 2a predominantly comprises plantation woodland, which is of lower ecological importance to protected species. The native woodland present along Route Option 2a is more sporadic and fragmented, making it generally easier to avoid through careful route alignment. In contrast, Route Option 2b has more extensive and continuous areas of native and ancient woodland, including Caledonian Pinewood forests, which poses a greater constraint for route alignment as they are significantly harder to avoid. As such, the habitat loss, fragmentation, and disturbance that would be generated through the required vegetation clearance and wider proposed works in Route Option 2b is likely to impact a greater variety of protected species, specifically including red squirrel, pine marten, and wildcat as species that are dependent on well-connected, mature, closed canopy woodland.

6.2.19 As such, based on the respective levels of habitat provisioning for protected species, Route Option 2b has been allocated a **Red** RAG rating, whilst the remaining route options have been allocated an **Amber** RAG rating. This rating applies to both OHL span and HDD crossing options for Route Option 1b and 1c. Please note, protected species of birds are considered separately in the **Ornithology Section** below.

Habitats

6.2.20 As shown in **Figure 3,** wet heath is the dominant Annex 1 habitat within the Corridor and is present within several areas of all of the route options. This habitat is a constituent part of the upland heathland mosaic, which further comprises Annex 1 blanket bog, dry heath, and montane heath, as well as degraded blanket bog. Route Option 1a and 1c cover the most extensive areas of wet heathland habitat between the western route options, and Route Option 2b covers the most extensive areas of Annex 1 habitats in the eastern route options.

6.2.21 Within the route options, the following Annex 1 habitats are present in order of prevalence:

- Wet heathland: the most prevalent habitat type within Route Option 1a and 1c, where it accounts for approximately 52% and 57% respectively of ground cover and is ubiquitous across the western, central, and eastern sections, compared to Route Option 1b where wet heathland accounts for approximately 23% of ground cover and is generally restricted to the western section to the northwest and southeast of Loch Cuaich. To the east of the Corridor, wet heathland habitat is less prevalent (<20% total ground cover) where Route Options 2a and 2b are situated, and patches of this habitat type are fragmented by extensive woodland cover. Route Option 2c covers higher altitude open moorland, which supports uninterrupted expanses of wet heathland accounting for approximately 55% of ground cover, the greatest extent of all eastern route options.
- Blanket Bog: present to the west of the Corridor where ground cover is dominated by upland moorland. Route Option 1c has the largest ground cover of blanket bog (approximately 10%)

compared to Route Option 1a (approximately 9%) and Route Option 1b (approximately 4%) as this route option crosses more open moorland where blanket bog is a common component. To the east of the Corridor, blanket bog is less prevalent in infrequent patches throughout the woodland mosaic. Blanket bog accounts for approximately 2.5% of ground cover in both Route Option 2a and 2b, which have a greater proportion of higher altitude ground. Blanket bog accounts for <1% of ground cover within Route Option 2b, which predominantly supports woodland cover.

- Dry heathland: uncommon across the route options; however, it is likely that this habitat has been underrepresented. To the west, dry heathland is likely to occur across all route options on dry, sloping ground, but it is considered that it is more common across Route Option 1a and 1c as moderate-high gradient ground comprises a larger part of the route options. To the east of the Corridor, dry heathland is uncommon, with Route Options 2a and 2b having a limited extent of this habitat to the eastern portion surrounding the proposed Loch Lundie Substation. However, due to Route Option 2c having the largest portion of upland habitat, it is likely that the actual dry heathland cover here exceeds that of the other two western route options.
- Montane heathland: present within the Corridor; however, it has not been identified within the route options during the desk study, and it is unlikely to be an integral component of the moorland across the route options.
- Woodland habitats: Caledonian Pinewood forests comprises an integral part of the woodland mosaic that constitutes the majority land cover of Route Option 2b, accounting for approximately 6% of ground cover. These internationally important woodlands are ancient and considered irreplaceable habitats that are afforded additional protection under NPF4. Western oak woodland and Caledonian Pinewood forests are rare to absent within the western route options. The eastern extent of Route Option 1b encroaches upon a scattered stand of Caledonian Pinewood forest (approximately 0.4% cover) and Route Option 1a and 1c encroach on an even smaller extent of this Caledonian Pinewood forest (<0.03% cover). Western oak woodland is common along the northern shore of Loch Garry and accounts for approx. 2% cover of Route Option 2a. Western oak woodland is rare or absent within the other two eastern route options and is not considered to exceed 0.1% ground cover. Targeted woodland clearance of these woodlands and wider potential impacts could be avoided within Route Options 1b, 2a, and 2b, subject to alignment selection and appropriate control measures; however, clearance of surrounding plantation woodland would still generate fragmentation across this habitat mosaic. Woodland clearance within Route Option 2b, including irreplaceable ancient woodlands, would be largely unavoidable.
- Potential Annex 1 waterbodies: present within Route Options 1b, 2a, and 2c and absent from Route Options 1a, 1c and 2b. These features are small in their extent and impacts could be minimised and/or avoided within these route options subject to appropriate alignment selection and control measures.

6.2.22 Based on the classified habitats, all route options pass through peatland areas (see **Figure 4**). Within the western route options, Route Option 1a and 1c extend through the largest expanses of Class 1 and Class 2 peatland, associated with Annex 1 wet heathland and blanket bog areas. Within the eastern route options, Route Option 2c passes through the largest expanse of Class 1 and 2 peatland. Route Option 2c would also pass through the Beinneun Wind Farm Outline Habitat Management Plan area, which is avoided by Route Option 2a and 2b.

6.2.23 As such, based on the presence of Annex 1 and irreplaceable habitat within the route options, Route Option 2b has been allocated a **Red** RAG rating, as it includes the largest extent of native woodland / irreplaceable ancient woodland and woodland Annex 1 habitat (including Caledonian Pinewood), with large-scale felling likely to be unavoidable. The remaining route options have been allocated an **Amber** RAG rating. Route Option 2a would be slightly preferable to Route Option 2c as it would avoid the Beinneun Wind Farm Outline Habitat Management Plan area.

Ornithology

6.2.24 Open moorland habitats (particularly in the vicinity of Route Options 1a, 1b, 1c and 2c) provide opportunities for breeding and foraging Schedule 1 species such as hen harrier, merlin, peregrine, greenshank, wood sandpiper and golden eagle. Other species that may be found in these habitats include short-eared owl, ring ouzel, skylark and waders such as golden plover, dunlin and curlew.

6.2.25 Mature woodland habitats, particularly in the vicinity of Route Options 2a and 2b provide suitable habitat for nesting Schedule 1 species such as white-tailed eagle, goshawk, osprey, honey buzzard, hobby, crested tit and crossbill and other species such as black grouse. Areas of mature heather in the vicinity of Route Option 2b may also provide suitable habitat for nesting merlin and hen harrier.

