

**Consultation Document**  
**Overhead Line Alignment Selection**  
**Lewis-Harris 132 kV Overhead Line Connection**

**February 2022**

**Reference LT000245**



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## GLOSSARY

Term	Definition
Alignment	A centre line of an overhead line OHL, along with location of key angle structures.
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.
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.
Environmental Impact Assessment (EIA)	A formal process set down in <i>The Electricity Works (EIA) (Scotland) Regulations 2017</i> used to systematically identify, predict and assess the likely significant environmental impacts of a proposed project or development.
Gardens and Designed Landscapes (GDLs)	The Inventory of Gardens and Designed Landscapes lists those gardens or designed landscapes which are considered by a panel of experts to be of national importance.
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).
Micrositing	The process of positioning individual structures to avoid localised environmental or technical constraints.
Mitigation	Term used to indicate avoidance, remediation or alleviation of adverse impacts.
National Scenic Area (NSA)	A national level designation applied to those landscapes considered to be of exceptional scenic value.
Overhead line (OHL)	An electric line installed above ground, usually supported by lattice steel towers or poles.
Plantation Woodland	Woodland of any age that obviously originated from planting.
Riparian Woodland	Natural home for plants and animals occurring in a thin strip of land bordering a stream or river.
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.
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'.

<b>Term</b>	<b>Definition</b>
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.
Span	The section of overhead line between two structures.
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 Argyll and Bute 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.
SSEN Transmission	Scottish and Southern Energy Networks Transmission
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.
Terminal Structure	A structure (tower or pole) required where the line terminates either at a substation or at the beginning and end of an underground cable section.
The National Grid	The electricity transmission network in the Great Britain.
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
Wild Land Area (WLA)	Those areas comprising the greatest and most extensive areas of wild characteristics within Scotland.

## PREFACE

This Consultation Document has been prepared by Ramboll on behalf of SSEN Transmission to seek comments from all interested parties on the Preferred Alignment identified for the proposed Lewis-Harris 132 kV overhead line (OHL) project.

This Consultation Document has been prepared by Ramboll on behalf of Scottish and Southern Electricity Networks Transmission (SSEN Transmission) to seek comments from all interested parties on the Preferred Alignment identified for the proposed Lewis-Harris 132 kV overhead line (OHL) project.

The Consultation Document is available online at: [https://www.ssen-transmission.co.uk/projects/harris-stornoway-132 kv-ohl/](https://www.ssen-transmission.co.uk/projects/harris-stornoway-132-kv-ohl/)

Our virtual consultation room launched on 24<sup>th</sup> January 2022, where further information regarding our proposals will be available alongside opportunities to join the project team for interactive text chat sessions.

A link to view the virtual consultation platform is available on the project webpage as of 24<sup>th</sup> January.

Date and time of event	Website address to join consultation
<b>15/02/2022</b> <b>2pm – 4pm &amp; 6pm – 7pm</b>	<a href="https://www.ssen-transmission.co.uk/projects/harris-stornoway-132kv-ohl/">https://www.ssen-transmission.co.uk/projects/harris-stornoway-132kv-ohl/</a>
<b>17/02/2022</b> <b>2pm – 4pm &amp; 6pm – 7pm</b>	

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All comments are requested by 24<sup>th</sup> March 2022.

## EXECUTIVE SUMMARY

This Consultation Document invites members of the public, statutory consultees and other key stakeholders to provide comment on the Preferred Alignment identified for a 132 kV overhead line (OHL) connection between the existing Stornoway substation and the existing Harris grid supply point, south of Tarbert.

In order to meet the licence obligations and ensure security of supply SSEN Transmission needs to provide a new 132 kV OHL transmission connection; this new connection will replace the existing 132 kV OHL. SSEN Transmission has identified a Preferred Alignment within the study area to meet this need.

A route selection exercise was completed in accordance with SSEN Transmission guidance, identifying a Preferred Route between the existing Stornoway substation and the existing Harris grid supply point, south of Tarbert. This was consulted on in September-October 2021. From this process, a Proposed Route was selected, which was used as the starting point for developing an OHL alignment. The OHL design contractor, LSTC, were instructed by SSEN Transmission to develop a Baseline Alignment for a 132 kV OHL, contained within the extents of the Proposed Route. The information gathered in the site assessment was used to determine the most suitable engineering alignment, hereafter called the 'Baseline Alignment'. The Baseline Alignment aims to provide the optimal alignment within the Proposed Route, taking account of engineering criteria as per Table A7 of SSEN Transmission guidance.

Following the identification of the Baseline Alignment, amendments were identified (referred to as 'deviations'). The following deviation options were suggested to address environmental issues and previous consultation feedback:

- Deviation 1A: This deviation option was chosen to offer potential improvements to the setting of Drum Dubh stone circle (SM 5504);
- Deviation 2A: This deviation option was chosen to offer potential improvements to visual amenity from the Aline woodland walks;
- Deviation 3A: This deviation option was chosen to offer potential improvements to visual amenity from surrounding dwellings at Ardhasaig, and,
- Deviation 3B: This deviation option was also chosen to offer potential improvements to visual amenity from surrounding dwellings at Ardhasaig.

This report presents a summary of the comparative analysis of environmental, engineering and cost criteria of the four alignment deviation options and the baseline alignment. **Overall, a combined preference of the Baseline Alignment plus two alternative deviations in the vicinity of Druim Dubh scheduled monument and Ardhasaig were selected.**

As part of the consultation exercise, comments are sought from members of the public, statutory consultees, and other key stakeholders on the Preferred Alignment option in response to questions set out in Section 6.

A Report on Consultation will be produced which will document the consultations received, and the decisions made considering these responses.

# 1. INTRODUCTION

## 1.1 Purpose of Document

SSEN Transmission is proposing to construct and operate a new single circuit 132 kV overhead line (OHL) between the existing substation south of Stornoway, Lewis, and the existing grid supply point south of Tarbert, Harris, Scotland. This Consultation Document invites comments from all interested parties on the Route Options under consideration. The Proposed Route is shown in Appendix 1, Figure 1.

Transmission licensees, such as SSEN Transmission, have a duty under Section 9 of the Electricity Act 1989 to develop and maintain an efficient, coordinated and economical system of electricity transmission; and to facilitate competition in the generation and supply of electricity. These works are necessary in order to replace and strengthen the existing 132 kV OHL connection between these two connection points, in accordance with the National Electricity Transmission System Security and Quality of Supply Standard (NETS SQSS).

This Consultation Document describes the different OHL Alignment Deviation Options evaluated in more detail and invites interested parties to provide their views on the Preferred Alignment put forward in this document.

All comments received will inform SSEN Transmission's selection of a Preferred Option to take forward.

## 1.2 Document Structure

This report is comprised of the following sections as follows:

2. **The Proposals** – describes the project need, the project overview, and consultation history;
3. **Description of the Alignment Deviation Options**- describes the identification of Alignment Deviation Options and provides a summary of each option;
4. **Comparative Appraisal** – a summary of the environmental, engineering and cost topics, followed by a comparative analysis summary and a description of the Preferred Alignment;
5. **Consultation on the Proposals** – invites comments on the Preferred Alignment and describes the next steps.

The main body of this document is supported by a series of figures which can be found in Appendix 1: Figures.

## 1.3 Next Steps

As part of the consultation exercise, comments are sought from members of the public, statutory consultees and other stakeholders on the Preferred Alignment put forward in this report.

A Report on Consultation will be produced in March 2022 after the consultation response time, which will document the consultation responses received, and any decisions made as a result of these responses, to select the Indicative Proposed Alignment.

The Indicative Proposed Alignment, will be taken forward for more detailed environmental and technical assessment prior to submission of an application for consent under section 37 of the Electricity Act 1989, as amended (hereafter referred to as s37 consent).

## 2. THE PROPOSALS

### 2.1 Project Need

The primary requirement for this project is to address the condition of the existing Lewis-Harris 132 kV OHL connection, with a secondary requirement to improve network resilience. This project would also support SSEN Transmission's goal of one third reduction in greenhouse gas emissions, through the reduced need for diesel generation in the Western Isles due to unplanned outages. The requirement is to construct an offline 132 kV OHL wood pole trident line between Harris Grid Supply Point and Stornoway Grid Supply Point, to replace the existing single pole trident design with a new "H" Pole trident wood pole line.

### 2.2 Proposals Overview

The Proposed Development would comprise the construction of a new 132 kV OHL supported by "H" Pole trident wood poles (Plate 2.1 below). Low-profile steel trident poles may be used in certain locations to achieve long spans. The design of the low-profile poles is still to be finalised; however, it is envisaged that they will look very similar to the wood pole trident, the only marked difference would be the replacement of the wood poles with steel poles. The 132 kV trident construction would meet the requirements of the line rating and would have a similar visual profile to the existing OHL. It would have improved reliability over the existing OHL, meeting increased climatic design parameters, and would also include a fibre-optic cable, which meets the requirements for modern communication for protection and operation of the circuit. The new OHL would replace the existing 132 kV OHL, which would be removed once the Proposed Development is operational.

**Plate 2.1: Trident wood pole design**



The spacing between wood poles would vary depending on topography, altitude, and land use but would likely be between 60 m and 120 m, with an average span length of 90 m. To install the majority of the wood poles, existing tracks would be used where possible. However, the use of bog mats may be necessary in some areas



depending on existing access conditions, terrain and altitude. At this stage, it has been assumed that wood poles would be a maximum of 17 m above ground level, with a typical average pole height of 13 m above ground level.

Construction of the Proposed Development would require the removal of sections of commercial forest as well as community woodland, which would be undertaken in consultation with Aline Community Woodland and affected landowners. After felling, any timber removed that is commercially viable would be sold and the remaining forest material would be dealt with in a way that delivers the best practicable environmental outcome and is compliant with waste regulations.

### **2.3 Consultation History**

The Project and project corridor were first presented to consultees on 30<sup>th</sup> June 2021. Following this the Preferred Route was presented to consultees in September 2021, with the publication of a Consultation Document and two virtual consultation events held in September 2021. The subsequent consultation period ran until October 2021. The programme of consultation was designed to engage with statutory and non-statutory organisations, in order to invite feedback on the work undertaken to identify the Preferred Route. Following receipt of all consultation feedback, a Proposed Route was established (Figure1).

### 3. DESCRIPTION OF BASELINE ALIGNMENT AND DEVIATION OPTIONS

#### 3.1 Study Area

As referred to above, the Proposed Route illustrated on Figure 1 (Appendix 1) was established as the starting point for development of an OHL alignment. The Baseline Alignment for a 132 kV OHL was developed by SSEN Transmission, within the extents of the Proposed Route.

#### 3.2 Identification of Baseline Alignment

The OHL design contractor, LSTC, instructed by SSEN Transmission, developed the Baseline Alignment for a 132 kV OHL via the following steps:

- an initial desktop analysis was conducted of the Proposed Route, which allowed provisional angle points to be selected and marked on maps;
- provisional ground lines and elevations were reviewed using LIDAR survey data; and
- an on-site assessment of the initial alignment and angle points was made, involving traversing the initial alignment to investigate, photograph and record the locations (via hand held GPS) of key features including buildings, roads, public footpaths, water bodies, existing service markers, existing Low Voltage (LV) and High Voltage (HL) OHLs and other infrastructure that may require specific clearance from the Proposed Development.

The information gathered was used to determine the most suitable engineering alignment, hereafter called the 'Baseline Alignment'. The Baseline Alignment aims to provide the optimal alignment within the Proposed Route, taking account of engineering criteria as summarised in Table 3.1 below.

