

# Harris to Stornoway 132 kV Overhead Line Replacement

Environmental Impact Assessment Report:  
Volume 1: Non-Technical Summary  
October 2022

Application for consent under Section 37 of the  
Electricity Act 1989



Scottish & Southern  
Electricity Networks

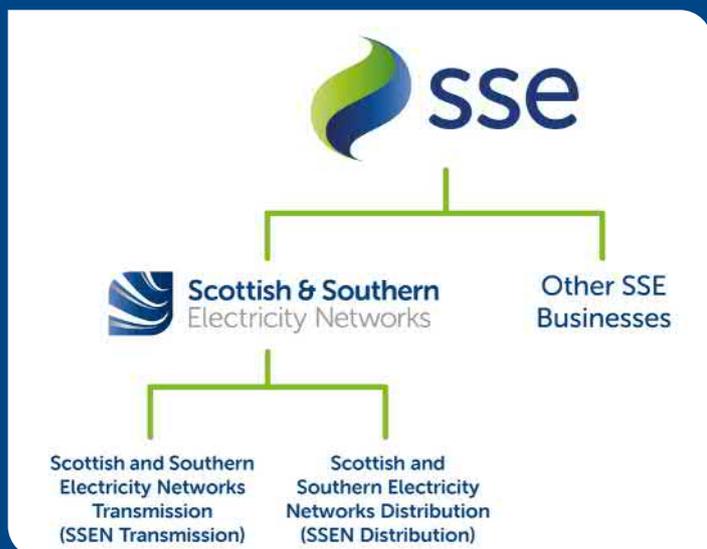
TRANSMISSION

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# Who we are

We are Scottish and Southern Electricity Networks, operating under licence as Scottish Hydro Electric Transmission Plc for the transmission of electricity in the north of Scotland.



## What is the difference between Transmission and Distribution?

Electricity Transmission is the transportation of electricity from generating plants to where it is required at centres of demand.

The Electricity Transmission network, or grid, transports electricity at very high voltages through overhead wires, underground cables and subsea cables. The transmission network connects large scale generation, primarily renewables, to central and southern Scotland and the rest of Great Britain. It also helps secure supply by providing reliable connection to the wider network of generation plants.

The Electricity Distribution network is connected into the Transmission network but the voltage is lowered by transformers at electricity substations, and the power is then distributed to homes and businesses through overhead lines or underground cables.

In total we maintain about 5,000 km of overhead lines and underground cables – easily enough to stretch across the Atlantic from John O’Groats all the way to Boston in the USA.

Our network crosses some of the UK’s most challenging terrain – including circuits that are buried under the seabed, are located over 750 m above sea level and up to 250 km long.

The landscape and environment that contribute to the challenges we face also give the area a rich resource for renewable energy generation. There is a high demand to connect from new wind, hydro and marine generators which rely on Scottish and Southern Electricity Networks to provide a physical link between the new sources of power and electricity users. Scottish and Southern Electricity Networks is delivering a major programme of investment to ensure that the network is ready to meet the needs of our customers in the future.

## Our responsibilities

We have a licence for the transmission of electricity in the north of Scotland and we are closely regulated by the energy regulator Ofgem.

Our licence stipulates that we must develop and maintain an efficient, co-ordinated and economical system of electricity transmission.

## Overview of Transmission projects



# Project overview

The aim of the project is to replace the existing aged 132 kV overhead line (OHL) connection with a new 132 kV OHL connection, providing improved reliability and meeting the requirements for modern communication, protection and operation of the circuit.

## Introduction

Scottish Hydro Electric Transmission plc (the Applicant) operating and known as Scottish and Southern Electricity Networks Transmission (SSEN Transmission) is proposing to construct and operate a c.58 km single circuit 132 kV OHL between the existing Harris Grid Supply Point (GSP) and the existing Stornoway Substation on Lewis. The location of the Proposed Development is presented on page 6.

## Environmental Impact Assessment

A voluntary Environmental Impact Assessment Report (EIAR) has been prepared in support of the s37 application to be submitted by SSEN Transmission. The primary purpose of the EIA process is to inform the decision maker of the likely significant environmental effects of the Proposed Development, and to specify mitigation to avoid or reduce significant environmental effects.

The aim of this Non-Technical Summary (NTS) (EIAR Volume 1) is to summarise the content and the main findings of the EIAR in a clear and consistent manner to assist the public in understanding what the environmental effects of the Proposed Development are likely to be.

The full EIAR provides a more detailed description of the Proposed Development, and the findings of the EIA.

- Volume 2: Main Report;
- Volume 3a: Figures;
- Volume 3b Visual Representations;
- Volume 4: Technical Appendices; and
- Volume 5: Confidential Appendices.

## Further Information

The EIAR is submitted within the Section 37 application to the Scottish Government's Energy Consents Unit (ECU). Electronic versions of the application, including the EIA are available to download from SSEN' Transmission's website: <https://www.ssen-transmission.co.uk/projects/harris-stornoway-132kv-ohl/>

The EIAR can also be viewed via the ECU's website: [www.energyconsents.scot](http://www.energyconsents.scot)

This EIAR is available in other formats if required. For details, including costs, please contact:

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Any representations on the s37 consent application may be submitted via:

- The ECU website: [www.energyconsents.scot/Register.aspx](http://www.energyconsents.scot/Register.aspx);
- By email to the ECU mailbox at [representations@gov.scot](mailto:representations@gov.scot); or
- By post to the Scottish Government, Energy Consents Unit, 4th Floor, Atlantic Quay, 150 Broomielaw, Glasgow, G2 8LU.

Written or emailed representations should be dated, clearly stating the name (in block capitals), full return email and postal address of those making representations, identify the Proposed Development (Harris to Stornoway 132 kV Overhead Line Replacement) and specify the grounds for representation. Only representations sent by email to [representations@gov.scot](mailto:representations@gov.scot) will receive acknowledgement.

The closing date for representations will be published on the ECU website.

# Project Description

The Proposed Development consists of a c.58 km single circuit 132 kV OHL, supported by low profile trident H poles, between the Harris GSP, near Tarbert, and the existing Stornoway Substation, near Stornoway.

The overall objective of the Proposed Development is to replace the existing 132 kV trident wood pole OHL which is over 30 years old. The replacement would include a fibre-optic cable, meeting the requirements for modern communication, protection and operation of the circuit and increasing network resilience. This project would also support the Applicant's goal of a one third reduction in greenhouse gas emissions, through the reduced need for diesel generation in the Western Isles due to unplanned outages.

## Description of Development

The Proposed Development would primarily comprise a c.58 km single circuit 132 kV OHL, supported by low profile trident H poles, between the Harris GSP and the existing Stornoway Substation.