6.2.26 As discussed in **Section 6.2 - Designated Sites**, there is potential for disturbance to and loss of suitable habitat for qualifying species of the West Inverness-shire lochs SPA and several Schedule 1 / Annex I species. There is also potential collision risk for SPA species associated with commuting flights between constituent lochs of the SPA and SSSI, particularly in relation to Route Option 2a and Route Option 2c, and cumulative effects associated with other existing and proposed electrical infrastructure. It is considered that there may be opportunities to design in a back-clothing effect of local topography and utilise tree cover could reduce the potential for collision risk along Route Option 2a, whereas Route Option 2c crosses higher ground and a new OHL crossing through this route could be sky-lined, increasing the potential for collision risk of SPA qualifying species. Therefore, a **Red** RAG rating has been allocated to Route Option 2a and Route Option 2c for ornithology.

6.2.27 Route Option 2b is situated to the south of Loch Garry. Given the greatest potential for collision risk lies between Loch Garry and Loch Loyne (as noted in the **Designations Section**), an OHL within this route option would likely have considerably less risk of collision in relation to SPA qualifying species. Furthermore, as the final connection would be UGC, the risk of collision between Loch Garry and Loch Lundie would be removed. This would apply to all eastern route options.

6.2.28 Route Option 2b has therefore been allocated a RAG rating of **Amber** for ornithology as there is still the potential for disturbance to and loss of suitable habitat for several Schedule 1 / Annex I species.

6.2.29 For Route Options 1a a RAG rating of **Amber** has been given due to proximity to West Inverness-shire Lochs SPA. However, should this route option cross Loch Poulary to enable a potential connection with Route Option 2b, the RAG rating would be increased to **Red** given potential for increased collision risk. For Route Option 1b, a RAG rating of **Red** has been given as an OHL crossing of Loch Cuaich would increase risk of collision to the species associated with West Inverness-shire Lochs SPA. Should an HDD cable be utilised for the crossing and connects with Route Option 2b, the RAG rating for this route option would be reduced to **Amber** RAG rating. However, should this route option cross Loch Poulary, with or without the HDD solution, to enable a potential connection with Route Options 2a or 2c, the RAG rating would be increased to **Red** given potential for increased collision risk.

6.2.30 For Route Option 1c, a RAG rating of **Red** has been given as an OHL crossing of Loch Cuaich and Gearr Garry glen would increase risk of collision to the species associated with West Inverness-shire Lochs SPA. Should the HDD cabled solution be taken forward and connects with Route Options 2a or 2c, collision risk would reduce, however a **Red** RAG rating would still be applied due to the crossing of Gearr Garry glen. Should this route option cross Loch Poulary, with or without the HDD cabled solution, to enable a potential connection with Route Option 2b, the RAG rating would be **Red** given potential for increased collision risk.

6.2.31 Further bird survey work, comprising vantage point surveys and breeding bird surveys, will continue to be undertaken which will be used to inform alignment selection. Appropriate mitigation measures would need to be implemented to minimise any disturbance / collision risk to protected species.

Soils, Geology and Water Environment

6.2.32 Priority peatland mapping[22] highlights that all the route options would pass through areas of Class 1 and 2 peatlands. Route Option 1a, 1c and 2c would pass through the largest area of Class 2 peatlands. Whichever route option is considered further peat probing will be undertaken to inform alignment stage studies as peat, and areas of deep or extensive peat are avoided where technically feasible.

6.2.33 Watercourse crossings would be necessary for all route options as can be seen in **Figure 5**, and all permanent structures would need to be set back from the watercourse channel to protect against natural river processes leading to watercourse meandering and migration.

6.2.34 SEPA mapping shows floodplains associated with the larger watercourses. Flood extents are generally confined to the watercourse channels. Wider flood extents are noted near the confluences of these larger watercourses with smaller tributaries or lochs, particularly within Route Option 1a and 1c where a larger flood extent is associated with the Allt a' Ghobhainn. Potential for flood risk during the construction stage and the siting of construction related infrastructure would need to be given appropriate consideration for all route options.

6.2.35 THC PWS database indicates that private water supplies are noted within all route options. Three surface water DWPA are recorded: two are north of Loch Garry and crossed by Route Options 1a, 1c, 2a and 2c. The third DWPA is located near Loch Lundie and Route Options 2a, 2b and 2c would all cross it. Potential impacts on the DWPAs and private water supplies will need to be assessed further as part of alignment stage studies.

6.2.36 All route options have been allocated a RAG rating of **Amber** for Geology, Hydrology and Hydrogeology given the presence of peatland, PWS and DWPAs across all routes. This rating applies to both OHL span and HDD crossing options for Route Option 1b and 1c.

6.3 Cultural Heritage

Cultural Heritage Designations

6.3.1 As can be seen in **Figure 6**, there are no Scheduled Monuments within any of the route options and only Route Options 1a, 1b and 2b contain any Listed Buildings.

6.3.2 For Route Option 1a and 1b, one Listed Building (a modern, 20th century hydroelectric scheme dam and intake housing) lies at the western end of both routes, at the east end of Loch Cuaich. It could be easily avoided, and its setting preserved.

6.3.3 For Route Option 2b, a suspension footbridge lies towards the eastern end of the route option, where it would cross the River Garry, and a cruck-framed barn lies at Greenfield towards the centre of the route option. Both could be easily avoided, and their settings preserved.

6.3.4 In terms of designations within the Corridor, there are a small group of Listed Buildings at Invergarry, around the mouth of the Aldernaig Burn, close to its confluence with the River Garry. However, all buildings lie within a wooded valley setting and would likely have no intervisibility with any of the route options.

6.3.5 These listed buildings should not constitute a constraint and therefore, all route options are assigned **Green** RAG rating for designated heritage constraints and there is no clear preference for any one over any other.

Cultural Heritage Assets

6.3.6 For non-designated heritage assets, there is little to distinguish between any of the route options in terms of the character of the assets within them or the density of distribution of heritage assets along their length. Most sites

within the route options are of post-medieval date and mainly relate to historic farming settlement. The identified sites are mainly small in extent, and all are easily avoided during design.

6.3.7 All route options are assigned **Green** RAG rating for non-designated cultural heritage asset constraints and there is no clear preference for any route option

6.4 People

Proximity to Dwellings

6.4.1 **Figure 7** shows the limited number of dwellings and buildings within the Corridor.

6.4.2 Route Option 1a, 1c and 2a have a number of buildings scattered throughout, concentrated in the vicinity of the minor road to Kinlochhourn and the A87. Route Option 2b has a limited number of buildings throughout the route, but there is a concentration of buildings within the vicinity of the A87 near Invergarry, where the route option would require crossing the road. Route Options 1b and 2c are largely absent of buildings.

6.4.3 Given the limited number of buildings within route options, it is anticipated there would be opportunities at alignment stage to avoid close proximity to dwellings. However, the distribution and location of buildings, together with other existing electrical infrastructure, could pose constraints with maintaining an appropriate separation buffer to properties in some routes. Therefore, Route Options 1a, 1c, 2a and 2b have been allocated an **Amber** RAG rating, whilst Route Options 1b and 2c have been given a **Green** RAG rating due to the absence of many buildings.