**Table 3.1: Baseline Alignment – Engineering Appraisal Criteria**

<b>Infrastructure Crossing</b>	<p><u>Major Crossings:</u> Review of major crossings (132kV, 275kV, Rail, 200 m+ wide river, navigable canal, and hydro/gas pipeline) (Holford Rule 6).</p> <p><u>Road Crossing:</u> Review number of road crossings.</p>
<b>Ground Conditions</b>	<p><u>Terrain:</u> Review of topography, with a preference for lower gradients and avoiding slope gradients &gt;50% where possible.</p> <p><u>Peat:</u> Site survey to avoid unfavourable ground, such as peat, extensive areas of rocky outcrops and wet areas and water courses/ bodies.</p>
<b>Construction and Maintenance</b>	<p><u>Angle Poles:</u> Review of angle pole requirements. Least number of angle poles is preferable (Holford Rule 3).</p>
<b>Proximity</b>	<p><u>Clearance Distance:</u> Review distance to existing buildings or properties. Aiming at least 100 m distance.</p>

The Baseline Alignment is shown on Figure 2 (Appendix 1).

#### 3.3 Alignment Deviations Analysis

The next stage comprised the analysis of the Baseline Alignment in terms of the environmental criteria summarised in Table 3.2 below.

**Table 3.2: Baseline Alignment – Environmental Appraisal Criteria**

<b>Natural Heritage</b>	Designations, protected species, habitats, ornithology, hydrology, geology.
<b>Cultural Heritage</b>	Designated and non-designated assets.
<b>Proximity to Dwellings</b>	Residential properties.
<b>Landscape and Visual</b>	Designations, landscape character and visual amenity.
<b>Land Use</b>	Agriculture, forestry, and recreation.
<b>Planning</b>	Policy and proposals.

The route selection stage, completed in accordance with the SSEN Transmission OHL routeing process and the Holford Rules, ensured that the areas of highest amenity value were avoided. Therefore, for the majority of the Baseline Alignment, no obvious benefit was identified from alternative alignment options and the Baseline Alignment is confirmed as the Preferred Alignment for the majority. However, four Deviation Options were identified as shown on Figure 3 (Appendix 1); these are briefly described below:

### 3.3.1 Alignment Deviation 1A

This deviation moves the Alignment to the east and further from the Druim Dubh, stone circle (SM 5504) and was introduced in order to offer potential improvements to the setting of this scheduled monument. Alignment Deviation 1A is approximately 1.5 km in length and runs in a generally south westerly direction to the north west of the A859.

### 3.3.2 Alignment Deviation 2A

This deviation moves the Alignment to the 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. Alignment Deviation Option 2A is approximately 2 km in length and runs in a generally southerly direction, west of the A859.

### 3.3.3 Alignment Deviation 3A

This deviation moves the Alignment so that it sits immediately west of the A859 road at Ardhasaig. It was considered that this deviation may offer potential improvements to visual amenity from surrounding dwellings, in conjunction with the undergrounding of the existing distribution connection in that location. Alignment Deviation Option 3A is approximately 1 km in length and runs in a north-south direction.

### 3.3.4 Alignment Deviation 3B

This deviation moves the Alignment, so that it lies further to the west and further from residential dwellings on the Ardhasaig peninsula. It was considered that this deviation may offer potential improvements to visual amenity from surrounding dwellings, which lie at greater distance than the alternative alignment options at Ardhasaig. Alignment Deviation Option 3B is approximately 1.5 km in length and runs southwest away from the A859 before turning south east back towards the A859.

## 4. COMPARATIVE APPRAISAL

### 4.1 Introduction

The comparative appraisal for each Alignment Deviation Option has been completed in accordance with SSEN Transmission guidance. The guidance states that each Option should be evaluated with reference to agreed environmental, engineering and cost criteria and should be considered in terms of the potential for the Proposed Development to be constrained. A Red/Amber/Green (RAG) rating has been applied to each criterion with RED indicating a high potential for constraint, AMBER indicating intermediate potential for constrain and GREEN indicating low potential for constraint. It should be noted that a RED or AMBER rating does not necessarily indicate that the Option would be unacceptable, but rather indicates the need for further consideration of the potential to mitigate potentially adverse impacts.

### 4.2 Comparative Analysis of Baseline Alignment with Deviation 1A

#### 4.2.1 Environmental Topics

The RAG analysis has identified particular sensitivities in relation to those constraints shown as amber in Table 4.1 below. Many of these do not indicate a preference between the alternative options; however, the preferences that can be drawn out are identified below.

The Baseline Alignment is preferred in relation to:

- Protected species (otter), due to its greater distance from Loch Briodag and Loch Airigh Riabhach;
- Ornithology (breeding black-throated diver), due to its greater distance from Loch Briodag; and
- Landscape, due to its location at a lower elevation within the landscape.

Alignment Deviation 1A is preferred in relation to:

- Hydrology, due to its greater distance from a surface water abstraction for a private water supply (PWS). However, it is noted that both the Baseline Alignment and Deviation 1A are at greater than 250 m distance (the distance which would necessitate further detailed assessment);
- Cultural heritage, due to its reduced potential for setting impacts on both a scheduled monument SM5504 (Druim Dubh stone circle) and an HER entry MWE146155 (a heritage asset of local value and low sensitivity); and
- Habitat. Both the Baseline Alignment and Deviation 1A are rated as amber in the RAG analysis, however Deviation 1A is preferred as less blanket bog is traversed.

**Table 4.1: Summary of Environmental RAG Ratings**

Alignment options	RAG Impact Rating																
	Natural Heritage						Cultural Heritage		People	Landscape and Visual			Land Use			Planning	
	Designations	Protected Species	Habitats	Ornithology	Hydrology	Geology	Designated Assets	Non-designated Assets	Proximity to Dwellings	Designations	Character	Visual	Agriculture	Forestry	Recreation	Policy	Proposals
Baseline	A	G	A	A	G	A	A	A	G	A	G	A	G	G	G	G	G
Deviation 1A	A	G	A	A	G	A	G	G	G	A	G	A	G	G	G	G	A

#### 4.2.2 Engineering Topics

The Baseline Alignment is preferred in relation to its proximity to the main road (A859).

Alignment Deviation 1A is preferred in relation to:

- its slightly higher elevation, out of boggy / softer ground conditions; and
- existing peat cutting areas are avoided.

**Table 4.2: Summary of Engineering RAG Ratings**

Alignment options	RAG Impact Rating											
	Infrastructure Crossing		Environmental Design			Ground Conditions		Construction / Maintenance		Proximity		
	Major Crossings	Road Crossings	Elevation	Pollution Areas	Flooding	Terrain	Peat	Access	Angle Poles	Clearance Distance to Buildings	Proximity to Windfarms	Urban Environments
Baseline	G	G	G	G	G	G	R	G	G	A	G	G
Deviation 1A	G	G	G	G	G	G	R	G	A	G	G	G

#### 4.2.3 Cost Topics

Both the Baseline Alignment and Deviation 1A would encounter similar issues such as loch crossings, areas of deep peat, requirement to underground existing distribution OHLs, etc. The only difference that would make a minor cost difference is that Deviation 1A lies further away from the main road for access purposes and would require additional construction works. However, the cost difference would be minor.

**Table 4.3: Summary of Cost RAG Ratings**

Alignment options	RAG Impact Rating - Cost							
	Capital						Operational	
	Construction	Diversions	Public Road Improvements	Felling	Land Accessibility	Consent Mitigations	Inspections	Maintenance
Baseline	G	G	G	G	G	G	G	G
Deviation 1A	G	G	G	G	G	G	G	G

### 4.3 Comparative Analysis of Baseline Alignment with Deviation 2A

#### 4.3.1 Environmental Topics

The RAG analysis has identified particular sensitivities in relation to those constraints shown as amber in Table 4.4 below. Many of these do not indicate a preference between the alternative options, however the preferences that can be drawn out are identified below.

The Baseline Alignment is preferred in relation to:

- Visual amenity, due to its proximity to existing transmission lines limiting the removal and clearance of coniferous forestry which provides screening. However cumulative effects would require consideration and it is noted that both alignment options are rated amber in the RAG analysis; and
- Hydrology, due to the reduced requirement for watercourse crossings.

Alignment Deviation 2A is preferred in relation to:

- Ornithology, due to the lesser potential for collision risk in relation to birds flying into and out of Loch Cleit na Stiuire;
- Cultural heritage, due to a reduced potential for impact on heritage assets of local value and low sensitivity; and
- Recreation, due to its lesser interaction with Aline Woodland Walks.

**Table 4.4: Summary of Environmental RAG Ratings**

Alignment options	RAG Impact Rating																
	Natural Heritage						Cultural Heritage		People	Landscape and Visual			Land Use			Planning	
	Designations	Protected Species	Habitats	Ornithology	Hydrology	Geology	Designated Assets	Non-designated Assets	Proximity to Dwellings	Designations	Character	Visual	Agriculture	Forestry	Recreation	Policy	Proposals
Baseline	G	G	G	A	G	A	G	G	G	G	G	A	G	A	A	G	G
Deviation 2A	G	G	G	G	G	A	G	G	G	G	G	A	G	A	A	G	G

#### 4.3.2 Engineering Topics

The Baseline Alignment is preferred in relation to:

- its utilising the existing OHL corridor;
- the reduced requirement for larger swathes of tree felling; and
- it avoids boggy ground conditions along the side and northern end of the Loch Cleit na Stiuire.

Deviation 2A is preferred in relation to:

- the lack of requirement to cross Loch Cleit a Stiuire; and
- the reduced access requirements with only bridges that would require upgrading.

**Table 4.5: Summary of Engineering RAG Ratings**

Alignment options	RAG Impact Rating											
	Infrastructure Crossing		Environmental Design			Ground Conditions		Construction / Maintenance		Proximity		
	Major Crossings	Road Crossings	Elevation	Pollution Areas	Flooding	Terrain	Peat	Access	Angle Poles	Clearance Distance to Buildings	Proximity to Windfarms	Urban Environments
Baseline	A*	G	G	G	G	G	R	A	G	G	G	G
Deviation 2A	G	G	G	G	A**	G	R	A	G	G	G	G
*Loch Cleit na Stiuire classed as 'Major Crossing' in comparison ** Slightly greater interaction with flooding zones due to northern end of Loch Cleit na Stiuire and proximity to Abhainn Ruadh												

#### 4.3.3 Cost Topics

Both the Baseline and Deviation 2A encounter similar issues; however the only difference which would make a minor cost difference is that Deviation 2A would require wider felling works within the Aline Forestry.

**Table 4.6: Summary of Cost RAG Ratings**

Alignment options	RAG Impact Rating - Cost							
	Capital						Operational	
	Construction	Diversions	Public Road Improvements	Felling	Land Accessibility	Consent Mitigations	Inspections	Maintenance
Baseline	G	G	G	A	G	G	G	G
Deviation 2A	G	G	G	A	G	G	G	G

#### 4.4 Comparative Analysis of Baseline Alignment with Deviations 3A and 3B

##### 4.4.1 Environmental Topics

The RAG analysis has identified particular sensitivities in relation to those constraints shown as amber in Table 4.7 below. Many of these do not indicate a preference between the alternative options, however the preferences that can be drawn out are identified below.

The Baseline Alignment is preferred in relation to:



- Cultural heritage, due to its lesser potential for impact of local HER entries.

Alignment Deviation 3A is preferred in relation to:

- Ornithology, due to its slightly reduced potential for collision risk for SPA species (as the SPA would be at greater distance); and
- Hydrology, due to the greater distance to coastal waters and its proximity to existing watercourse crossings.