It is anticipated that the construction of the Proposed Development would commence in February 2024 (subject to consents and approvals being granted). A provisional construction period of 30 months is anticipated, with energisation of the project scheduled for March 2026. Works would be co-ordinated to minimise disruption to consumers.



## Limit of Deviation

The Limit of Deviation (LOD) is an area within which the OHL infrastructure can be constructed. The purpose of the LOD is to allow flexibility in the consent for the final position of individual poles, allowing poles and access routes to be micro-sited to respond to localised ground conditions, engineering and environmental constraints. The horizontal LOD parameter established for this development allows poles to be relocated up to 50 m either side of the indicative proposed alignment (reduced to 30 m either side of the proposed alignment in areas of woodland). A vertical LOD parameter is set to allow a maximum pole height of 18 m.

The EIAR provides an assessment of the likely significant environmental effects based on the proposed pole schedule. The application of the LOD would be limited to the variation of pole positions (including height for poles) that do not result in an adverse change to the level of significance of effects on the environment as detailed in the EIAR.

Any utilisation of the LOD would be evaluated against the level of significance of effects reported in the EIAR. Should the evaluation identify an adverse change to the level of significance identified in the EIAR, consultation would be carried out with Comhairle nan Eilean Siar (CnES) (and any relevant statutory consultees) for approval of the proposed change.

## Ancillary Works

Ancillary works for the construction and maintenance of the OHL include vegetation clearance, upgrade existing or establishment of new junction bell mouths, establishment of temporary access (for the construction of the OHL), measures to protect road and other public/private crossings during construction and dismantling of the existing aged 132 kV OHL.

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# Site Location



# Construction Phases

The Proposed Development would be carried out in four phases, described below.

## Phase 1 Enabling Works

Enabling works would comprise:

- Undergrounding and/or re-location of some existing distribution network assets to make way for the Proposed Development.
- Woodland removal and vegetation clearance to allow for construction, safe operation and maintenance, and
- Establishment of construction compounds.

## Phase 2 OHL Construction

The construction phase would comprise the following key activities:

- Removal of turf and topsoil at each pole installation site;
- Excavation of a hole to allow the pole and/or foundations to be positioned in place. A typical pole excavation is 3 m<sup>2</sup> x 2.5 m deep;
- Erection of the poles;
- Backfilling of the hole; and
- Stringing the conductor between the poles, in sections.

## Phase 3 OHL Commissioning

The commissioning phase involves an inspection and snagging process, conducted by the Applicant and the Principal Contractor, to check the works have been built to specification and are fit to energise. The Proposed Development would also go through a commissioning procedure for the switchgear, communications, and protection controls through the substation at Stornoway. The circuits would then be energised.

## Phase 4 OHL Reinstatement

Following commissioning of the Proposed Development, all construction sites would be reinstated. Reinstatement would form part of the contract obligations for the Principal Contractor and would include the replacement of topsoil then turves at all work sites around the pole locations and the re-vegetation of all construction compounds.

The existing 132 kV OHL from Harris GSP to Stornoway Substation would then be decommissioned and removed, with reinstatement undertaken in a similar manner. Foundations for the poles would be left in place but the top portion of the foundations would be cut off and disposed to no less than 1 m below ground level where practical.

## *Construction Employment and Hours of Work*

The Proposed Development would provide opportunities to support local communities. The Applicant would encourage the successful Principal Contractor to use suitable labour and resources from areas local to the site.

Construction activities would in general be undertaken during daytime periods. For weekdays, this would involve work between approximately 07:00 to 19:00 in the summer and 07:30 to 17:00 (or as daylight allows) in the winter. On Saturdays, the working hours would be approximately 07:00 to 17:00 in the summer and 07:30 to 13:00 in the winter.

## *Construction Traffic*

Construction traffic comprises staff journeys and vehicle movements to build access tracks, deliver and collect materials and transport construction plant to pole locations. The Principal Contractor(s) would prepare a Construction Traffic Management Plan, which would be agreed with CnES. This document would set out the measures to reduce impacts of construction traffic on the road networks.

## *Construction Environmental Management Plan*

A Construction Environmental Management Plan (CEMP) will be developed and implemented by the Principal Contractor(s). The CEMP will detail how the Principal Contractor(s) will manage the site in accordance with all environmental commitments and mitigation detailed in the EIAR and will include information on statutory consents and authorisations, and industry best practice and guidance.

## *Operation Management and Maintenance*

Once operational, regular routine inspections would be undertaken to identify any issues with the components as well as ongoing vegetation management within the operational corridor. However, in general the OHL would require very little maintenance.

## *Decommissioning*

The Proposed Development would not have a fixed operational life. It is assumed that the Proposed Development would be operational for 40 years or more. The effects associated with the construction phase can be considered representative of worst-case decommissioning effects, and therefore no separate assessment is provided in the EIAR..

# Consideration of Alternatives

## The reasonable alternatives studied and the reasons for selecting the final option.

The EIA Regulations require reasonable alternatives, relevant to the Proposed Development, to be studied and the reasons for selecting the final option to be provided by the Applicant.

Stakeholder consultation and engagement has been undertaken throughout the development process, with advice from key consultees being sought early in the design stage to inform decisions about the Proposed Development.

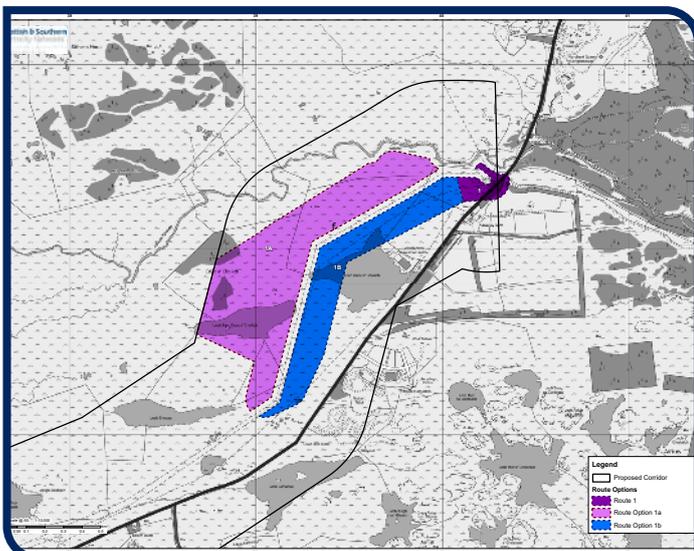
The following alternatives have been considered:

- The "Do Nothing" Scenario; Discounted. Would result in a significant deterioration of the existing line and would not support the Applicant's ability to meet their licence requirements to develop and maintain an efficient, coordinated, and economic electricity system.
- Replacement of the existing poles in situ, particularly those poles showing a high level of decay; Discounted. Would result in extensive outages on the existing connection that would be required during each pole replacement, increased reliance on diesel generation at Battery Point to replace the electricity demands resulting from these outages (and the cost and potential carbon impacts associated with this), and replacement of the poles with current poles would result in the existing line being overloaded.
- A full route underground cable; Discounted. It would be subject to many of the same physical and environmental constraints as an OHL but would also result in more challenges with regards to peat and bog habitat management. The environment was also regarded as unsuitable over many areas of the preferred alignment. These factors resulted in a higher cost for the development.
- A Subsea Cable; Discounted. A large number of environmental constraints were identified for this option including shipping, fishing, aquaculture sites, unrecorded wrecks, a complex seabed slope and presence of designated sites. Although most of these constraints could be appropriately addressed through route selection, the cost of such a development would be approximately 376% of an OHL.
- Alternative overhead line solutions; the use of trident H poles was identified as the preferred solution, based on expert judgement and experience in other Scottish Islands. Trident OHLs minimise landscape and visual impact and consequently lead to reduced programme risk when compared to other solutions, e.g. towers or New Suite of Transmission Structures (NeSTS).