6.5 Landscape and Visual

Designations

6.5.1 Landscape designations can be seen on **Figure 7**. The western extent of Route Options 1a, 1b and 1c would all pass through the Moidart, Morar and Glen Shiel Special Landscape Area (SLA). While this comprises only the edge of the SLA in an area where other OHLs are already prominent, there is some potential for cumulative impacts with other infrastructure, particularly for Route Options 1b and 1c which are likely to appear prominent if the OHL solution was used to cross Loch Cuaich. The presence of existing OHL infrastructure near Quoich dam as well as the rising landform limits opportunities to find an alignment here for all three route options. The very western extent of Route Options 1a, 1b and 1c also falls within Kinlochourn – Moidart – Morar WLA. Although this is an area of lesser wild characteristics due to the presence of the Loch Quoich Dam, minor road and existing OHLs, it does have valued remote qualities as an approach to the areas of greater wildness.

6.5.2 Should the OHL solution be used to cross Loch Cuaich, Route Option 1b and 1c would appear very prominent and potentially reduce some of the remote qualities of this landscape. This would introduce vertical features which may be prominent in views along the loch, potentially interrupting the characteristic combination of high mountain, glen and loch which forms one of the key characteristics of the SLA. If the HDD solution were to be used to cross the loch, this is likely to reduce potential impacts on the SLA and WLA.

6.5.3 The remaining route options would not pass through any designated landscapes.

6.5.4 Route Option 1a has been given an **Amber** RAG rating for landscape designations, while Route Options 1b and 1c have both been given a **Red** RAG rating should the OHL solution be used to cross the loch. Should an HDD solution be used for crossing the loch, then an **Amber** RAG rating would apply for Route Option 1b. Due to crossing the glen and having the potential to appear prominent in views within the SLA, Route Option 1c would maintain its **Red** RAG score even if the HDD solution were to be used to cross the loch.

6.5.5 As Route Options 2a, 2b and 2c would not pass through any designated landscapes, they have been allocated a **Green** RAG rating for landscape designations.

Landscape Character

6.5.6 Landscape character types can be seen on **Figure 8**.

6.5.7 Route Option 1a, following the route of the existing 132 kV OHL on the northern side of Glen Garry, would pass through a short section of LCT 239: Interlocking Sweeping Peaks – Lochaber, at the western end when leaving Fearna PSH. The rest of the route option follows the transition between LCT 235: Broad Forested Strath and LCT 237: Rocky Moorland – Lochaber, which would offer good opportunities to route linear features, although there is potential for vertical structures to be more prominent at the western end. The route option broadly follows the alignment of the existing 132 kV OHL, and the proposed Skye Reinforcement Project (which would replace the existing 132 kV OHL). This provides an opportunity to use an existing infrastructure corridor, although there is some potential for cumulative effects particularly at the Loch Quoich Dam where a pinch point is present, and also considering the taller height of these towers compared to existing structures. Given these constraints an **Amber** RAG rating has been applied to this route option.

6.5.8 Route Option 1b on the southern side of the glen would likewise start in LCT 239: Interlocking Sweeping Peaks – Lochaber, at the western extent when leaving the point of connection, before continuing through LCT 237: Rocky Moorland – Lochaber. The eastern-most extent of Route Option 1b would pass through LCT 235: Broad Forested Strath. Within the Broad Forested Strath LCT, the route option follows a low-lying route through commercial forestry plantation with good opportunity to accommodate this type of development. In some areas, particularly at the eastern end, pockets of native woodland and Caledonian Pine could be affected leading to localised loss of these landscape features. Although less developed than the northern side of the glen, the undulating landform and forest cover would provide some screening, giving this landscape some capacity to accommodate development of this type, although a potential OC through forestry may be noticeable in elevated views across the glen, and towers may be visible above forestry. The presence of existing OHL infrastructure near Loch Quoich Dam as well as the rising landform limits opportunities for alignment selection at the western end. Should the OHL solution be used to cross Loch Cuaich this would appear prominent crossing the open water and disrupt views along / across the loch, and have potential for cumulative effects with other infrastructure, reducing some of the remote qualities of this landscape, particularly given the height of these towers in relation to existing infrastructure. The HDD solution for this route option would help reduce the prominence of vertical features in this area. A **Red** RAG rating has therefore been applied to Route Option 1b, should the OHL Span Solution be used to cross the loch, due to the limited opportunities for alignment selection and potential for cumulative effects at the western end, particularly crossing the loch. If the HDD Solution was to be used to cross the loch, an **Amber** RAG rating would apply.

6.5.9 Route Option 1c would follow the same route as Route Option 1b at the western end when leaving the point of connection, briefly passing through LCT 239 before continuing through LCT 237. It would then turn north and cross the glen and the Gearr Garry, with the rest of the route option running along the transition between LCT 237, and LCT 235: Broad Forested Strath. Similarly to Route Option 1a, the presence of existing OHL infrastructure near Loch Quoich Dam as well as the rising landform limits opportunities for alignment selection at the western end. The route option would likely appear noticeable crossing the glen and the Gearr Garry, due to the relatively open character at the western end of Glen Garry. As per Route Option 1b, should the OHL solution be used to cross the loch Route Option 1c would similarly appear prominent crossing the open water and disrupt views along / across the loch, as well as have potential for cumulative effects with other infrastructure, reducing some of the remote qualities of the landscape. The use of the HDD solution would reduce effects at the western end. However, a **Red** RAG rating has been applied to Route Option 1c regardless of technology solution used, due to its prominence crossing the glen at the western end of Glen Garry.

6.5.10 Of the eastern route options, Route Option 2a also broadly follows the existing 132 kV OHL through a transition between LCT 235: Broad Forested Strath and LCT 237: Rocky Moorland – Lochaber. These LCTs typically provide good opportunities to route linear features, although consideration also needs to be given to the creation of OCs which could potentially increase landscape impact in some areas, as well as the taller height of these towers compared to existing structures. There is an opportunity to make use of existing or proposed (i.e. the Skye Reinforcement Project) infrastructure corridors within this landscape, although cumulative effects would need to be considered, and in some places opportunities to find a suitable alignment alongside existing or proposed infrastructure may be constrained by steep terrain. There would also be potential for cumulative effects near Loch Lundie given the presence of existing infrastructure as well as the proposed Skye Reinforcement and Coire Glas OHLs, and the proposed Loch Lundie Substation. An **Amber** RAG rating has been applied to this route option.

6.5.11 Route Option 2b, running on the southern side of Glen Garry, mainly falls within LCT 235: Broad Forested Strath with the eastern extent crossing over into LCT 237: Rocky Moorland – Lochaber, which typically provides a good opportunity to route linear features of this type. Within the Broad Forested Strath LCT, the route follows a low-lying route through commercial forestry plantation and felled areas, generally considered to be of lower sensitivity, although there are pockets of more sensitive native woodland and Caledonian Pine, which could result in a localised loss of landscape features. There may also be potential localised impacts to smaller scale settled landscapes in Glen Garry at the eastern end of this route option, where the towers would appear out of scale with existing landscape features. Landform may cause a constraint in terms of finding a suitable alignment at the eastern end where the route crosses the River Garry near Whitebridge, and there is some potential for cumulative effects with the grid connection for Coire Glas with this route option. As for Route Option 2a there would also be potential for cumulative effects near Loch Lundie given the presence of existing infrastructure as well as the proposed Skye Reinforcement and Coire Glas OHLs, and the proposed Loch Lundie Substation. An **Amber** RAG rating has been applied to this route option.