Alignment Deviation 3B is preferred in relation to:

- Proximity to dwellings, due to its being at a lower elevation and being fully backclothed from the eastern most residential receptors; and
- Visual amenity – this is a marginal preference, based on its location at a lower elevation such that it would be backclothed in views from receptors such as the A859, Core Paths 10/11, and users of Loch Seaforth.

**Table 4.7: Summary of Environmental RAG Ratings**

Alignment options	RAG Impact Rating																
	Natural Heritage						Cultural Heritage		People	Landscape and Visual			Land Use			Planning	
	Designations	Protected Species	Habitats	Ornithology	Hydrology	Geology	Designated Assets	Non-designated Assets	Proximity to Dwellings	Designations	Character	Visual	Agriculture	Forestry	Recreation	Policy	Proposals
Baseline	A	G	G	A	G	A	G	G	R	A	A	R	G	G	G	G	G
Deviation 3A	A	G	G	A	G	A	G	G	R	A	A	R	G	G	G	G	G
Deviation 3B	A	G	G	G	G	A	G	A	A	A	A	R	G	G	G	G	G

#### 4.4.2 Engineering Topics

The Baseline Alignment is preferred in relation to:

- its utilisation of the lower larger open areas to avoid visual aspects from A859; and
- its avoidance of the dwellings near the Petrol Station.

Alignment Deviation 3A is preferred in relation to:

- its avoidance of views from dwellings at Cul na h-Aird and Ardhasaig House (hotel); and
- Its utilisation of the existing 33 kV OHL corridor.

Alignment Deviation 3B is preferred in relation to:

- it avoids an elevated road crossing and steeper slopes to the north of Ardhasaig House.

**Table 4.8: Summary of Engineering RAG Ratings**

Alignment options	RAG Impact Rating											
	Infrastructure Crossing		Environmental Design			Ground Conditions		Construction / Maintenance		Proximity		
	Major Crossings	Road Crossings	Elevation	Pollution Areas	Flooding	Terrain	Peat	Access	Angle Poles	Clearance Distance to Buildings	Proximity to Windfarms	Urban Environments
Baseline	G	A*	G	G	G	A***	A	G	G	R	G	G
Deviation 3A	G	A*	G	G	G	A***	A	G	A	R	G	G
Deviation 3B	G	G	G	G	A**	G	A	G	A	R	G	G
*Elevated road to contend with Ardhasaig House ** Closer coastal proximity results in higher chance of flooding *** Steeper slopes to navigate north of Ardhasaig House (40-50%)												

#### 4.4.3 Cost Topics

The Baseline Alignment and Deviation options have the same main issues of running in close proximity to existing dwellings and the existing 132 kV / distribution OHLs also lie close by. Deviations 3A and 3B will have minor increased costs, in comparison to the Baseline Alignment, to ensure consenting mitigations as they swing further out from the road and will require slightly further lengths and slightly extra access requirements. With the exception of these there are almost no differences in the options.

**Table 4.9: Summary of Cost RAG Ratings**

Alignment options	RAG Impact Rating - Cost							
	Capital						Operational	
	Construction	Diversions	Public Road Improvements	Felling	Land Accessibility	Consent Mitigations	Inspections	Maintenance
Baseline	G	G	G	G	G	A	G	G
Deviation 3A	G	G	G	G	G	A	G	G
Deviation 3B	G	G	G	G	G	A	G	G

#### 4.5 Preferred Alignment

An internal alignment selection workshop was held in order to compare the environmental, technical and cost appraisals of the alignment deviation options and agree on a Preferred Alignment. This workshop resulted in the following decisions:

- An alternative deviation which lies closer to the Baseline Alignment than Deviation 1A was agreed, on the basis that this would allow greater distance between the Proposed Development and the scheduled monument (Druim Dubh) than for the Baseline Alignment, thereby reducing potential impacts on the setting of the scheduled monument, while also reducing the need for angle poles and remaining closer to the road than Deviation 1A;
- It was agreed that the Baseline Alignment would be retained over Deviation 2A on the basis that this would minimise tree loss and make use of the existing forestry corridor, thereby having a lesser impact on visual amenity; and
- An alternative deviation in preference to the Baseline Alignment, Deviation 3A and Deviation 3B was discussed and agreed on the basis that this would represent a preference in engineering terms, while also remaining close to the road and allowing the existing distribution connection to be undergrounded in this area (thereby reducing potential visual impacts).

This Preferred Alignment is shown on Figure 5 (Appendix 1).

## 5. CONSULTATION ON THE PROPOSALS

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.

### 5.1 Questions for Consideration by Consultees

When providing your comments and feedback, SSEN Transmission would be grateful for your consideration of the questions below:

1. Have we explained the need for this Project adequately?
2. Have we explained the approach taken to select the Preferred Alignment adequately?
3. Are there any factors, or environmental features, that you consider may have been overlooked during the Preferred Alignment selection process?
4. Do you feel, on balance, that the Preferred Alignment selected is the most appropriate for further consideration at the EIA and consenting stage?

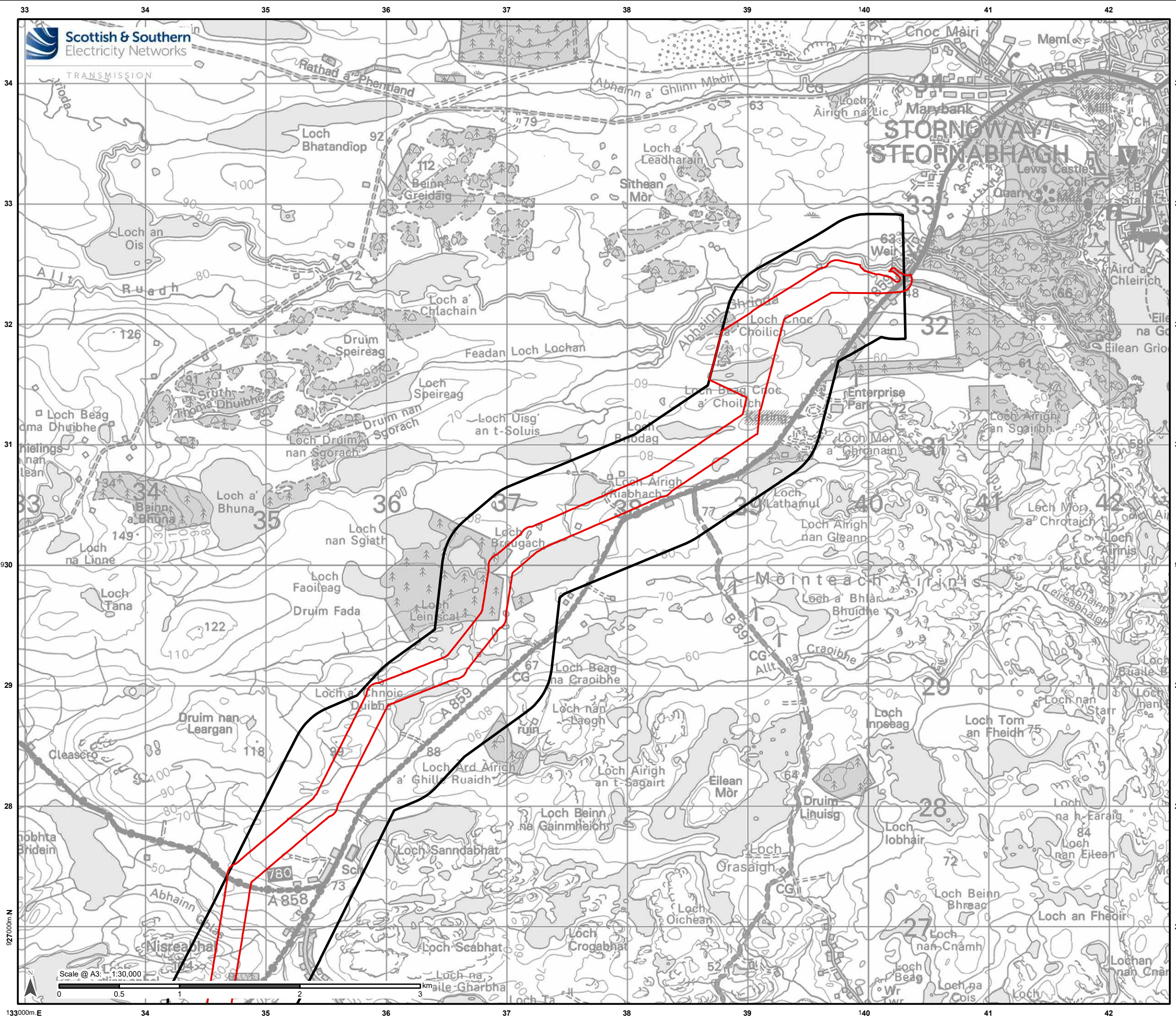
### 5.2 Next Steps

Virtual online consultation events will be held, as detailed in the preface of this document. The responses received from these consultation events, and those sought from statutory consultees and other stakeholders, will inform further consideration of the Preferred Alignment put forward, and the identification of a Proposed Alignment to take forward to the next stage of the process.

All comments are requested by 24<sup>th</sup> March 2022. A Report on Consultation will be produced which will document the consultation responses received, and the decisions made in light of these responses.

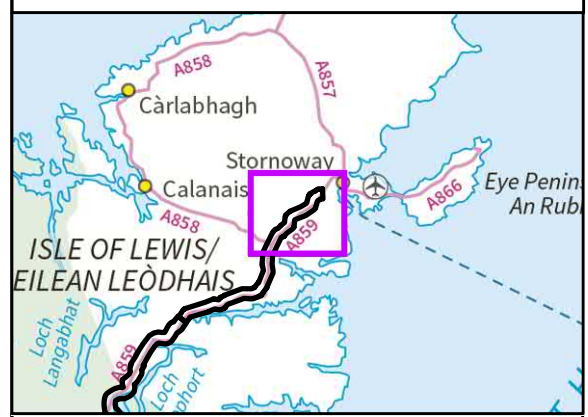
Following the identification of the Indicative Proposed Alignment, more detailed environmental and technical assessment will be conducted prior to submission of an application for consent under section 37 of the Electricity Act 1989, as amended (hereafter referred to as s37 consent).