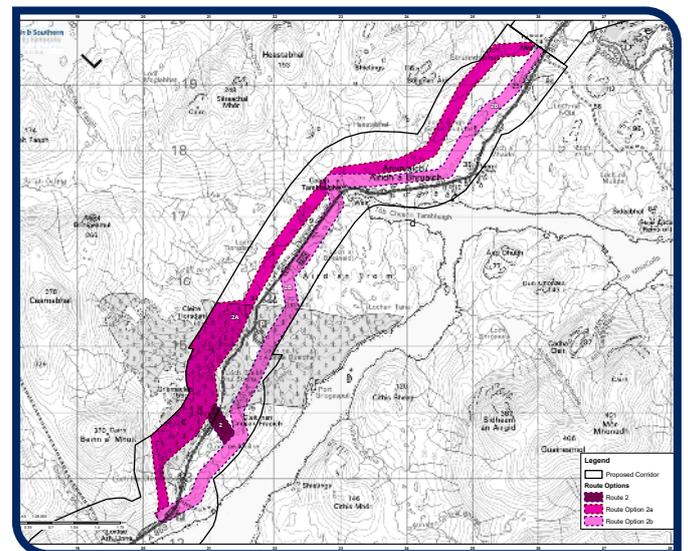
# Alternative OHL Route Options

A comparative analysis of environmental, engineering and cost criteria of alternative Route Options identified by the Applicant was undertaken in Q2 2021.

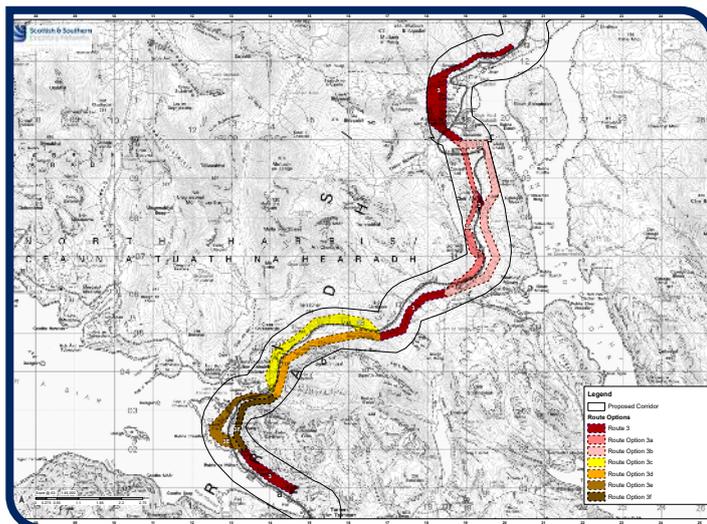
Route selection work was previously undertaken in respect of a connection between a proposed new switching station south-west of Balallan, Lewis, and a new converter station and substation site at Arnish Point, Lewis, as part of a separate SSEN project (Balallan-Stornoway 132 kV Overhead Line Replacement). This separate project was put on hold; however, the route selection work served to identify a proposed alignment for a new 132 kV OHL between Balallan and a point approximately 1.5 km south west of Stornoway Substation. The remainder of the corridor between Harris GSP and Stornoway substation was split into the following sections, and preferences were identified:



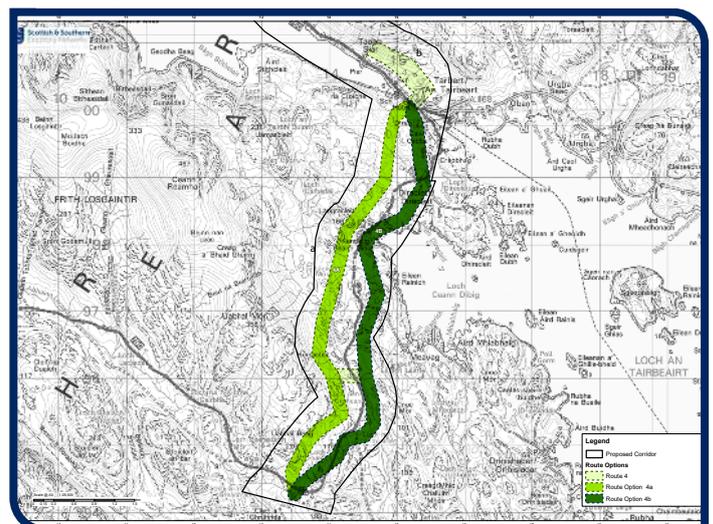
**Section 1: Stornoway to Arnish - Route Option 1a was preferred**



**Section 2: Balallan to east of Abhainn a' Mhuil – Route Option 2a was preferred**



**Section 3: East of Abhainn a' Mhuil to Taobh (northwest of Tarbert) – Route Options 3a, 3c and 3e were preferred**

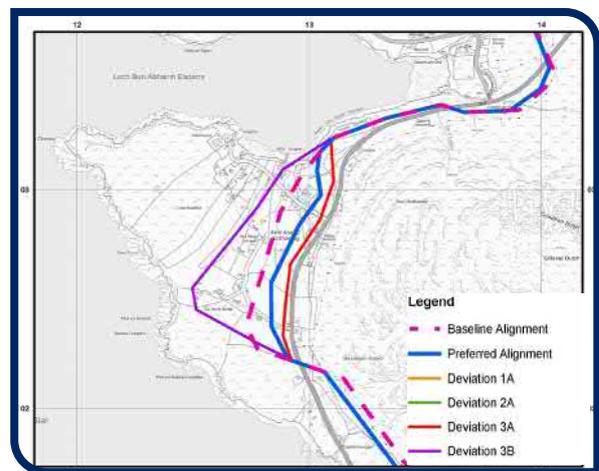
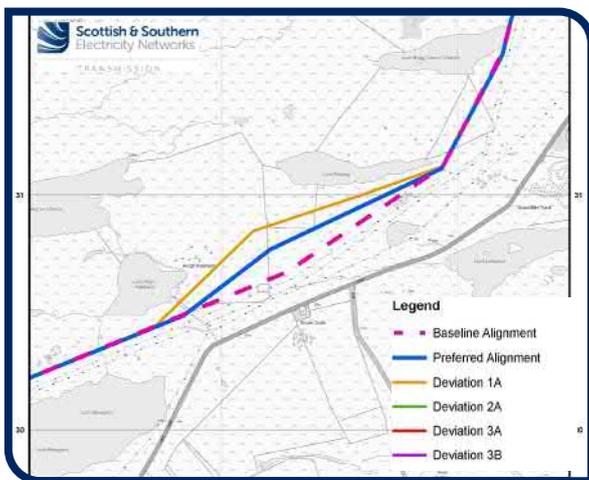