6.5.12 Route Option 2c, which would be situated further to the north of Route Option 2a on higher ground, falls predominantly within LCT 237: Rocky Moorland – Lochaber, fringing the edge of LCT 235: Broad Forested Strath. These LCTs are considered to have some capability to accommodate this type of development although open slopes and high ground are more sensitive. Much of the route would follow the upper line of the forestry, although in some areas it would be required to cross high ground and steep slopes and has the potential to become a prominent feature on the ridgeline. Towards the western extent where the route option crosses more open and elevated land, an OHL within this route option would be likely to be more prominent within the broad, elevated vistas which are a valued aspect of this landscape, and where the introduction of vertical built feature may have wider indirect impact. A steel lattice line would be likely to skyline and may appear prominent in open elevated views, although the larger scale of this landscape and the presence of Beinneun Wind Farm in close proximity may make it more capable of accommodating development of this scale and type. As for the other easterly route options, there would be potential for cumulative effects near Loch Lundie given the presence of both existing and proposed infrastructure in this area. A **Red** RAG rating has been applied to this route option due to its potential to appear prominent along the ridgeline.

Visual

6.5.13 There would be relatively few visual receptors which may gain views of any of the route options. The main route receptors within the Corridor include travellers on the A87 and the C1144 minor road to Kinloch Hourn. A number of recreational routes are also located near Whitebridge and within the forestry area to the south of Loch Garry.

6.5.14 Most notable views for residential visual receptors would be anticipated within Glen Garry, where most properties are concentrated on the northern side of the glen, many along the minor road, including Kingie and Tomdoun. There is a cluster of properties at the eastern end around Invergarry, but views from most of these

properties would be limited by the forested context. However, there is potential for views from properties in more elevated positions such as Faichem, Munerigie and Achadh Luachrach at the eastern end of Glen Garry.

6.5.15 Route Option 1a would run along the northern side of Glen Garry and would be visible above the minor road through Glen Garry in close proximity as well as from some properties within Glen Garry, although vegetation may screen or filter some views. Views from the public road and properties along here are generally focused south across and along the glen, and it would be preferable to find an OHL alignment in the route option to the north of the minor road and properties. This may be challenging for some sections of the route option such as to the south of Creag Poll-airigh, where the steep ground and the presence of the existing 132 kV OHL and proposed replacement Skye Reinforcement Project could pose a constraint. A RAG rating of **Amber** has been applied for this route option.

6.5.16 Route Option 1b would run along the southern side of the glen where there are limited residential receptors. The closest receptors are located at Kingie across the glen, from where the OHL is likely to be visible in relatively close proximity (between 0.5 and 1.5 km away). If this route option were to cross the glen and join Route Option 2a or 2c it would potentially pass close to Tomdoun, depending on the alignment. There may also be visibility from other properties across the glen as well as from the minor road, particularly near Loch Quoich Dam where it could appear prominent and would lead to OHL infrastructure on both sides of the public road. Route Option 1b would also cross the mountain route up to the Gairich summit, which runs along the top of Loch Quoich Dam. Landform and existing felling patterns could help minimise impacts for this route option, although due to the scale of the towers they would be likely to be visible above the tree line. Should an OHL solution be used to cross Loch Cuaich, it is likely to appear prominent in views across and along the loch, from the public road as well as from the mountain route, and there is potential for cumulative effects with other OHL infrastructure and the dam. These effects would be reduced to some degree should Route Option 1b utilise an HDD solution when crossing the loch. Based on the above, a RAG Rating of **Red** has been applied for Route Option 1b should the OHL Span Solution be used. If the HDD Solution were to be used, then visual constraints would be reduced and thus an **Amber** RAG rating would apply. However, if this route option were to cross the glen and tie into Route Option 2a or 2c this may increase potential for visual effects to receptors at Tomdoun depending on the specific alignment chosen, meaning a **Red** RAG rating would be likely in this instance for Route Option 1b.

6.5.17 Route Option 1c would follow a similar route as Route Option 1b at the western end when leaving the point of connection, and would similarly be visible from the minor road as well as the mountain route to Gairich summit, appearing prominent in views across and along Loch Cuaich should the OHL solution be used to cross over the loch. The HDD solution would reduce impacts for these receptors. However this route option would also appear noticeable in views from the minor road and residential properties near Kingie when crossing the glen. As for Route Option 1a, on the northern side of the glen it would be preferable to find an OHL alignment to the north of the minor road and properties, which may be challenging for some sections of the route where the steep ground and the presence of the existing 132 kV OHL and proposed replacement Skye Reinforcement Project pose a constraint. Based on the above, a RAG Rating of **Red** has been applied for Route Option 1c, regardless of technology solution used to cross the loch, as the OHL would appear prominent as it would cross Glen Garry.

6.5.18 Route Option 2a would roughly follow the route of the existing 132 kV OHL (and proposed Skye Reinforcement Project) and would be potentially visible from a number of properties and the minor road along Glen Garry, appearing within rear views for most properties with the potential to be occasionally screened by forestry and woodland. The requirement to increase the existing OC, or the creation of a new OC (depending on alignment) could further increase the potential for visual effects, and given the presence of existing electrical infrastructure there would be potential for cumulative visual effects. There would also be potential for cumulative effects at the eastern end near Loch Lundie given the presence of existing infrastructure as well as the proposed Skye Reinforcement and Coire Glas OHLs, as well as the proposed Loch Lundie Substation. There would be

potential views of the route running alongside the A87, from some tourist viewpoints on the road and also as it crossed the road. Rural properties to the north of A87 at Munerigie and Achadh-luachrach may also obtain views of the route option. A RAG rating of **Amber** has been applied for this route option.

6.5.19 Route Option 2b, running along the southern side of Loch Garry, would pass close to relatively few visual receptors. It would potentially be visible from a few estate properties on the south side of Loch Garry, and there may also be potential views of the OHL and the wayleave from properties, the Glen Garry minor road and elevated vantage points on the A87 on the northern side of Glen Garry. A sensitively aligned OHL could be achieved behind landform and existing felling patterns which would help reduce visibility of the route option, but due to their height the towers are likely to be visible above the tree tops. There are a number of recreational routes through forest on the south side of Loch Garry which may gain views although the presence of forest would reduce visibility and reduces visual sensitivity of the receptors using these routes. There may also be views of the OHL from the eastern end of Loch Garry including potential views from a small number of properties and recreational routes near Whitebridge, which are more sensitive than routes going through forestry. As for Route Option 2a there would be potential for cumulative effects at the eastern end near Whitebridge and Loch Lundie given the presence of existing infrastructure as well as the proposed Skye Reinforcement and Coire Glas OHLs, as well as the proposed Loch Lundie Substation. Due to the landform and the proposed Coire Glas Grid OHL, there may be limited opportunities in terms of finding a suitable alignment within Route Option 2b near Whitebridge. A RAG rating of **Red** has therefore been applied for this route option due to the potential for cumulative effects with other OHL infrastructure.