## APPENDIX 1: FIGURES



**Legend**

- LT0245 Proposed Route
- Proposed Corridor



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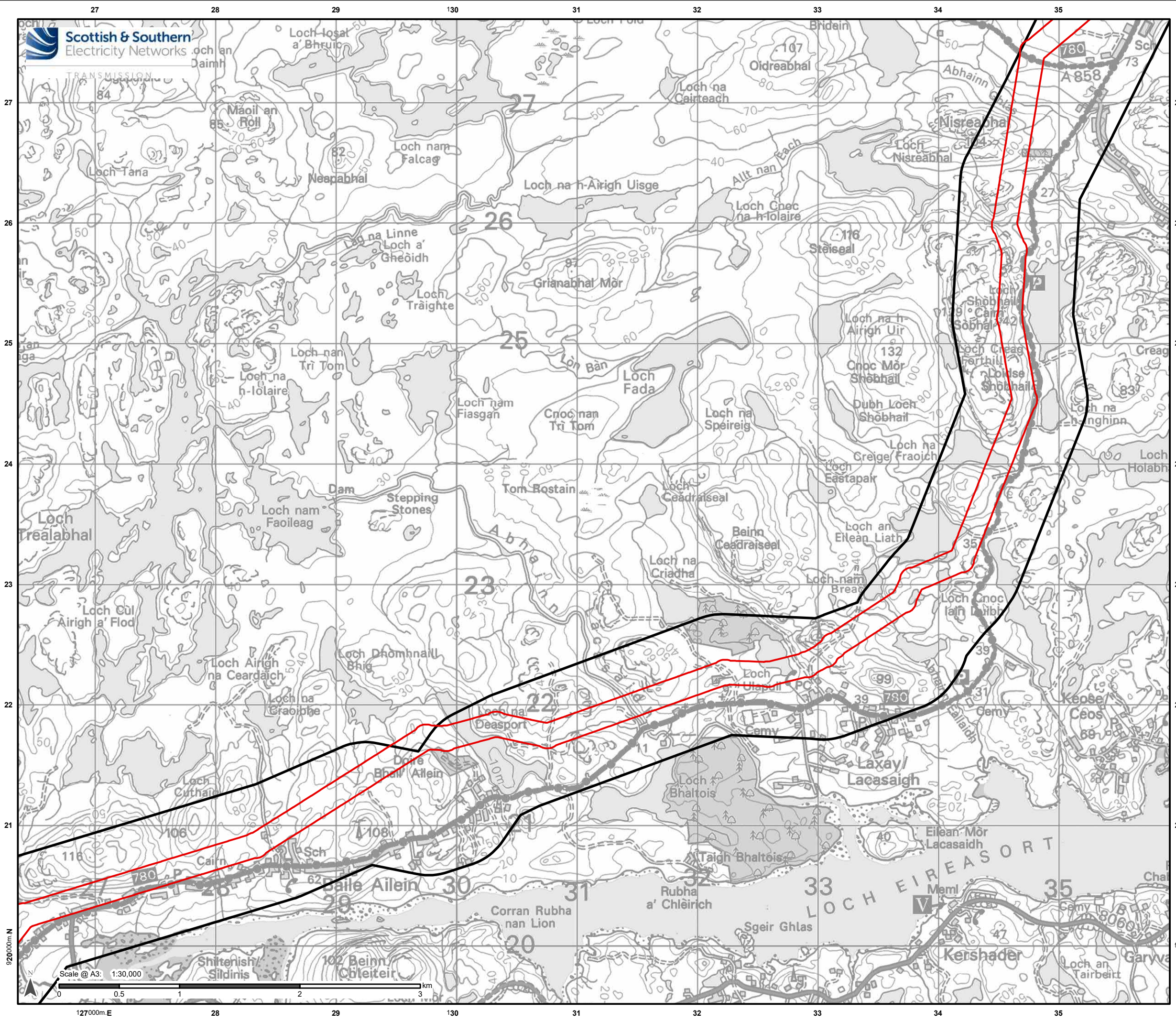
Project No: LT0245  
Project: 1620011469

Title:  
Figure 1a: Proposed Route

Drawn by: CF Date: 26/01/2022

Drawing: R162\_11469\_Fig1\_ProposedRoute\_A





**Legend**

- LT0245 Proposed Route
- Proposed Corridor



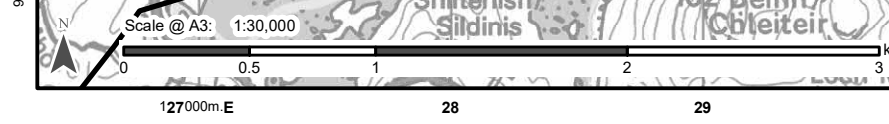
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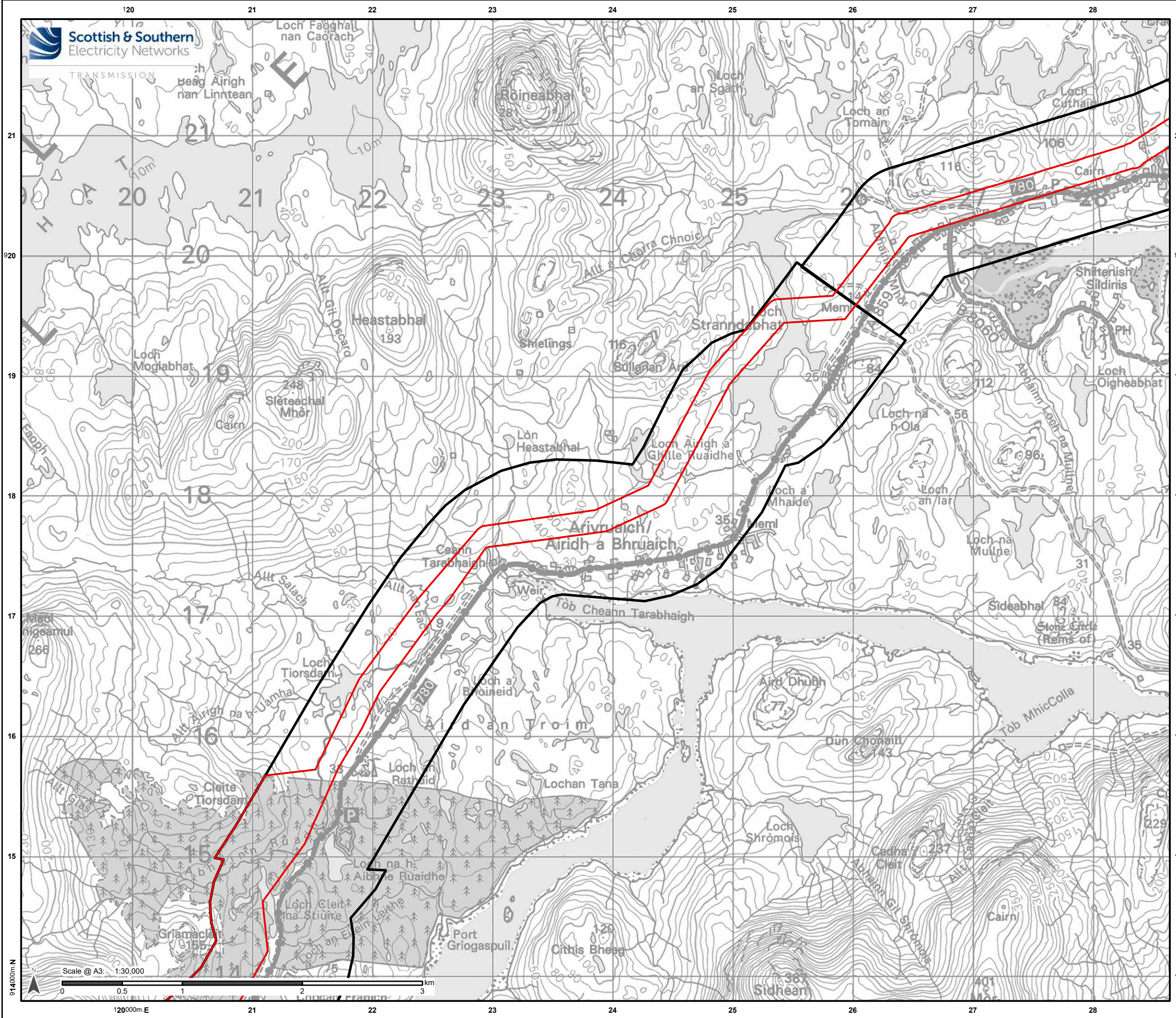
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Title:  
Figure 1b: Proposed Route

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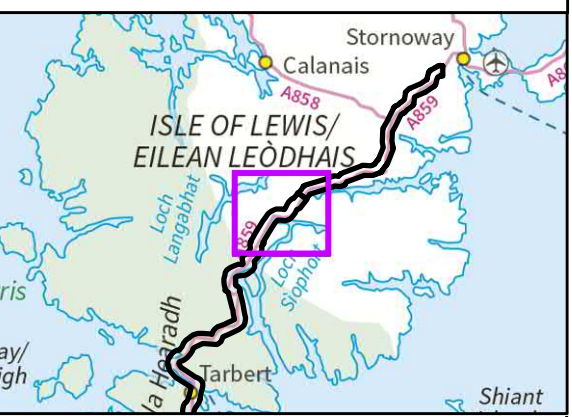
Drawing: R162\_11469\_Fig1\_ProposedRoute\_A





**Legend**

- LT0245 Proposed Route
- Proposed Corridor



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Project: 1620011469

Title:  
Figure 1c: Proposed Route

Drawn by: CF Date: 26/01/2022

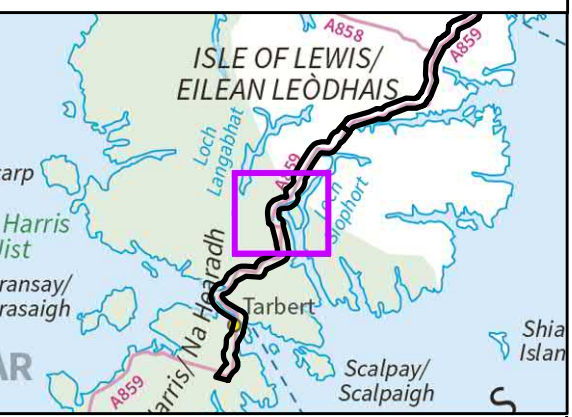
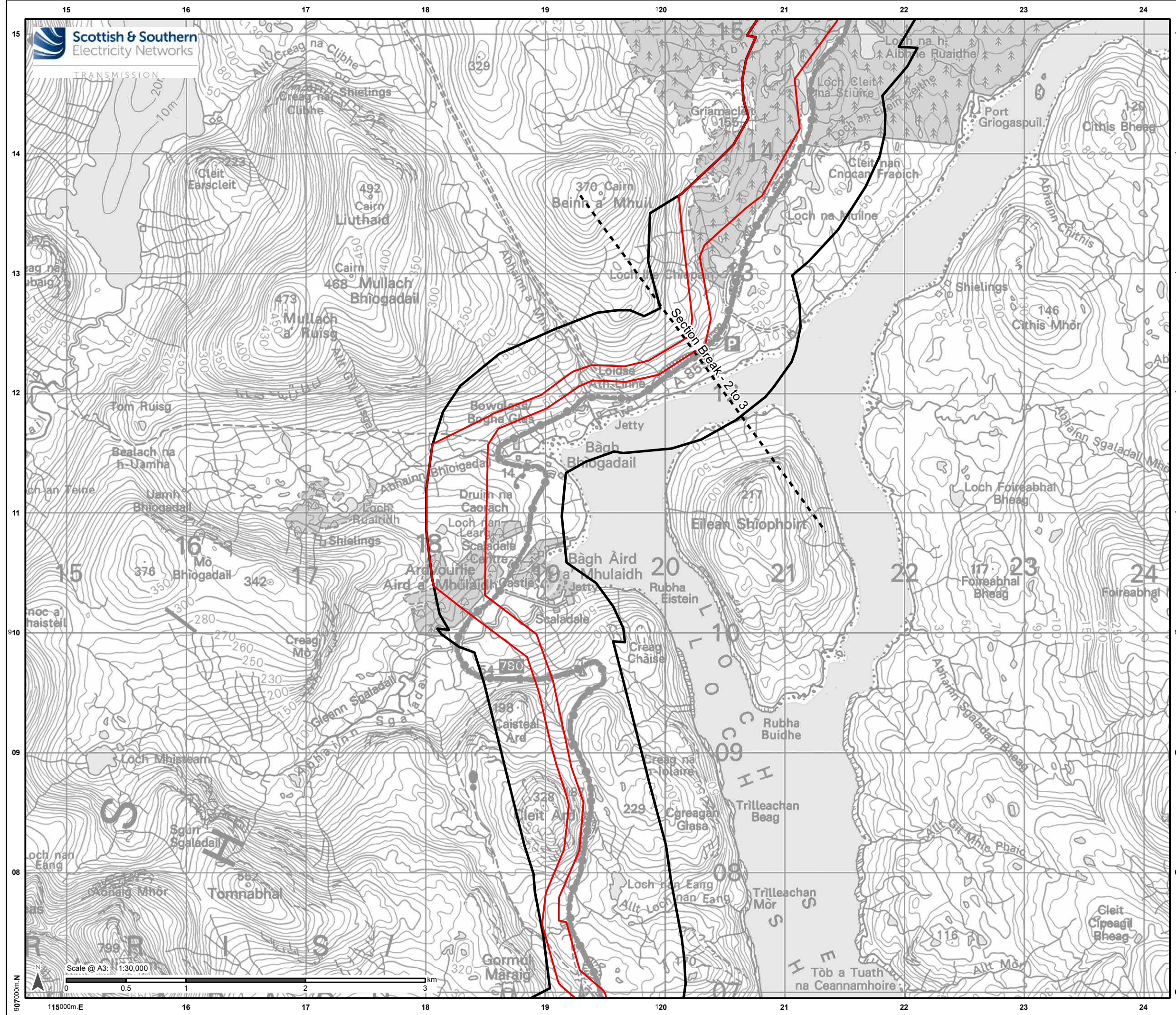
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**Legend**