**Section 4: Tarbert to South Harris – Route Option 4a was preferred.**

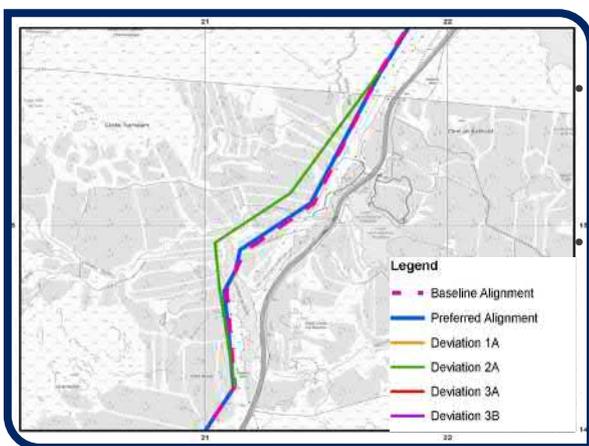
In September 2021 stakeholders were consulted on the route selection process undertaken and the selection of the Preferred Route (Figure 3.2: Routing Options, EIAR Volume 3a).

# Alternative OHL Alignment Options

Following the routing stage a Baseline Alignment was developed. Amendments were suggested (hereafter referred to as 'deviations') which were largely suggested to address environmental and engineering issues and feedback from previous consultation. The four deviations were suggested for the following reasons:



- **Alignment Deviation 1a:** This option moved the Alignment to the east and further from the Druim Dubh, stone circle (SM 5504) to offer potential improvements to the setting of this scheduled monument, in response to advice received from Historic Environment Scotland (HES) during the routeing consultation.
- **Alignment Deviation 2a:** This option moved the Alignment to the east and further from the Aline Woodland walks, whilst seeking to retain as much distance as possible from waterbodies. This deviation was introduced in order to offer potential improvements to visual amenity from the woodland walks, in response to concerns raised by CnES regarding potential impacts on recreation during the routeing consultation.



**Alignment Deviation 3a:** This option moved the Alignment to sit immediately west of the A859 road at Ardhasaig. It was considered that this option offered potential improvements to visual amenity from surrounding dwellings, in conjunction with undergrounding of the existing distribution connection in that location.

**Alignment Deviation 3b:** This option moved the Alignment further to the west and further from residential dwellings on the Ardhasaig peninsula. It was considered that this option offered potential improvements to visual amenity from surrounding dwellings, which would be at greater distance than the alternative alignment options at Ardhasaig.



# EIA Process and Scope

EIA is a process that identifies the potential environmental effects (both beneficial and adverse) of a Proposed Development and proposes mitigation to avoid, reduce and offset any adverse environmental effects. Mitigation measures are recommended to prevent, reduce or remedy any potential adverse environmental effects identified. Following the implementation of mitigation measures, an assessment of the significance of any residual effects is undertaken.

Embedded mitigation, which comprises both design features and construction good practice, is assumed to be in place prior to impact assessment and effectively forms part of the Proposed Development. Following the initial assessment, additional mitigation measures have been recommended to prevent, reduce or remedy any potentially significant environmental effects identified.

## Stakeholder Consultation

Best practice in EIA encourages consultation and engagement with stakeholders early in the process, with advice and input from key consultees being sought at the early design stages of a project, to inform decisions about the Proposed Development. The following stakeholder consultation has been undertaken to date:

- A virtual public consultation event to present the Preferred Corridor was held in June 2021;
- Three virtual public consultation events on the alternative Route Options were held in September 2021;
- Four virtual public consultation events on the Preferred Alignment were held in February 2022;
- A scoping request for the Preferred Alignment was submitted in May 2022; and
- Three further in-person consultation events on the Preferred Alignment were held in June 2022.

## EIA Scoping

A request for a Scoping Opinion was made to the Scottish Ministers under Regulation 12 of the EIA Regulations in May 2022. A Scoping Report was submitted to support the request (Technical Appendix 4.1: EIA Scoping Report, EIAR Volume 4), which sought input from both the ECU; and statutory and non-statutory consultees regarding the information to be included within this EIAR. A Scoping Opinion was provided by the ECU on 11th July 2022. The responses contained within the Scoping Opinion and any other consultation have been considered in detail during the EIA process.

Through EIA scoping and other stakeholder consultation it was agreed that the following environmental topics would have the potential for likely significant effects resulting from the Proposed Development or required additional information. These topics are therefore addressed in the EIA and discussed in the EIAR:

- Seascape, Landscape and Visual Amenity;
- Cultural Heritage;
- Ecology;
- Ornithology;
- Hydrology, Hydrogeology, Geology and Soils; and
- Traffic and Transport.

For the following topics, significant effects were not considered to be likely and therefore it was agreed that they did not require further assessment within the EIA process:

- Land use;
- Material assets;
- Population and human health;
- Noise and vibration;
- Major accidents and disasters;
- Climate change; and
- Air quality.

# Potential Environmental Effects

This section summarises the key findings of the EIA and the significance of potential effects.

The EIA considered the environmental impacts across a range of factors, in accordance with the EIA Scoping Opinion issued by the ECU on 11th July 2022. The conclusions of the EIA are that potential likely significant effects were identified for a number of topics (see bullet list below). However, these would be reduced to a non-significant level through the application of mitigation. The only exception to this is for ecology impacts where some significant residual effects would remain.

- Seascape, Landscape and Visual Amenity;
- Cultural Heritage;
- Ecology;
- Ornithology; and
- Hydrology, Hydrogeology, Geology and Soils.

The EIA has also considered the potential for cumulative environmental impacts arising as a result of the Proposed Development in combination with other reasonably foreseeable schemes (inter-cumulative effects), as well as the combined or synergistic effects caused by the combination of a number of effects from the Proposed Development on a particular receptor (intra-cumulative effects). The potential for such effects has been identified in relation to sensitive habitats, recreational receptors and residents and settlements however, no significant effects have been identified.