6.5.20 Route Option 2c would be situated further to the north of Route Option 2a. It would run to the north of the A87 and would be elevated above the road and would cross it towards the western end. Although it would be screened to some degree by forestry and woodland in views from the road, it would be visible particularly as it crosses the A87, and given its scale would potentially be a distracting feature in views from popular parking areas featuring elevated views towards the mountainous landscapes to the west. In some places this may be seen in combination with the turbines of the Beinneun wind farm. Depending on the OHL alignment, there could be potential visibility from the rear of properties at Munerigie and Achadh-luachrach as well as from properties along the south side of Glen Garry, although the OHL may be partially screened by forest on the opposite hillside. It would be likely to be hidden by forestry and woodland from properties on the north side of Glen Garry. A steel tower OHL line would be likely to skyline and appear prominent in views from receptors on the south side of Glen Garry, depending on the alignment. A RAG rating of **Amber** has been applied for this route option.

6.6 Land Use and Recreation

6.6.1 This section considers land use and recreation for each route option, specifically forestry (see **Figure 9**), agriculture (see **Figure 10**), and recreational use and amenity (see **Figure 11**).

Forestry

6.6.2 **Figure 9a** shows the Ancient Woodland and Caledonian Pinewood within the Corridor, while **Figure 9b** shows Native Woodland as part of the NWSS all of which is discussed in **Section 6.2** of this report, under natural heritage designations.

6.6.3 This forestry Section relates to the route options potential interaction with areas of commercial forestry only.

6.6.4 The eastern end of Route Option 1a and 1c cross areas of privately owned conifer plantations at Tomdoun. These mature plantations are currently managed under an active Long Term Forest Plan, Species present include Lodgepole pine and Sitka spruce. The OC that would be necessary within this area for Route Option 1a and 1c would require clearance or sterilisation of forest areas.

6.6.5 Working west to east, Route Option 1b and 1c would pass through a privately owned mature commercial plantation comprising Lodgepole pine and Sitka spruce, however this area could be easily avoided in Route Option 1c. As Route Option 1b crosses the River Kingie, it would travel north and enter Forestry and Land Scotland (FLS) woodlands comprising mainly restocked plantations with a mixed age range. The main species being Sitka spruce and Lodgepole pine. These would require significant clearance of woodland to facilitate the OC. Where Route Option 1c turns north-east and passes over Gearr Garry, it passes small sections of native woodland, however there would be potential for this area to be avoided at alignment stage. The eastern extent of Route Option 1b comprises an area of Plantations on Ancient Woodland Sites (PAWS), albeit there would be some opportunities to avoid or minimise impacts on this area during the alignment selection stage.

6.6.6 Route Option 2a passes through mainly privately owned commercial woodland consisting of mature Lodgepole pine and Sitka spruce. These woodlands are at various stages of active forest management, including areas currently being felled and others undergoing replanting. In the centre of the route option there are areas of nearly-native woodland.

6.6.7 A large section of the western commercial woodlands are poor quality and suffering from progressive wind throw damage. The Forestry and Land Scotland woodland Ardochy, contains significant areas of LEPO in the process of felling and replanting. An OC already exists through these plantations given the presence of existing electrical infrastructure. Further extension or creation of new OCs would be required for a new OHL within this route option. Consideration for the proposed Skye Reinforcement Project within this route would be required due to the potential for cumulative impacts

6.6.8 Route Option 2b runs through the Forestry and Land Scotland Glengarry woodland and extensive areas of native woodland and PAWS. In the western end of the route option there are large areas of commercial woodlands. These woodlands are at various stages of active forest management, including areas currently being felled and others undergoing replanting. Felling for an OHL wayleave would be required throughout this route within the commercial plantations.

6.6.9 Route Option 2c passes through mainly privately owned commercial woodland consisting of Lodgepole pine and Sitka spruce. These woodlands are at various stages of active forest management, including areas currently being felled and others undergoing replanting. A large section of the western commercial woodlands are poor quality and suffering from progressive wind throw damage. A newly planted native woodland runs above the Ruighe Rainich plantation, which would require minimal clearance. Where the route option would cross open hill to reach the proposed Loch Lundie substation there are small areas of Upland birchwood on the boundaries of the route option which could easily be avoided. However, it is acknowledged that the potential for cumulative effects would be increased within this route option given the presence of existing and proposed infrastructure and the proposed Coire Glas grid connection which will require careful consideration at the alignment selection stage.

6.6.10 All route options have been allocated an **Amber** RAG rating as they all cross areas of commercial woodland, potentially impacting the long-term management and commercial viability of these woodlands. However, Routes 2a and 2b are subject to a larger impact compared to Route Option 2c due to the presence of native woodland. Despite this difference, all routes remain within the Amber rating. Refer also to **Section 6.2** under the natural heritage designations topic above for discussion on AWI.

Agriculture

6.6.11 The agricultural land within all route options has been identified as being of Class 5.3 and lower (see **Figure 10**). The main land classification is 6.3, land capable of use as rough grazing with low quality plants, and therefore all route options are unlikely to disrupt any areas of highly productive agriculture. As such, a RAG rating of **Green** has been allocated to all route options.

Recreation

6.6.12 There are points of recreational interest scattered throughout all the route options, as can be seen on **Figure 11**. The following recreational interests fall within, or near to, the route options:

- Allt na Calliche Trail and Ciste Dubh Trails;
- Core Path LO11.01, LO.11.08 and LO11.09 situated by the River Garry;
- Scottish Hill Track 259 / Core Path LO11.02 from Aldernaig Burn to Loch Lundie;
- Scottish Hill Track 238a and 239, located within the forestry areas south of Loch Garry;
- Scottish Hill Track 257a and 247, northwest of Glen Loyne and southwest of Glen Kingie;
- Mountain route which passes along Loch Quoich Dam heading to Gairich summit; and
- Water sports on the River Garry, including kayaking and white water rafting.

6.6.13 All of the route options would encompass Scottish Hill Track: 247 for approximately 2 km, where additional visual impacts may affect the recreational amenity of this path. Route Option 2b encompasses Scottish Hill Track 238a for approximately 9 km, which could impact recreational use of the path during the construction stage, although no long-term impacts on its use are anticipated. Core Paths LO11.01 and LO11.04 are also present in the western extent of Route Option 2b. Recreational interest in Route Option 2a is generally limited.

6.6.14 Given that a new OHL would run parallel to Scottish Hill Track – Loch Arkaig to Loch Garry (238a and 238b), there is potential to impact the recreational amenity of this path. As such, Route Option 2b has been allocated an **Amber** RAG rating. A **Green** RAG rating has been applied to all remaining route options.

6.6.15 Should Route Option 1a or 1c be required to cross the River Gary to enable a potential connection with Route Option 2b, or should Route Option 1b be required to cross the River Garry to enable a potential connection with Route Option 2a or Route Option 2c, the RAG ratings would remain the same.

6.7 Planning Context

Policy

6.7.1 Electricity transmission infrastructure (such as this development) is recognised in NPF4 as a National Development under ND3 Strategic Renewable Electricity Generation and Transmission Infrastructure. It therefore forms a vital element to deliver network and grid infrastructure required to deliver the Government's legally binding targets for net zero emissions and renewable energy electricity generation objectives.