- LT0245 Proposed Route
- Proposed Corridor



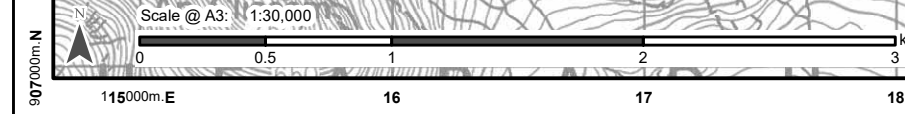
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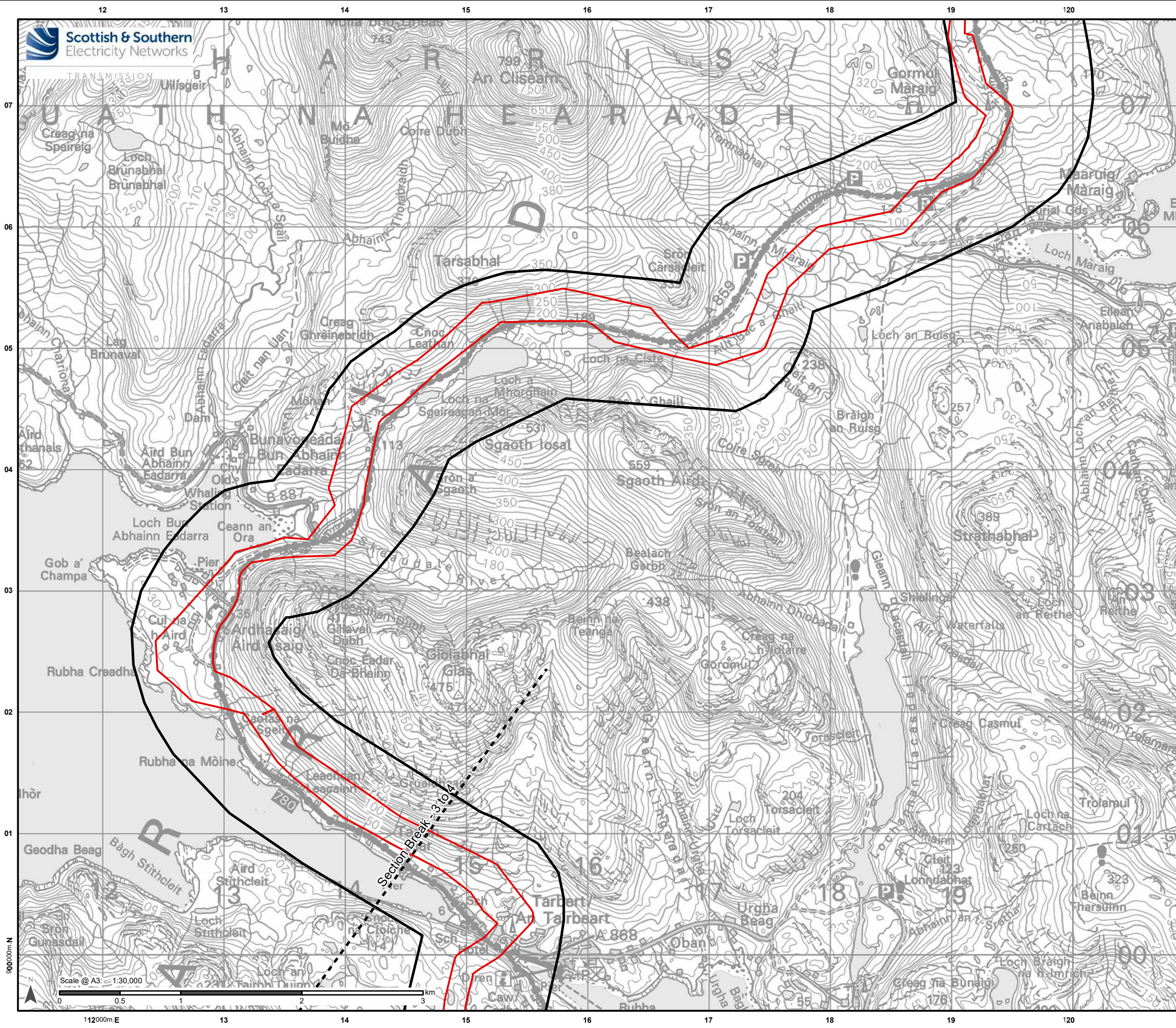
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Title:  
Figure 1d: Proposed Route

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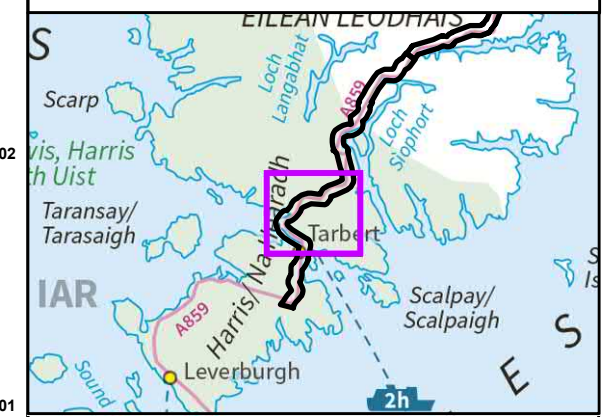
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**Legend**

- LT0245 Proposed Route
- Proposed Corridor



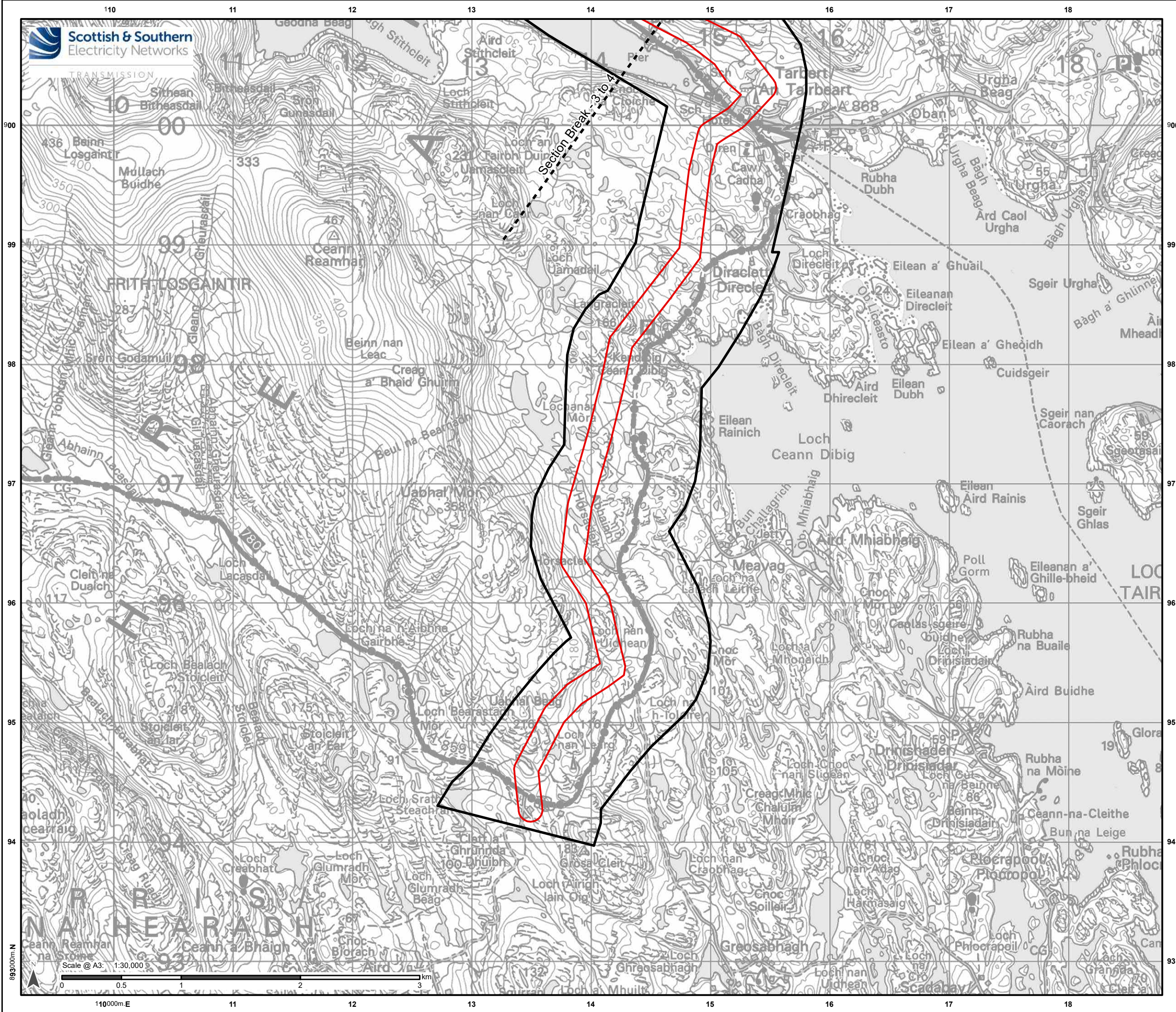
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Project No: LT0245  
Project: 1620011469

Title:  
Figure 1e: Proposed Route

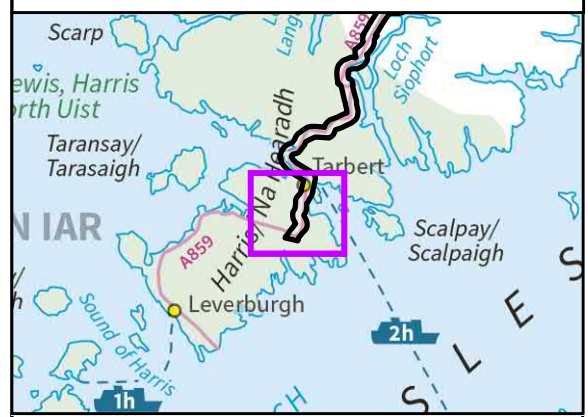
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Drawing: R162\_11469\_Fig1\_ProposedRoute\_A