## Seascape, Landscape and Visual Amenity

The Seascape, Landscape and Visual Impact Assessment (SLVIA) considers effects on landscape fabric, seascape and landscape character and visual amenity. Baseline conditions were established through a desk-based review of existing information and consultation with CnES and NatureScot to confirm viewpoint (VP) locations for sensitive receptors. Desktop findings were verified and augmented by targeted field surveys and all key sensitive receptor locations were visited.

### Baseline / Potential Receptors

The landscape encompassing the Proposed Development is characterised by individual peaks with pronounced summits, long ridges, and slopes, rising steadily from the surrounding terrain in the south, and by smooth dipped slopes which combined with the rocky convexities to form a rocky and stepped landscape in the north. The Proposed Development is located west of Loch Seaforth and Loch Eireasort, and the Proposed Development passes between Loch a' Siar and East Tarbert Loch. In higher elevations to the south of the Proposed Development there is very little vegetation cover, although on lower elevations there is a mixture of low moorland, mixed windswept heather with damp rough grassland which gives a course textured surface which is much roughened in places by the presence of large boulders, with the lower slopes eventually merging gently into the surrounding moorlands. To the north of the development the landcover predominately comprises open moorland and damp, rough grassland which extends, and occasionally over rocky knolls. There are occasional areas of forestry, small woodland and/ or shelter planting found throughout the landscape. Potential receptors include:

- Visual receptors: includes residents of Stornoway, Tarbert, Balallan, Ardhasaig, Maraig, Diraclett, Luirbost and Laxay which would have full or partial views of the OHL, individual properties, tourists, walkers and cyclists.
- Designated landscapes: including the Lewis, Harris and North Uist National Scenic Area,
- Non-designated landscapes: including the Lews Castle and Lady Lever Park Garden Designed Landscape (GDL) and Eisgein and Harris – Uig Hills Wild Land Area (WLA),

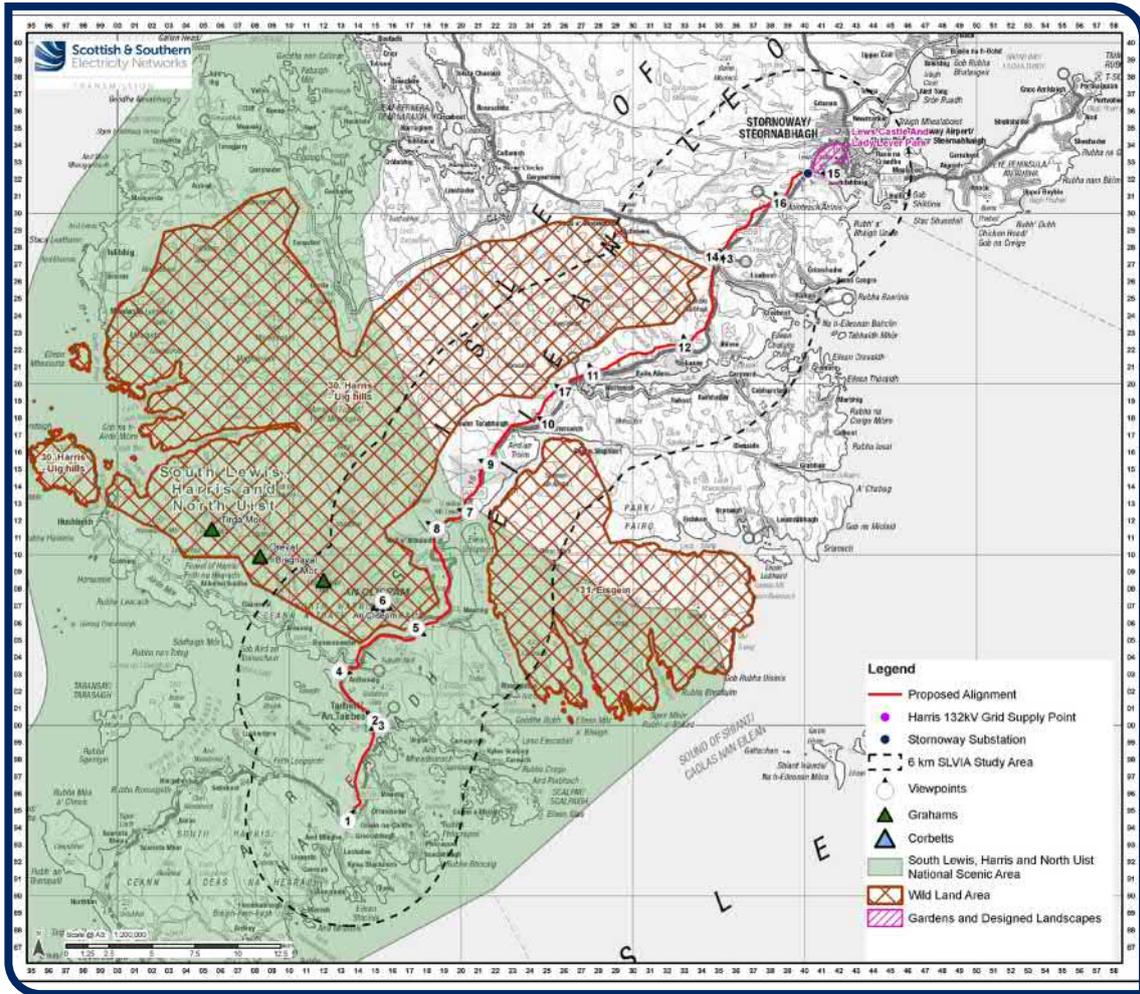
### Potential Effects

The main source of impact would be from the proposed poles, which would require vegetation clearance and removal of a small section of coniferous forestry. Careful routing of the Proposed Development during the design stage has mitigated these effects by endeavouring to avoid the most sensitive landscape and visual receptors to minimise potential significant landscape and visual effects. Therefore, no significant residual impacts on the landscape fabric and host seascape and landscape character are predicted. The Proposed Development would not introduce a wholly new or uncharacteristic element to the existing landscape condition and would be seen within the context of other existing OHL infrastructure, including the 33 kV and 11 kV OHLs which are situated directly adjacent. Moreover, as part of the Proposed Development, the existing 132 kV OHL would be removed following construction of the Proposed Alignment, reducing the number of OHL structures within the landscape post construction to that which is broadly consistent with the current baseline.

There would not be any impacts on designated or classified landscapes which would adversely affect their special qualities or key characteristics, or impact upon the justification for their designation.

No significant adverse residual visual effects were identified at any of the viewpoint locations. The Proposed Development would represent a minor addition to the influence of transmission development on the character and/ or composition of views from the representative viewpoints. The change would be discernible; however, the original character of the landscape and/ or the composition of views would be largely unaltered.