6.7.2 Compatibility with National and Local planning policy will in large part depend on avoiding or minimising potential constraints noted, particularly in relation to potential impacts on the natural environment given presence of designated sites, areas of peatlands and ancient woodland, and areas of landscape importance. Given the potential impacts to natural heritage assets, in particular through the presence of European designated sites and ancient woodland, a **Red** RAG rating has been allocated to Routes Option 1b, 1c, 2a, 2b and 2c. However, should an HDD cable be utilised, Route Option 1b would reduce to **Amber** RAG rating for the reasons described below for Route Option 1a.

6.7.3 Route Option 1a has been allocated an **Amber** RAG rating to recognise the potential constraints noted, but also acknowledging the opportunities to mitigate these during the alignment selection and EIA / EA stages of the project, as well as the status of the project as National Development in NPF4.

6.7.4 However, should Route Option 1a be required to cross Loch Poulary to enable a potential connection with Route Option 2b the RAG rating would increase to **Red** given potential for increased collision risk associated with the qualifying interests of the West Inverness-shire Lochs SPA / SSSI.

Proposals

6.7.5 The Skye Reinforcement Project, which would involve replacing the existing 132 kV OHL in this area, runs directly through Route Options 1a, 1c (in part) and 2a, and may also overlap with parts of Route Option 2c. Should either of these route options be taken forward to alignment selection stage, appropriate buffers would need to be considered to accommodate this connection project alongside the Skye Reinforcement Project. An alignment within Route Option 1a and 1c may also need to consider proposals to replace the existing 132 kV switchgear and OHL at the Quoich Tee switching station.

6.7.6 The red line boundary of the proposed Beinneun 2 Wind Farm[36] would be crossed by Route Option 2a very slightly, however Route Option 2c would cut directly through a number of the proposed turbines.

6.7.7 Within Route Options 1b and 2b, peatland restoration projects are proposed that may pose a constraint (see **Figure 12**).

6.7.8 The Coire Glas Pumped Storage Scheme is also proposed to connect into the proposed Loch Lundie substation from the south.

6.7.9 Route Option 1a has been allocated an **Amber** RAG rating given the presence of other proposals, particularly the Skye Reinforcement Project. Route Option 1b and 1c pass directly through the proposed Beinn Bheag Wind Farm Development Area[36]. From the Scoping document[37] submitted to ECU, the indicative turbine layout shows that the northern most turbines near Beinn Bheag are either within, or in close proximity to the proposed route options. Therefore, should Beinn Bheag Wind Farm progress, it could pose a notable constraint to Route Option 1b and 1c. As such, both route options have been allocated a **Red** RAG rating.

6.7.10 Route Option 2a and 2b have also been allocated an **Amber** RAG rating given the close proximity of the Skye Reinforcement Project through both route options. Route Option 2c has been allocated a **Red** RAG rating due principally to the interaction with the Beinneun 2 Wind Farm proposal.

6.8 Engineering Topic Areas

Infrastructure Crossings

Major Crossings

6.8.1 Major infrastructure crossings[38] can present many obstacles when designing and constructing an OHL and therefore, it is advantageous to avoid multiple crossings if possible. Major crossings include other OHLs of 132 kV and above, railways, rivers/loch spanning over 200 m, navigable waterways, major pipelines and other significant infrastructure. These crossings require specific OHL solutions and can greatly constrain a design.

6.8.2 The potential major crossing for any of the route options include the existing 132 kV OHL from Fort Augustus to Ardmore (planned to be replaced with a new 132 kV OHL as part of the Skye Reinforcement Project), and the proposed Coire Glas 400 kV OHL. Route options 1a,1c, 2a, and 2c are situated predominantly to the north of the planned Skye Reinforcement Project, but may have a crossing depending on the final alignment. Route options 1b and 2b remain to the south of this circuit with less opportunity for crossing. Route Options 2a, 2b, and 2c would also likely cross the proposed Coire Glas 400 kV OHL near Loch Lundie substation.

6.8.3 Route Options 1b and 1c are both required to cross Loch Cuaich (approximately 500 m) which would require either tall OHL towers either side of the loch, or installation of an HDD cable and construction of a cable sealing

[37] Energy Consents Unit (2024) 'Beinn Bheag Wind Farm – Scoping Document, available at: https://www.energyconsents.scot/ApplicationDetails.aspx?cr=ECU00005186 [Accessed: February 2025]

[38] Major infrastructure crossings include high voltage transmission lines, rail lines, wide rivers (greater than 200 m), navigable canals, gas pipelines, and hydro pipelines.

end (CSE) compound close to the shore (to facilitate transition back to OHL), both of which would lead to engineering challenges. As such, Route Options 1b and 1c have been allocated a **Red** RAG rating.

6.8.4 Route Options 1a, 2a, 2b, and 2c may potentially cross the Skye Reinforcement Project line, with Route Option 2a, 2b and 2c also having proximity to the proposed Coire Glas 400 kV line. These crossings present less constraint than the loch crossings. Therefore, all four route options have been allocated an **Amber** RAG rating.

Road Crossings

6.8.5 Road crossings, including private tracks and driveways, can collectively constrain OHL design, although they typically have less impact than major crossings.

6.8.6 All eastern route options (Route Option 2a, 2b and 2c) require a crossing of the A87, a major tourist route with high seasonal traffic. Whilst the requirement for road closures is unlikely, construction methods such as protective scaffolding would be required.

6.8.7 For western route options, Route Option 1b has no road crossings, whilst crossings in Route Options 1a and 1c are limited to minor roads and access tracks, which are unlikely to present major constraints. Therefore, a **Green** RAG rating has been applied to Route Option 1b while all remaining route options have been allocated an **Amber** RAG rating.

Environmental Design

Elevation

6.8.8 The elevation on which an OHL is constructed can have a significant effect in terms of influencing both wind and ice loading. The altitude along all route options (using a centreline for the purposes of this appraisal) is partially above 200 m AOD. All route options have mountainous terrain across them with significant rises and falls of elevation throughout, albeit with varying levels of severity. Route Option 2b has been allocated an **Amber** RAG rating as its rises and falls of elevation are not abrupt, while all remaining route options have been given a **Red** RAG rating as their rises and falls of elevation are more severe.

Contaminated Land

6.8.9 Desk based studies have confirmed that there is no known unexploded ordnance (UXO) in the areas surrounding the route options. Also, there were no known areas of contaminated land found during this appraisal and a **Green** RAG rating has been allocated to all route options.

Flooding

6.8.10 There are three types of flooding which must be considered: Coastal, Surface and River. Potential for flood risk has been based on SEPA publicly available data to determine if less than 80% of the width for less than 2% of the length of any route options was found to be within the 1:200-year flood zone.[39]

6.8.11 A flood risk assessment using overlayed flood maps showed that all proposed route options have minimal exposure to 200-year flood zones. Route Options 1a, 1b, 1c, and 2a follow areas near Loch Poulary and have similar flood risk. Route Option 2b and 2c are located further north near Loch Garry on higher ground and have slightly lower flood risk.