**Legend**

- LT0245 Proposed Route
- Proposed Corridor



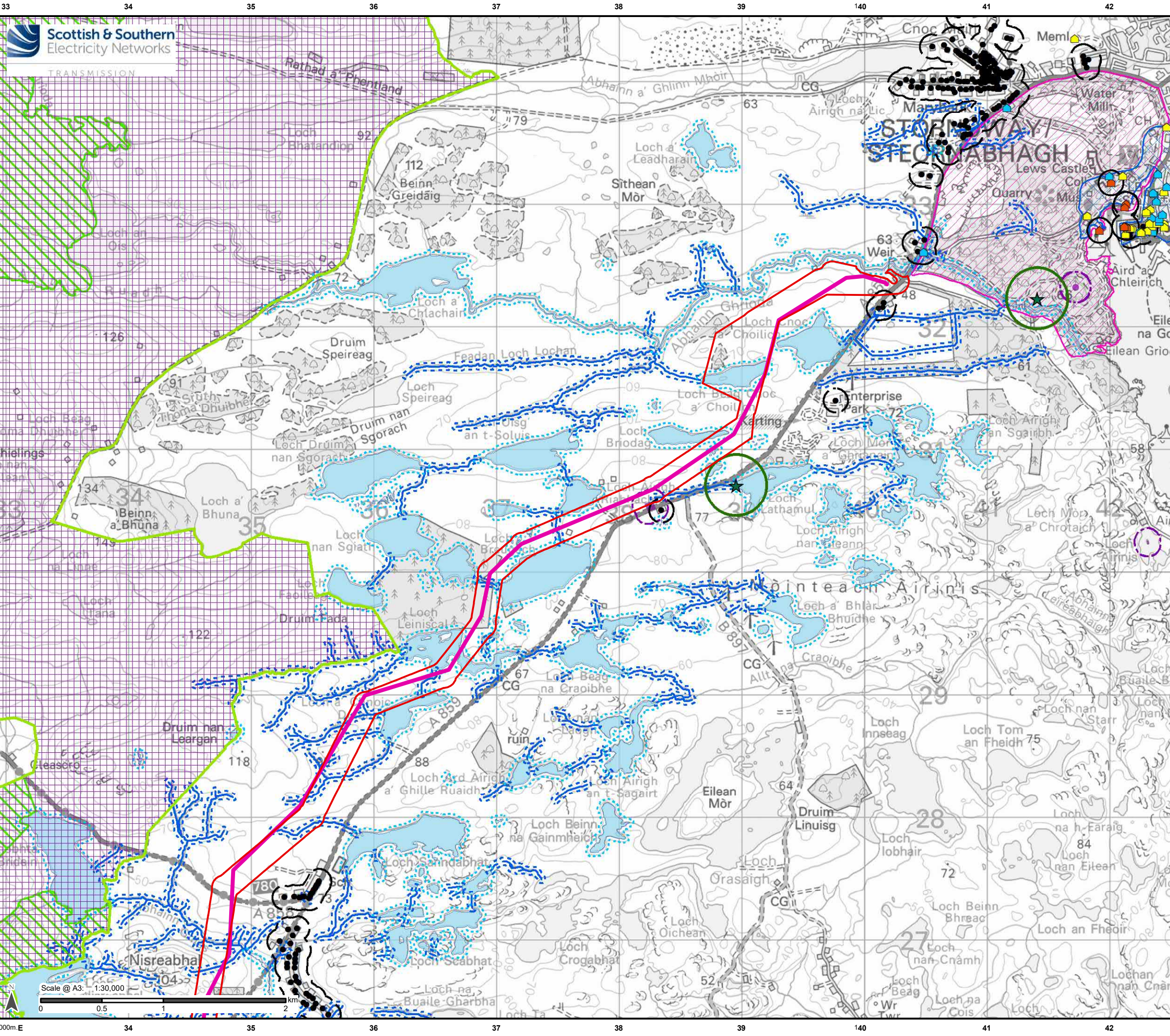
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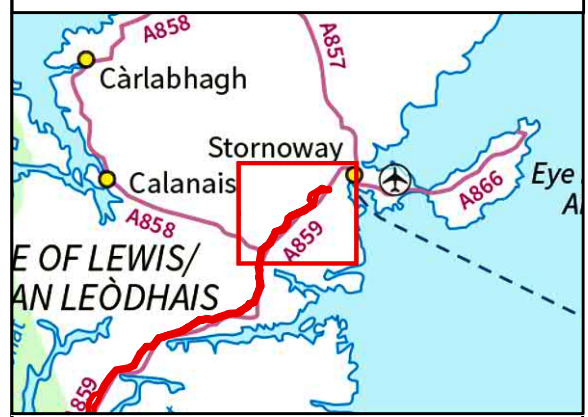
Title:  
Figure 1f: Proposed Route

Drawn by: CF Date: 26/01/2022

Drawing: R162\_11469\_Fig1\_ProposedRoute\_A



- ### Legend
- LT0245 Proposed Route
  - Baseline Alignment
  - SPA
  - ★ Private Water Supply
  - Private Water Supply Buffer (250 m)
  - ▲ Listed Building Cat
  - ▲ Listed Building Cat B
  - ▲ Listed Building Cat C
  - Listed Buildings 100m Buffer
  - Residential Property
  - Residential Property 100m Buffer
  - Scheduled Monuments 100m Buffer
  - Scheduled Monuments
  - RAMSAR
  - SAC
  - Conservation
  - Gardens and Designed Landscapes
  - Watercourse
  - Watercourse 30m Buffer
  - Waterbody
  - Waterbody 30m Buffer



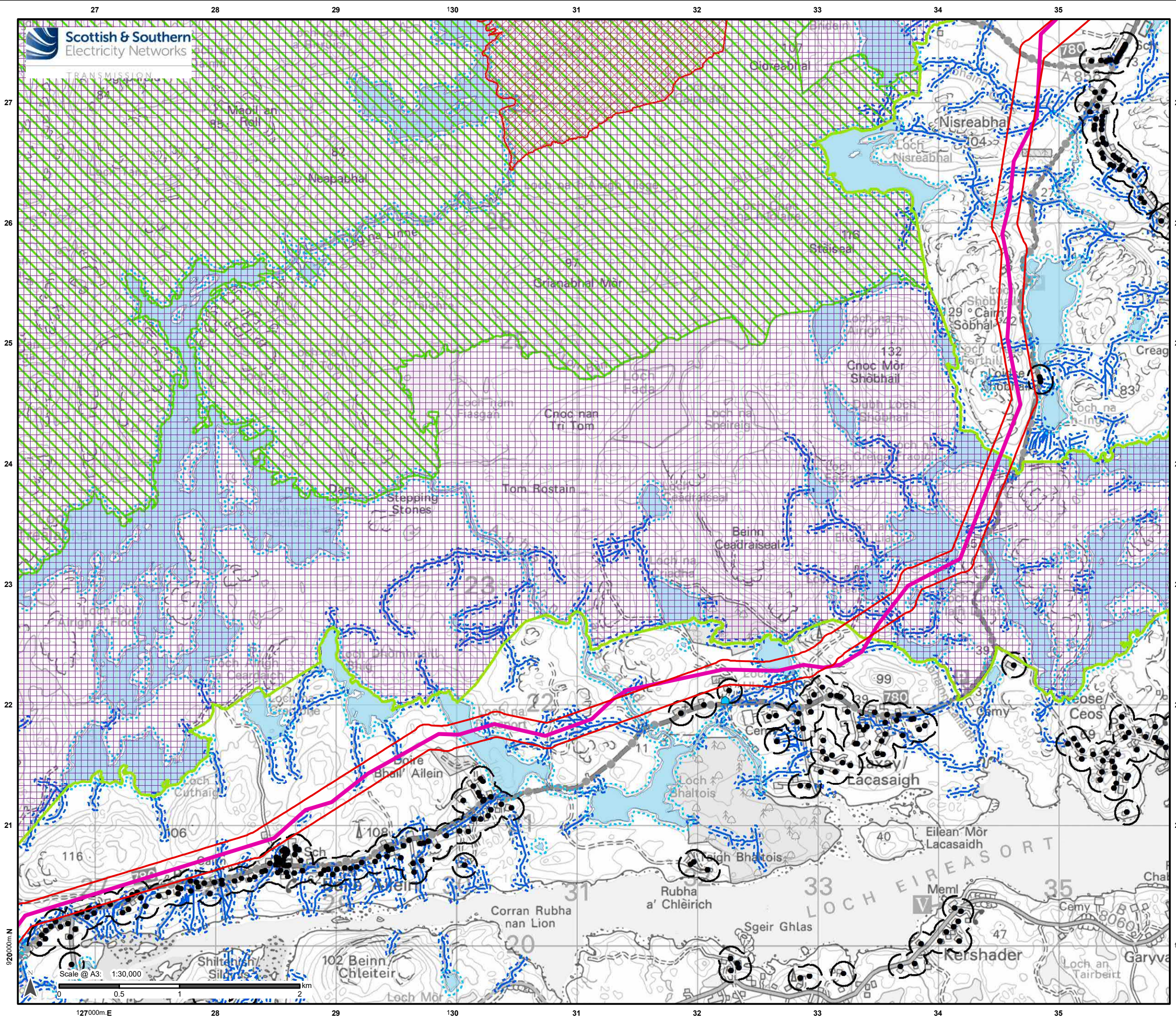
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Project No: LT000245  
Project: 1620011469

Title:  
Figure 2a :  
Baseline Alignment

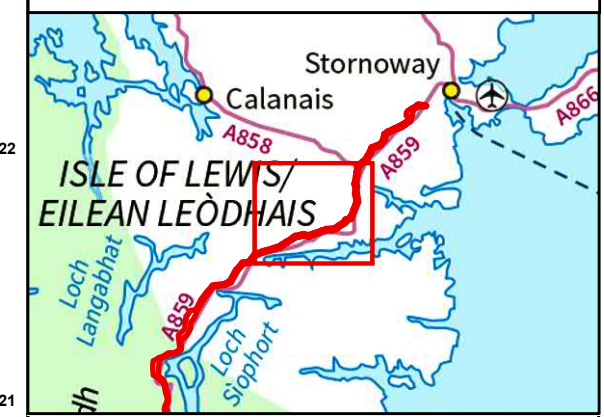
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Drawing: R162\_11469\_Fig2\_BaselineAlignemnt\_B



**Legend**

- LT0245 Proposed Route
- Baseline Alignment
- SPA
- Listed Building Cat C
- Residential Property
- Residential Property 100m Buffer
- SSSI
- RAMSAR
- SAC
- Watercourse
- Watercourse 30m Buffer
- Waterbody
- Waterbody 30m Buffer