# Potential Environmental Effects



Landscape Designations



Viewpoint 17: Pairc Land Raiders Cairn

# Potential Environmental Effects

## Cultural Heritage

The EIA has assessed the potential impacts and their effects on archaeology and cultural heritage interests (hereafter 'heritage assets') associated with the construction and operation of the Proposed Development. Desk based assessment was conducted using documentary, archival and bibliographic sources, alongside consultation with Historic Environment Scotland (HES), CnES and West of Scotland Archaeology Service (WoSAS). Targeted field survey was carried out to inspect previously recorded heritage assets identified during the desk-based assessment and to identify any further heritage assets not revealed through the desk-based assessment that could be affected by the Proposed Development.

### Baseline

A total of 88 non designated assets have been identified in the Inner Study Area. The majority of these are associated with medieval or later settlement and agricultural activities, although possible stone settings and a quernstone findspot relating to prehistoric occupation, and a preserved wood of prehistoric date, are recorded close to the later settlements. The majority of the Inner Study Area comprises rough pasture with no evidence of recent agricultural improvement. It is considered that, where the Proposed Development crosses modern commercial forestry plantation, the survival of both the historic character of the landscape and any hitherto unknown features in these areas would have been already compromised and the potential for undiscovered archaeological remains to survive in these areas is considered to be negligible.

The Inner Study Area has no designated Scheduled Monuments (SM) or Listed Buildings (LB), Conservation Areas (CA), Inventory Garden and Designed Landscape (GDL), or Historic Battlefield (HB).

A further 24 heritage assets are located within the Outer Study Area (comprising of a 2 km radius from the Proposed Development). Three Scheduled Monuments, four Category B Listed Buildings, nine

Category C Listed Buildings and one Inventory Garden and Designed Landscape with predicted theoretical visibility have been identified within the Outer Study Area.

### Summary of Assessment – Inner Study Area

There is potential for construction works within the Inner Study Area to result in direct effects on 23 heritage assets. In the absence of mitigation one of these impacts is assessed as being potentially of major significance, and a further 18 are assessed as being potentially of moderate significance. In addition, 18 heritage assets lie within the Limit of Deviation and could be affected by micro-siting of proposed poles or deviation in open ground access track routes.

Mitigation measures have been set out in the EIA that would avoid, reduce or offset the predicted effects and residual effects of no more than minor significance (not significant in EIA terms) have been identified.

### Summary of Assessment – Outer Study Area

The assessment has resulted in the identification of a negligible significant effect on the setting of one Scheduled Monument. The Proposed Development would constitute a largely like-for-like replacement of the existing OHL, with no significant change to the surroundings of the designated heritage asset. A temporary impact of minor magnitude is predicted for the period immediately prior to the decommissioning of the existing OHL. It would remain possible for any visitor to the monument to understand and appreciate the monument and its setting. As such the integrity of the setting of the monument and its capacity to inform and convey its cultural significance, would not be compromised. The effect, which would not adversely affect the cultural significance of the asset, would last for the duration of the operational phase of the Proposed Development.



**Viewpoint CH01: Druim Dubh Scheduled Monument**

# Potential Environmental Effects

## Ecology and Ornithology

The EIA has considered potential impacts and their associated effects on ecological features (including designated nature conservation sites, habitats, and protected species) as well as on birds and bird related features (including sites designated for breeding birds and other protected bird species) in line with Chartered Institute of Ecology and Environmental Management (CIEEM) guidance. Baseline conditions have been collected through desk-based review of existing information, consultation with relevant statutory and non-statutory bodies and habitat and protected species surveys.

### Ecology and Nature Conservation

#### Baseline Habitat

The dominant habitats are blanket bog and wet heath. Potential Groundwater Dependent Terrestrial Ecosystems (GWDTEs) were recorded in four locations within the field survey area. No trees or structures with Bat Roost Potential (BRP) or evidence of Protected Species were recorded during field surveys, although the larger running water habitats are suitable for supporting otter populations.

#### Potential Significant Effects

Without the application of mitigation, significant effects are predicted on woodland. A suite of standard mitigation and good practice working measures would be implemented that would provide additional protection. These would include native woodland retention measures, compensatory planting, peatland restoration, habitat reinstatement and a CEMP. Following completion of the Proposed Development (including reinstatement work), a long-term residual adverse effect would remain for the loss of woodland until such time as the replacement woodland areas are fully established and functional (from 50 years).

### Ornithology

#### Baseline Habitat

The West Coast of the Outer Hebrides, Lewis Peatlands and North Harris Mountains Special Protection Areas (SPA), designated for the protection of a range of breeding and non-breeding bird species including red-throated divers, black-throated divers, eider, great northern diver, long-tailed duck, red-breasted merganser, Slavonian grebe, dunlin, golden eagle, golden plover, greenshank, and merlin have interconnectivity with the Proposed Development. Other species present within the area of the Proposed Development include hen harrier, white-tailed eagle, great skua, corncrake and wintering wildfowl.