6.8.12 Route Option 2b and 2c have therefore been allocated a **Green** RAG rating, while Route Options 1a, 1b, 1c and 2a have been allocated an **Amber** RAG rating.

[39] Scottish Environmental Protection Agency. *SEPA Flood Maps* [online] Available at: http://map.sepa.org.uk/floodmap/map.htm [Accessed: February 2025]

Ground Conditions

6.8.13 Ground topography and condition can directly impact the ease of routeing, access, construction and maintenance. Options with large areas of difficult ground conditions are more likely to be significantly constrained.

Terrain

6.8.14 Steep or mountainous terrain increases difficulty and cost for routeing, construction, and maintenance. Terrain analysis using Google Earth showed that all route options have undulating terrain with similar average slopes and maximum gradients below 40%. As a result, all routes have been given an **Amber** RAG rating due to moderate terrain-related constraints.

Peat

6.8.15 Construction in areas of peat can pose engineering challenges during both the design and construction stages of an OHL build. In addition, construction in peat can lead to increased construction and maintenance costs and therefore, should be reduced or avoided where possible. Priority peatland mapping[22] highlights that all the route options would pass through areas of Class 1 and 2 peatlands. Route Option 1a, 1c and 2c would pass through the largest area of Class 2 peatlands. Whichever route option is considered further peat probing will be undertaken to inform alignment stage studies as peat, and areas of deep or extensive peat are avoided where technically feasible.

6.8.16 All route options have therefore been allocated a **Red** RAG rating.

Construction / Maintenance

6.8.17 Constructability is an important consideration for all OHL developments considering the wide-ranging terrain and multiple obstacles that are often encountered. Therefore, giving some forethought to access routes and the number of critical angle masts to be used on this OHL is important for the construction and future maintenance requirements of the line.

Access

6.8.18 Adequate access is an important consideration for both construction and maintenance activities. Positioning an OHL in close proximity to existing public roads and networks of tracks will provide ease of access and can greatly reduce costs associated with the construction stage.

6.8.19 Route Option 1a, 1c and 2a benefit from good existing access throughout the route, passing in close proximity to the C144 on the north side of the valley. Therefore, all three routes have been allocated a **Green** RAG rating. Route Option 1b and 2b travel east to the south of the River Garry, where there is no existing public road network. There is reasonable access to existing forestry access tracks, however for Route Option 2b, the first 4.5 km to the south of Loch Cuaich there are no access tracks. As there are limited access tracks that can be used, both route options have been allocated an **Amber** RAG rating.

6.8.20 Route Option 2c begins near the C144 but quickly moves northward onto higher ground. While some access is available for the next 2 km via forestry tracks, access becomes increasingly limited thereafter. However, proximity to Beinneun Wind Farm may offer shared access potential. Therefore, a **Red** RAG rating has been applied.

Angle Towers

6.8.21 Angle towers are important components of an OHL as they are primarily used in 'stringing' operations and failure containment. Due to the nature of angle towers, higher loads are required to be designed into the structures and larger foundations and more complex installations are often required.

6.8.22 Route Option 2a would be anticipated to have approximately 5 angle towers. Route Options 1a, 1b, 1c and 2c would be anticipated to have approximately 6 angle towers, whereas Route Option 2b, which has slightly more challenging terrain would be anticipated to have approximately 8 angle towers.

6.8.23 Although the number of angle towers may change as the project progresses into alignment selection stage, it is anticipated that the proportion in which the towers would increase would remain similar. Therefore, Route Options 1a, 1b, 1c, 2b and 2c would be likely to have a higher number of angle towers overall (more than 110% of the minimum number of angle towers). Consequently, a **Red** RAG rating has been applied, while Route Option 2a has been assigned a **Green** RAG rating.

Proximity

6.8.24 The location of an OHL relative to structures and settlement of people is an important consideration when selecting a route and alignment. OHLs must be an adequate distance from buildings in order to ensure electrical clearance limits are achieved, but also in order to reduce the impact on households of the construction of a piece of key infrastructure in their vicinity. From an operability and maintenance viewpoint, wind turbines near OHLs have been found to potentially increase the occurrence of conditions suitable for aeolian vibration leading to the premature wear of the conductor through fatigue. Potential structural failure of wind turbines leading to collapse onto an OHL is also a consideration.

Clearance Distance

6.8.25 Assessment of the route options was undertaken to determine the clearance distances available between buildings and dwellings. No properties come within 250 m of Route Option 1b, therefore a **Green** RAG rating has been applied.

6.8.26 Route Option 1a and 1c pass in close proximity to the small settlement of Tomdoun where there are several properties located within 100 – 250 m of the route options. Route Options 1c, 2a and 2b all cover an area with several dispersed buildings along the north of Loch Garry. All three route options pass within 100 m of a property, however, the area is sparsely populated and it should be possible to avoid close proximity to properties during the alignment selection stage. Therefore, an **Amber** RAG rating has been applied to Route Options 1a and 2c, while Route Options 1c, 2a and 2b have been allocated a **Red** RAG rating.

Proximity to Wind Farms [40]

6.8.27 Wind farms pose a risk to OHLs due to disruption of airflows which can cause wake on OHL conductors. Due to the wake effect, there are chances of increased conductor vibrations which cause fatigue in conductors and eventually results in the breaking of conductor strands. Therefore, to achieve the desired life of the conductor it is mandatory to keep the OHL's out with a three-rotor-diameter buffer of any turbines.

6.8.28 Route Option 2c passes within the boundary of the proposed Beinneun 2 Wind Farm, which is planned for development adjacent to the existing Beinneun wind farm. Route Option 2c overlaps with the centreline of the proposed Beinneun 2 Wind Farm, which may introduce potential constraints. Therefore, a **Red** RAG rating has been applied to Route Option 2c. Route Option 2a lies within approximately 500 m of the proposed Beinneun 2 Wind Farm boundary but does not intersect the development area directly, therefore an **Amber** RAG rating has

[40] Due to Beinn Bheag Wind Farm being at pre-application stage, it was deemed that there was not sufficient information available for this development to be included in the engineering appraisal at the time of writing. This will be reviewed as the project progresses.

been given. All remaining route options have no turbines within 1 km of them, thus have been allocated a **Green** RAG rating.

Communication Masts

6.8.29 There are no communication masts along any of the western route options (1a, 1b and 1c), therefore the line of sight from masts will not constrain any structure locations in these route options and they have therefore been assigned a **Green** RAG rating.

6.8.30 In relation to the eastern route options (2a, 2b and 2c), several communication masts have been identified to the west of the A87 in between Loch Loyne and Loch Garry which may impact the eastern route options (2a, 2b and 2c). Route Option 2a and 2b are within 400 – 550 m of the closest communication mast, whereas the closest mast near Route Option 2c is over 700 m. As such, Route Options 2a and 2b have been given a **Red** RAG rating, and Route Option 2c an **Amber** RAG rating.