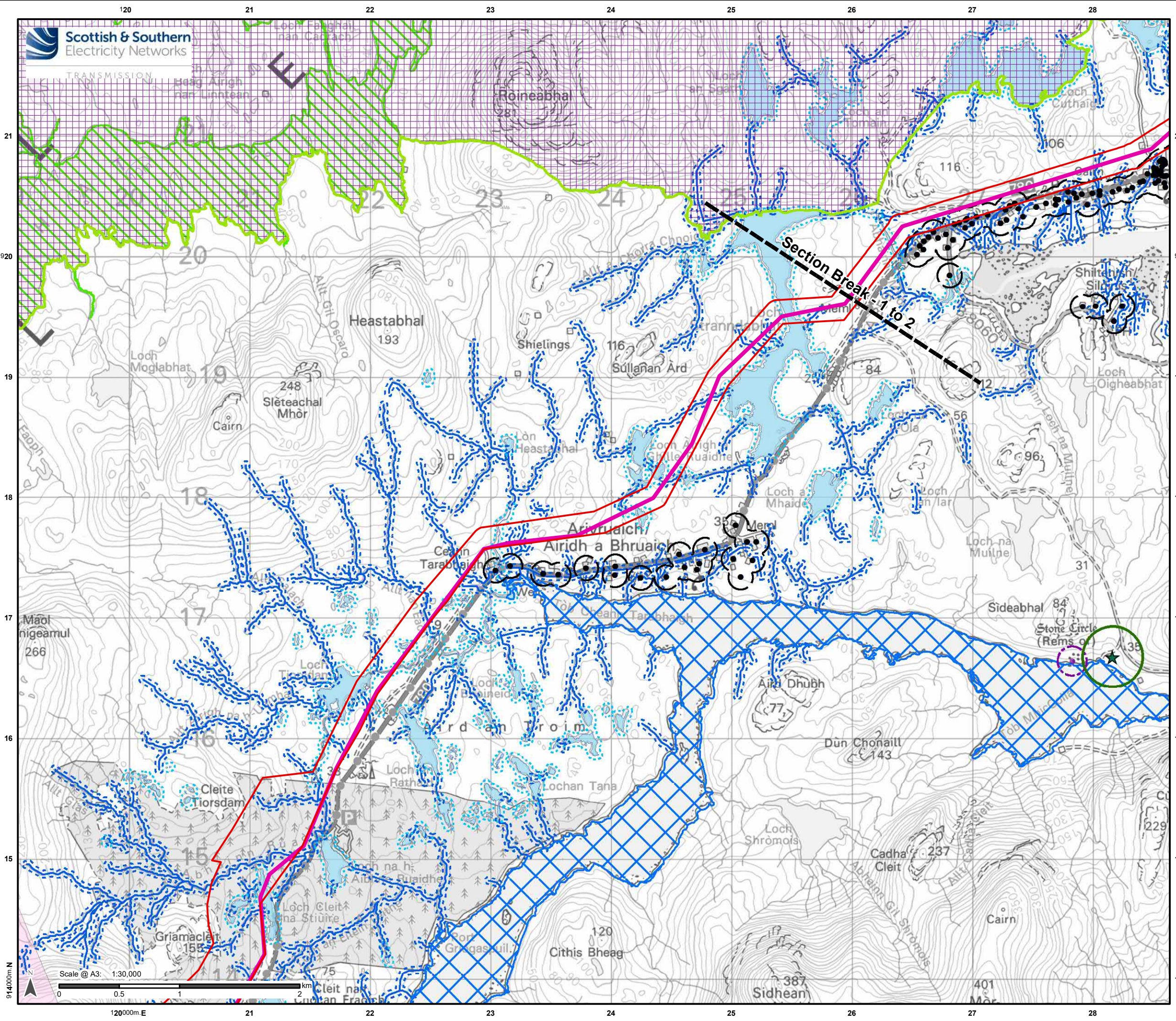
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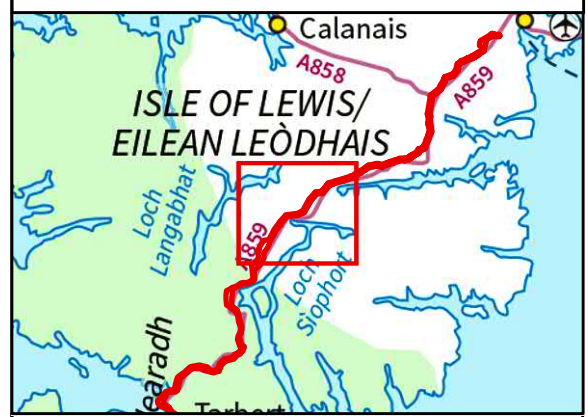
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Figure 2b :  
Baseline Alignment

Drawn by: CF Date: 07/02/2022

Drawing: R162\_11469\_Fig2\_BaselineAlignemnt\_B



- ### Legend
- LT0245 Proposed Route
  - Baseline Alignment
  - SPA
  - ★ Private Water Supply
  - Private Water Supply Buffer (250 m)
  - Residential Property
  - Residential Property 100m Buffer
  - Scheduled Monuments 100m Buffer
  - Scheduled Monuments
  - RAMSAR
  - SAC
  - MCA
  - National Scenic
  - Watercourse
  - Watercourse 30m Buffer
  - Waterbody
  - Waterbody 30m Buffer



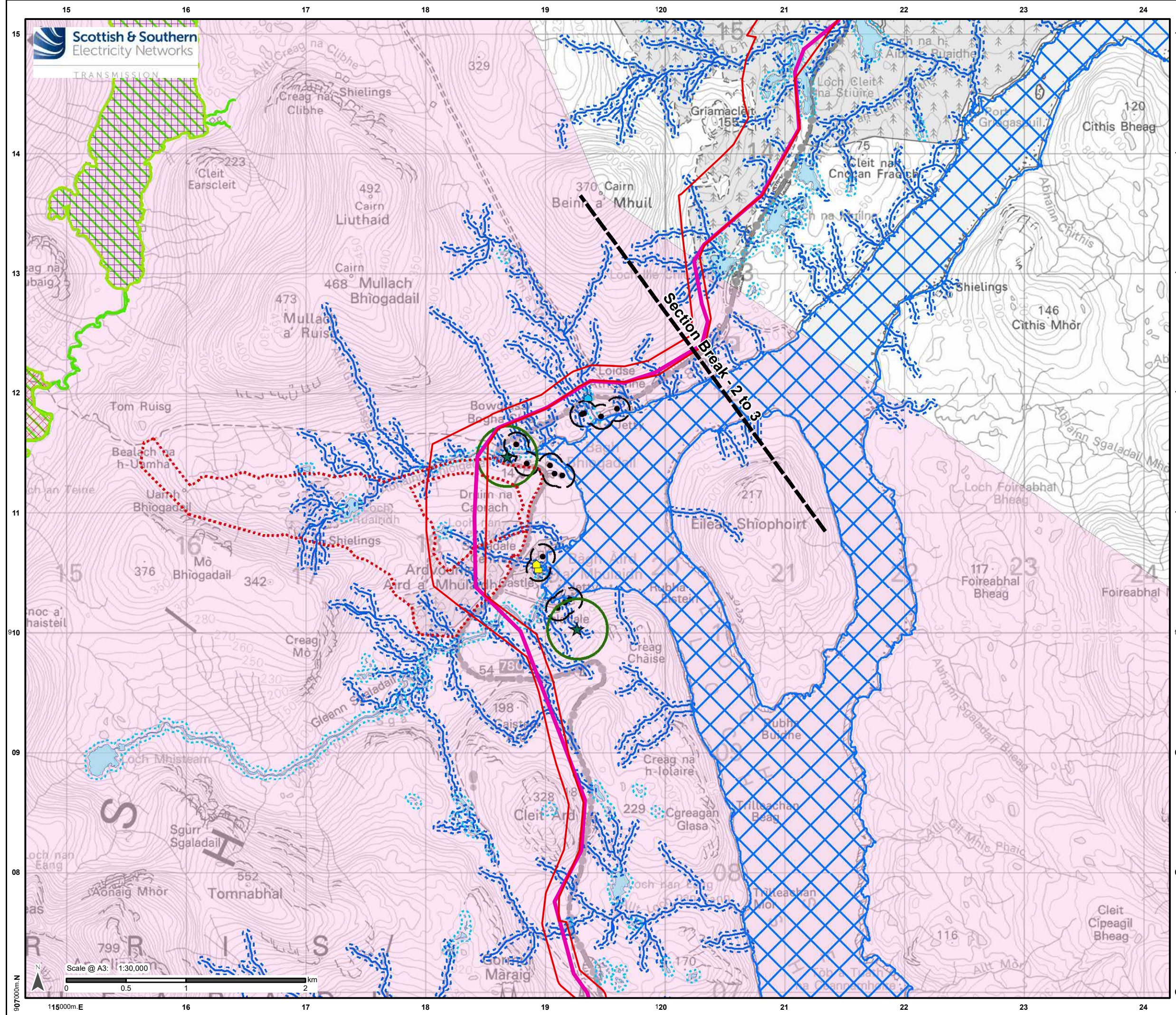
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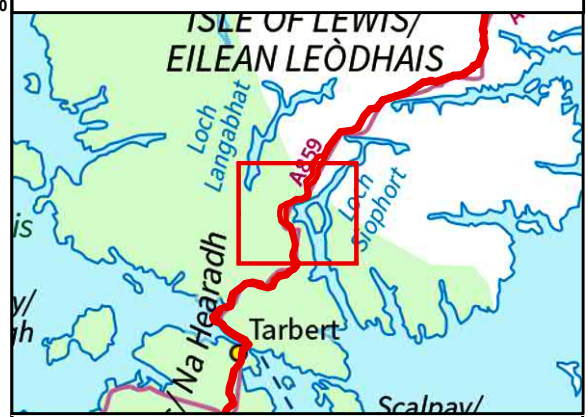
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Figure 2c :  
Baseline Alignment

Drawn by: CF  
Date: 07/02/2022

Drawing: R162\_11469\_Fig2\_BaselineAlignemnt\_B



- ### Legend
- LT0245 Proposed Route
  - Baseline Alignment
  - SPA
  - Scaladale Recreation Centre Boundary
  - ★ Private Water Supply
  - Private Water Supply Buffer (250 m)
  - ▲ Listed Building Cat B
  - ▲ Listed Building Cat C
  - Residential Property
  - Residential Property 100m Buffer
  - SSSI
  - RAMSAR
  - SAC
  - MCA
  - National Scenic Areas
  - Watercourse
  - Watercourse 30m Buffer
  - Waterbody
  - Waterbody 30m Buffer



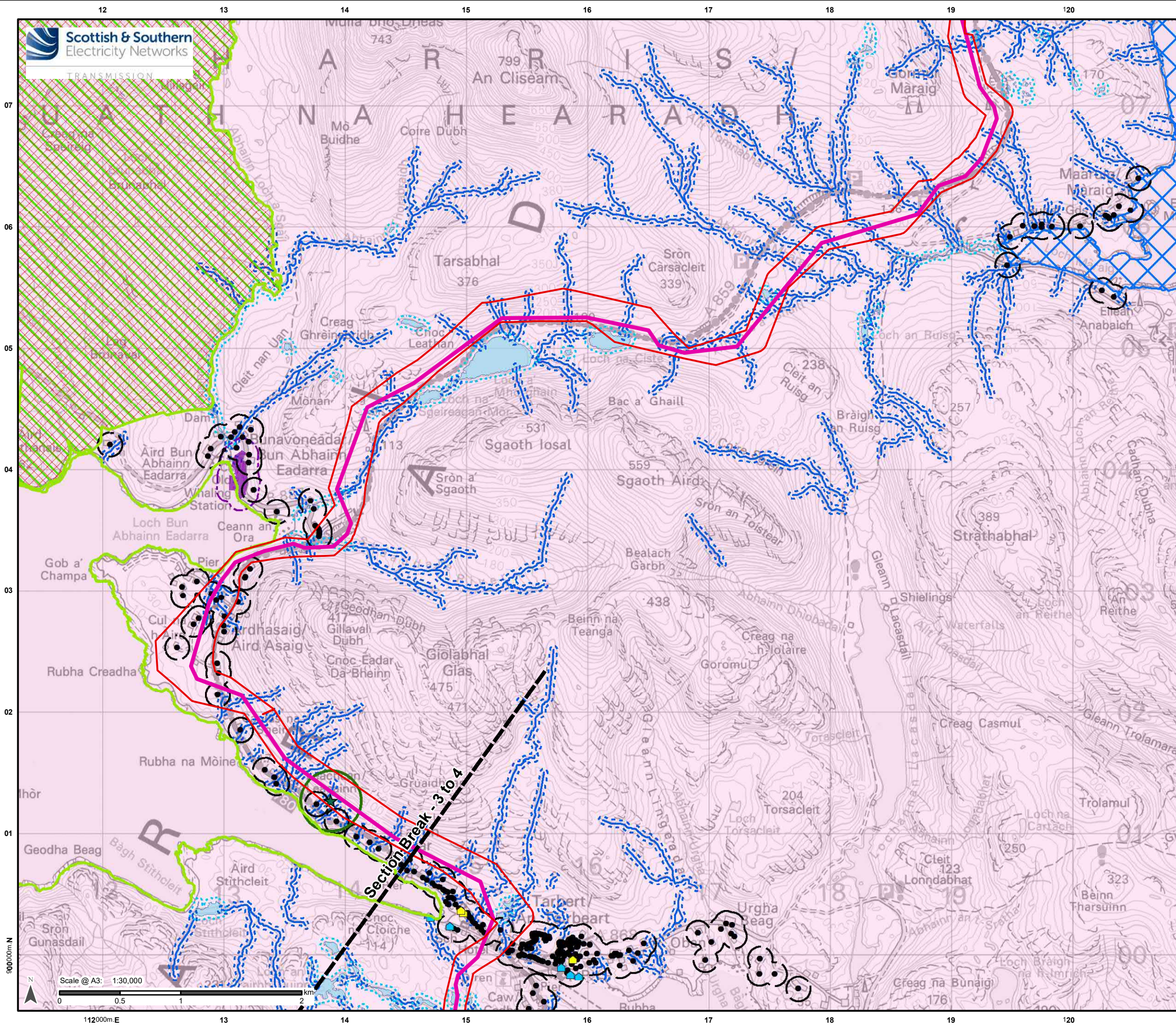
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Title:  
Figure 2d :  
Baseline Alignment