#### Summary of Assessment

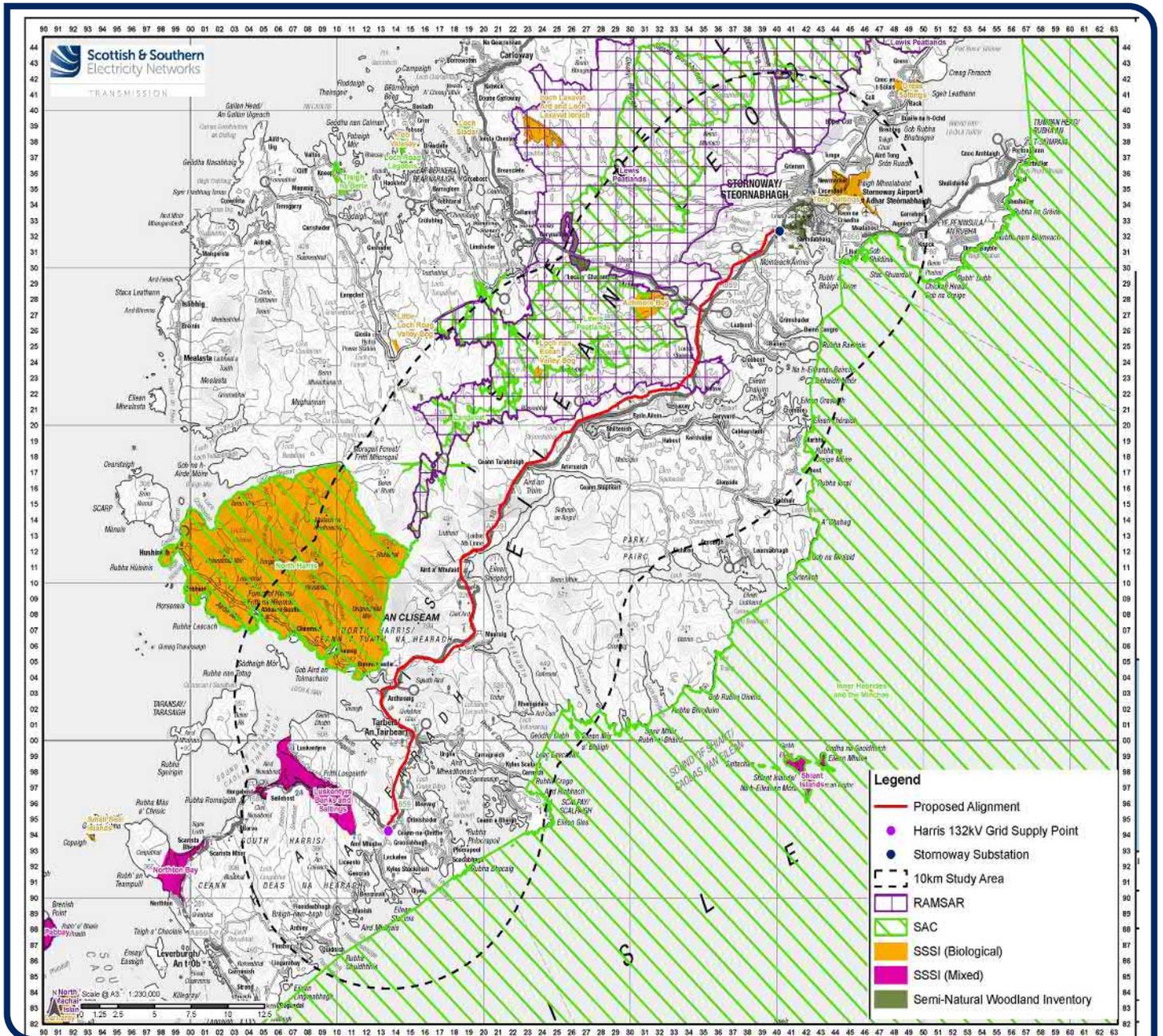
Impacts on these features would be mitigated by adhering to Species Protection Plans (SPP) and monitoring to be undertaken by the Ecological Clerk of Works. A General Environmental Management Plan (GEMP) and SPP have been produced which outlines protocols for the protection of bird species within the development area. Line marking along key sections is proposed in order to reduce collision risk for black-throated diver, red-throated diver and greylag goose.

No significant residual impacts or cumulative impacts on ornithological features are predicted.



Golden Eagle

# Potential Environmental Effects



## Ecological Designations

# Potential Environmental Effects

## Hydrology, Hydrogeology, Geology and Soils

The EIA has considered potential impacts and their associated effects on rivers, other surface water and groundwater features, water resources including public and private water supplies, soils and peatland. Baseline conditions have been collected through a desk-based review of existing information, consultation with the ECU, Scottish Environment Protection Agency (SEPA), Scottish Water and CnES to identify water abstractions, private water supplies and to discuss peat management. A field survey of the watercourses that would be crossed by the Proposed Development was undertaken to determine the hydrological context and gain a more detailed understanding of the sensitivities associated with the main watercourses. Peat depth probing was undertaken within the Proposed Development area in June, July and August 2022.

### Sensitive Receptors

A number of sensitive receptors have been identified:

- Surface Water
- Groundwater
- Drinking Water Protected Areas
- Ground Water Dependent Terrestrial Ecosystems
- Private Water Supplies
- Peatlands (blanket bog, wet modified bog, wet and dry heath, and flushes).

Without the application of mitigation, significant effects could occur to sensitive hydrological and peatland soil receptors. Following the application of mitigation measures to protect water supplies and peat, including measures to be implemented through the CEMP and Peat Management Plan (PMP), no significant residual effects are predicted. No significant cumulative effects are considered to occur to hydrological or hydrogeological receptors.

## Traffic and Transport

The EIA has considered the potential traffic and transport effects associated with the construction and operation of the Proposed Development on the surrounding public road network and sensitive receptors. The traffic and transport Study Area characteristics have been determined by desk-based review of existing information, field survey and consultation with relevant statutory and non-statutory bodies, including Transport Scotland.

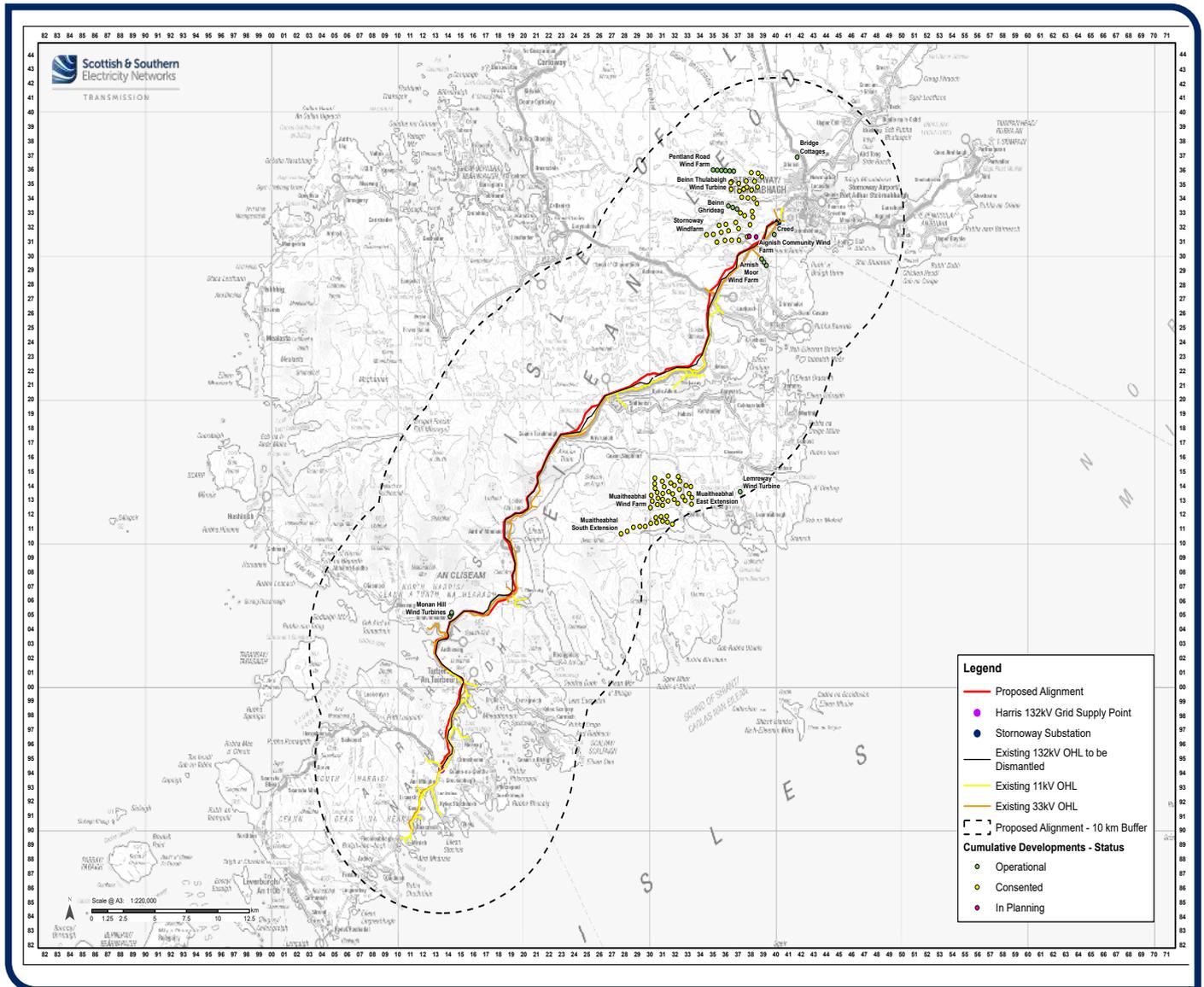
The main transport route which will be impacted by the Proposed Development is the A859 which is a single carriageway that connects Stornoway, in the north-east, to Rodel, in the south. Construction traffic would comprise construction staff in private cars, and HGVs / LGVs carrying construction materials, personnel, and plant equipment.