Urban Environments

6.8.31 All routes pass through sparsely populated areas with no significant urban environments in proximity. Route Options 2a and 2b pass near the small settlement of Tomdoun, while Route Option 1a passes in close proximity to Kingie. The route option width would be sufficient such that an alignment could be achieved that would avoid passing through these communities. Therefore, the RAG rating given to all route options is **Green**.

Metallic pipes

6.8.32 Metallic pipes must be avoided by individual supports, as they are often expensive to reroute.

6.8.33 No known metallic pipes have been identified within the vicinity of the route options, and all have been assigned a **Green** RAG rating.

Other Considerations

6.8.34 The topic areas listed in this section are not engineering considerations in SSEN Transmission's guidance for routeing as described in Section 3.1, however, they are deemed to be significant enough for consideration in this route option selection process.

DNO Crossings

6.8.35 Existing distribution (DNO) crossings are generally undergrounded or diverted to avoid creating a construction and maintenance hazard. There is a cost and programme requirement associated with this activity though, and route options with many DNO crossings could find minimising such crossing a significant routeing constraint.

6.8.36 Route Option 1a would cross two 33 kV DNO lines, Route Option 1c would cross three 33 kV DNO lines, and Route Option 2b would cross one 33 kV DNO line. All three route options have had therefore been allocated an **Amber** RAG rating.

6.8.37 No DNO crossings have been identified for Route Options 1b, 2a and 2c, and thus have been allocated a **Green** RAG rating.

6.9 Cost Topic Areas

6.9.1 Costs were not assessed in detail as part of this route selection process. These will be considered in more detail at the alignment stage when the technical and engineering specifications required become clearer. The cost RAG ratings are based on route length, tree felling, and anticipated compensatory planting. More detailed analysis on costs would be carried out at alignment selection stage.

Capital

6.9.2 The preferred technology solution anticipated to be a new 400 kV double circuit OHL supported on a steel lattice. From a capital cost perspective, Route Option 1b and 2a are less favourable compared to the route options (1a, 1c, 2b and 2c). As such, Route Option 1b and 2a have been allocated an **Amber** RAG rating for Capital Costs, while a **Green** RAG rating has been applied for all remaining route options.

Operational

6.9.3 Operational requirements were not considered at this stage. As such, all routes have been allocated a **Green** RAG rating.

6.10 Comparative Analysis Summary

6.10.1 The environmental, engineering and cost appraisal RAG ratings for the route options considered are summarised below in **Table 6.1**.

Potential Route Option

6.10.2 This route selection appraisal indicates that the combination of **Route Option 1a and Route Option 2a** is the route which offers the most balanced solution taking into account environmental, technical and cost considerations. Should this route be taken forward following consultation, it would be subject to further review during the alignment selection stage to minimise and, where practicable, mitigate likely significant environmental effects. This Potential Route Option can be seen on **Figure 13**.

Table 6.1: RAG Ratings

	Category	Sub-Topic	Western Route Options			Eastern Route Options		
			Route Option 1a	Route Option 1b	Route Option 1c	Route Option 2a	Route Option 2b	Route Option 2c
Environmental	Natural Heritage	Designations	A ***	R **	R	R	A	R
		AWI	A	R	A	R	R	R
		Protected Species	A	A	A	A	R	A
		Habitats	A	A	A	A	R	A
		Ornithology	A ***	R **	R	R	A	R
		Geology, Hydrology and Hydrogeology	A	A	A	A	A	A
	Cultural Heritage	Designations	G	G	G	G	G	G
		Assets	G	G	G	G	G	G
	People	Proximity to Dwellings	A	G	A	A	A	G
	Landscape and Visual	Designations	A	R **	R	G	G	G
		Character	A	R **	R	A	A	R
		Visual	A	R **	R	A	R	A
	Land Use	Agriculture	G	G	G	G	G	G
		Forestry	A	A	A	A	A	A
		Recreation	G	G	G	G	A	G
	Planning	Policy	A ***	R **	R	R	R	R
		Proposals	A	R	R	A	A	R
HLEngineering	Infrastructure Crossing	Major Crossings	A	R	R	A	A	A
	Infrastructure Crossing	Road Crossings	A	G	A	A	A	A
		Elevation	R	R	R	R	A	R
	Environmental Design	Atmospheric Pollution	G	G	G	G	G	G
		Contaminated Land	G	G	G	G	G	G
		Flooding	A	A	A	A	G	G
	Ground Condition	Terrain	A	A	A	A	A	A
		Peatland	R	R	R	R	R	R
	Construction & Maintenance	Access	G	A	G	G	A	R
		Angle Towers	R	R	R	G	R	R
	Proximity	Clearance Distance	A	G	R	R	R	A
		Windfarms	G	G	G	A	G	R
		Communication Masts	G	G	G	R	R	A
		Urban Developments	G	G	G	G	G	G
	Other Considerations	Metallic Pipes *	G	G	G	G	G	G
		DNO Crossings *	A	G	A	G	A	G
Cost	Capital	Capital	G	A	G	A	G	G
		Operational	G	G	G	G	G	G

** These topic areas are not an engineering consideration in SSEN Transmission's guidance for routeing as described in Section 3.1, however, have been deemed to be significant enough for consideration in this route option selection process.*

*** Reduced RAG rating to **Amber** would be expected if HDD crossing solution used for crossing Loch Cuaich instead of OHL.*

**** Would be RAG rated **Red** if connection into Route Option 2b is required due to crossing of Gearr Garry glen.*

7. SUMMARY AND NEXT STEPS

7.1 Overview

7.1.1 SSEN Transmission places great importance on, and is committed to, consultation and engagement with all parties, or stakeholders, likely to have an interest in proposals for new projects such as this. Stakeholder consultation and engagement is an essential part of an effective development process.

7.1.2 This Consultation Document summarises the environmental, technical and economic appraisal of route options for a proposed new 400 kV double circuit steel lattice OHL to connect an initial 300 MW of power from the proposed Fearna PSH project to the electricity transmission network at the proposed Loch Lundie 400 kV substation, to the north of Invergarry.

7.1.3 Comments are sought from stakeholders on the route options considered. When providing your comments and feedback, SSEN Transmission would be grateful for your consideration of the questions below:

- **Has the requirement for the project been clearly explained?**
- **Are there any additional factors, or environmental features, that you consider important and should be brought to the attention of the project team?**
- **Do you have any comments about any of the route options?**
- **Following a review of the provided information, how would you describe your understanding of the Loch Fearna Pumped Storage Grid Connection Project?**
- **Do you have any community benefit opportunities you would like us to consider, or are there any local initiatives you would like us to support?**

7.1.4 Consultation events will be held on 14th May 2024 14:30 to 19:30 at Glengarry Community Hall, Invergarry, Inverness-shire, PH35 4WW. The responses received from these consultation events, and those sought from statutory consultees and other key stakeholders, will inform further consideration of route options.

7.1.5 All comments on the route options and route selection process are requested by **25th June 2025**. Following consultation events and a review of consultation responses, a Report on Consultation will be produced which will document the consultations received, and the decisions made in light of these responses to inform the selection of a proposed route.

7.1.6 Following the identification and confirmation of a proposed route, further technical and environmental surveys will be undertaken to identify alignment options, after which further consultation will be carried out.