It is anticipated that HGVs will increase by 31.8% along the A859 to the south of Kintarvie and 15.8% along the A859 to the South of Stornoway. The increase in total traffic flows is under 5%. The total traffic movements are not anticipated to increase by more than 30% at the peak of construction activities.

The assessment of the potential environmental effects concludes that the impact to the road links within the Study Area is minor or negligible, and the significance of effect is considered to be Not Significant throughout.

Whilst no mitigation is required, the Applicant will implement a Construction Traffic Management Plan (CTMP) as a good practice measure to ensure the impact of the Proposed Development, and of other developments acting cumulatively, on the public road network are minimised as far as practicable. The CTMP will identify the programme of works, the agreed routes to site, details of a site Liaison Officer who would have responsibilities for managing traffic and transport impacts and effects and will also identify measures to manage / reduce construction staff travel by private car, particularly single occupancy trips.

# Potential Environmental Effects



## Cumulative Developments

# Potential Environmental Effects

## Cumulative Effects

There are two aspects to Cumulative Effects, defined as follows:

- Inter-cumulative effects: the combined effect of the Proposed Development together with other reasonably foreseeable development (both during construction and operation); and
- Intra-cumulative effects (effect interactions): the combined or synergistic effects caused by the combination of a number of effects on a particular receptor which may collectively cause a more significant effect than individually. A theoretical example is the culmination of disturbance from dust, noise, vibration, artificial light, human presence and visual intrusion on sensitive fauna (e.g. certain bat species) adjacent to a construction site.

### Inter-Cumulative Effects

In consultation with CnES and NatureScot, a number of developments with the potential for cumulative effects were identified within 10 km of the Proposed Development. The cumulative assessment considers developments recorded as consented (under construction or not yet constructed), those awaiting planning determination and those deemed reasonably foreseeable. Cumulative developments considered in the assessment comprise OHL works and wind farm developments. In-combination effects have been assessed within each of the Technical Assessments (Technical Chapters 6-11, EIA Volume 2). By way of a summary, given the nature of and location of the cumulative schemes, significant in-combination effects are likely to arise in respect of the following:

- Loss of peatland habitat (primarily blanket bog and wet heath) as a result of the Proposed Development and other surrounding cumulative developments. Given the predicted significant effects on blanket bog for Stornoway Wind Farm and the Muaitheabhal Wind Farm and extensions, the loss of blanket bog and wet heath could result in significant cumulative effects, even though the effect of habitat loss for the Proposed Development in isolation is considered to be not significant.

### Intra-Cumulative Effects

Potential effect interactions during the construction phase of the Proposed Development are likely to arise at the following receptors / receptor groups:

- sensitive habitats, including GWDTE and peatland;
- recreational receptors; and
- residents and settlements.

No significant intra-cumulative effects have been identified.

No potential for intra-cumulative effects during the operational phase of the Proposed Development has been identified

# Conclusion

The Applicant is proposing to construct and operate a c.58 km single circuit 132 kV OHL, supported by low profile trident H poles between the existing Harris GSP and the existing Stornoway Substation on Lewis (the 'Proposed Development').

There is a requirement to address the condition of the existing Harris-Stornoway 132 kV OHL connection, with a secondary requirement to improve network resilience. The project will also support the Applicant's goal of a one third reduction in greenhouse gas emissions, through the reduced need for diesel generation in the Western Isles due to unplanned outages.

Consultation with statutory and non-statutory consultees was carried out throughout the design evolution and EIA process, in addition to virtual exhibitions and face to face consultation events and meetings, in order to invite comment on the Proposed Development itself and specific areas of environmental assessment to incorporate into the EIA.

Through EIA scoping and stakeholder consultation it was agreed that the following environmental topics would have the potential for likely significant effects resulting from the Proposed Development or would require additional information:

- Seascape, Landscape and Visual Amenity;
- Cultural Heritage;
- Ecology;
- Ornithology;
- Hydrology, Hydrogeology, Geology and Soils; and
- Traffic and Transport.

As a result of a combination of design-led mitigation and additional proven construction phase mitigation measures, the EIAR concludes that likely significant effects associated with the proposed development, alone and in combination with cumulative developments, are limited to Ecology.

No significant residual effects are identified for Seascape, Landscape and Visual Amenity, Cultural Heritage, Ornithology, Hydrology, Hydrogeology, Geology and Soils, and Traffic and Transport.

The Applicant has submitted an application for consent under Section 37 of the Electricity Act 1989 and deemed Planning Permission under the Town and Country Planning (Scotland) Act 1997, as amended, for the Harris to Stornoway 132 kV OHL Replacement.

Any representations to the s37 consent application may be submitted via:

- The ECU website: [www.energyconsents.scot/Register.aspx](http://www.energyconsents.scot/Register.aspx);
- By email to the ECU mailbox at [representations@gov.scot](mailto:representations@gov.scot); or
- By post to the Scottish Government, Energy Consents Unit, 4th Floor, Atlantic Quay, 150 Broomielaw, Glasgow, G2 8LU.

Written or emailed representations should be dated, clearly stating the name (in block capitals), full return email and postal address of those making representations, identify the Proposed Development (Harris to Stornoway 132 kV Connection) and specify the grounds for representation.

Only representations sent by email to [representations@gov.scot](mailto:representations@gov.scot) will receive acknowledgement.

The closing date for representations will be published on the ECU website (addresses provided above).