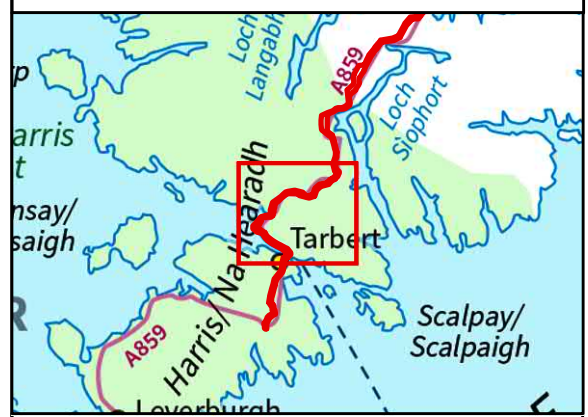
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**Legend**

- LT0245 Proposed Route
- Baseline Alignment
- SPA
- ★ Private Water Supply
- Private Water Supply Buffer (250 m)
- ▲ Listed Building Cat B
- ▲ Listed Building Cat C
- Residential Property
- Residential Property 100m Buffer
- Scheduled Monuments 100m Buffer
- Scheduled Monuments
- SSSI
- SAC
- MCA
- National Scenic Areas
- Watercourse
- Waterbody
- Watercourse 30m Buffer
- Waterbody 30m Buffer



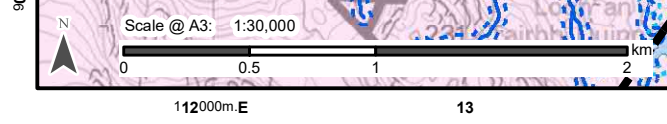
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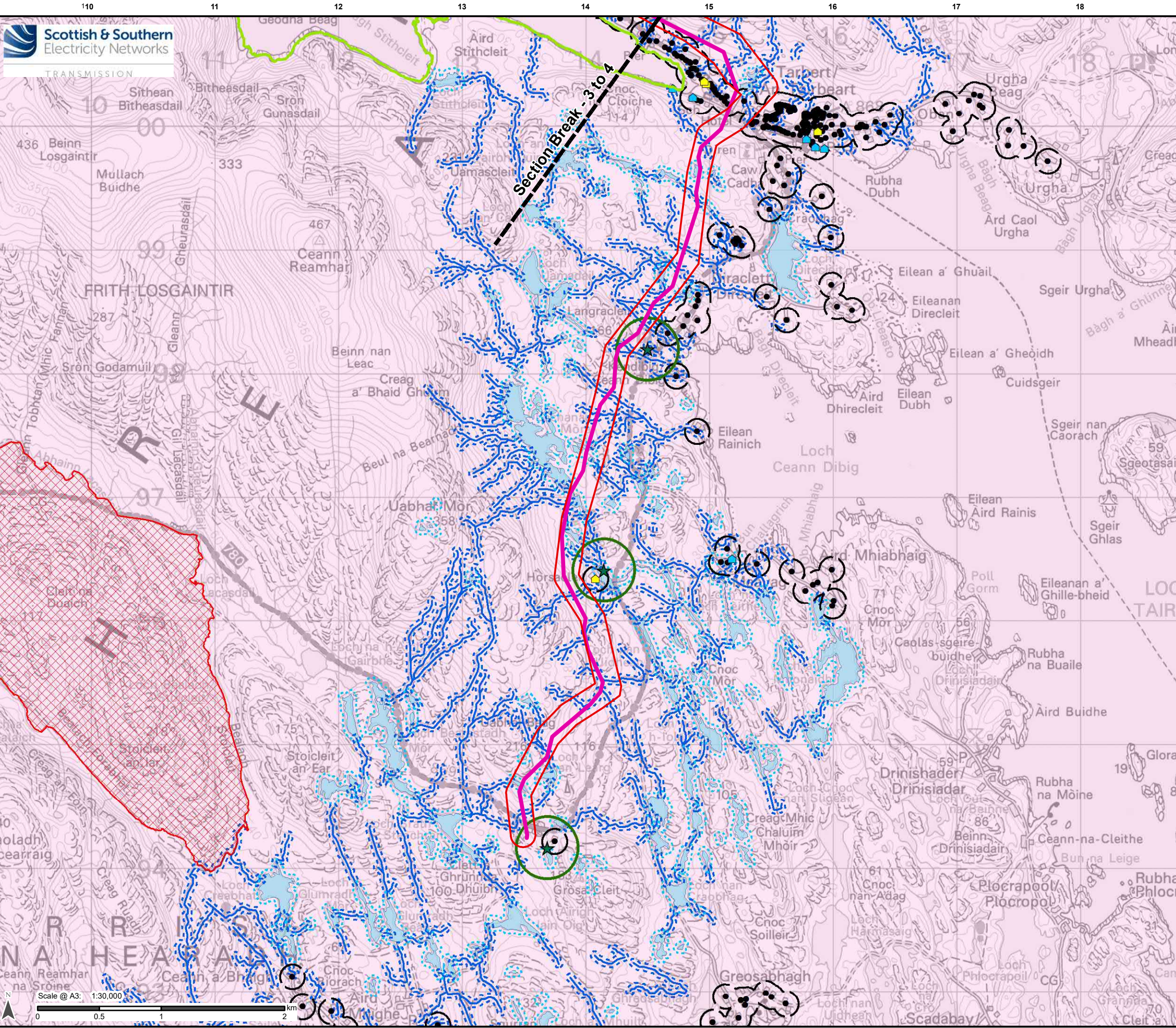
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Figure 2e :  
Baseline Alignment

Drawn by: CF Date: 07/02/2022

Drawing: R162\_11469\_Fig\_2e\_BaselineAlignemnt\_B







**Legend**

- LT0245 Proposed Route
- Baseline Alignment
- SPA
- ★ Private Water Supply
- Private Water Supply Buffer (250 m)
- ▲ Listed Building Cat B
- ▲ Listed Building Cat C
- Residential Property
- Residential Property 100m Buffer
- SSSI
- National Scenic Areas
- Watercourse
- Watercourse 30m Buffer
- Waterbody
- Waterbody 30m Buffer



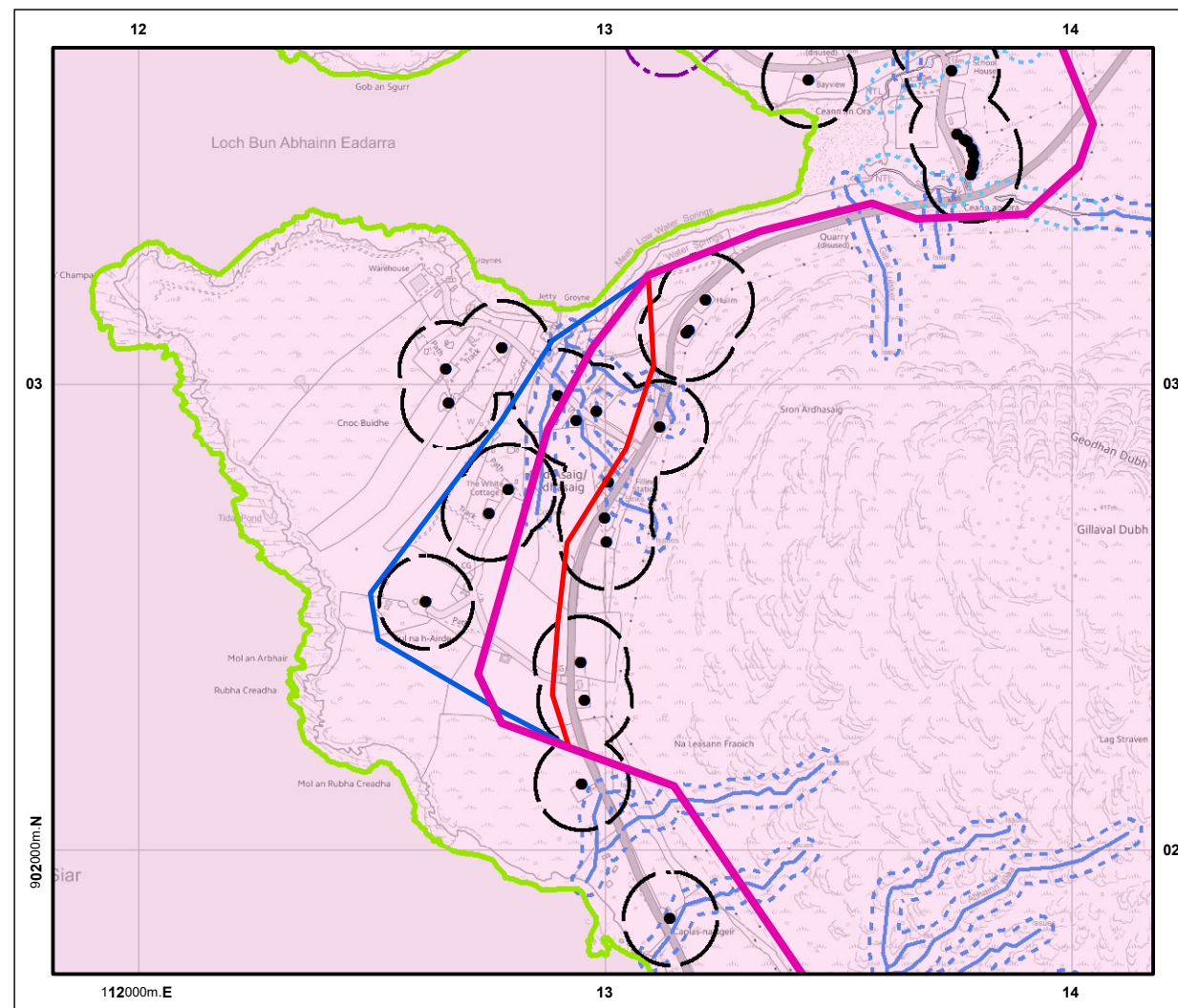
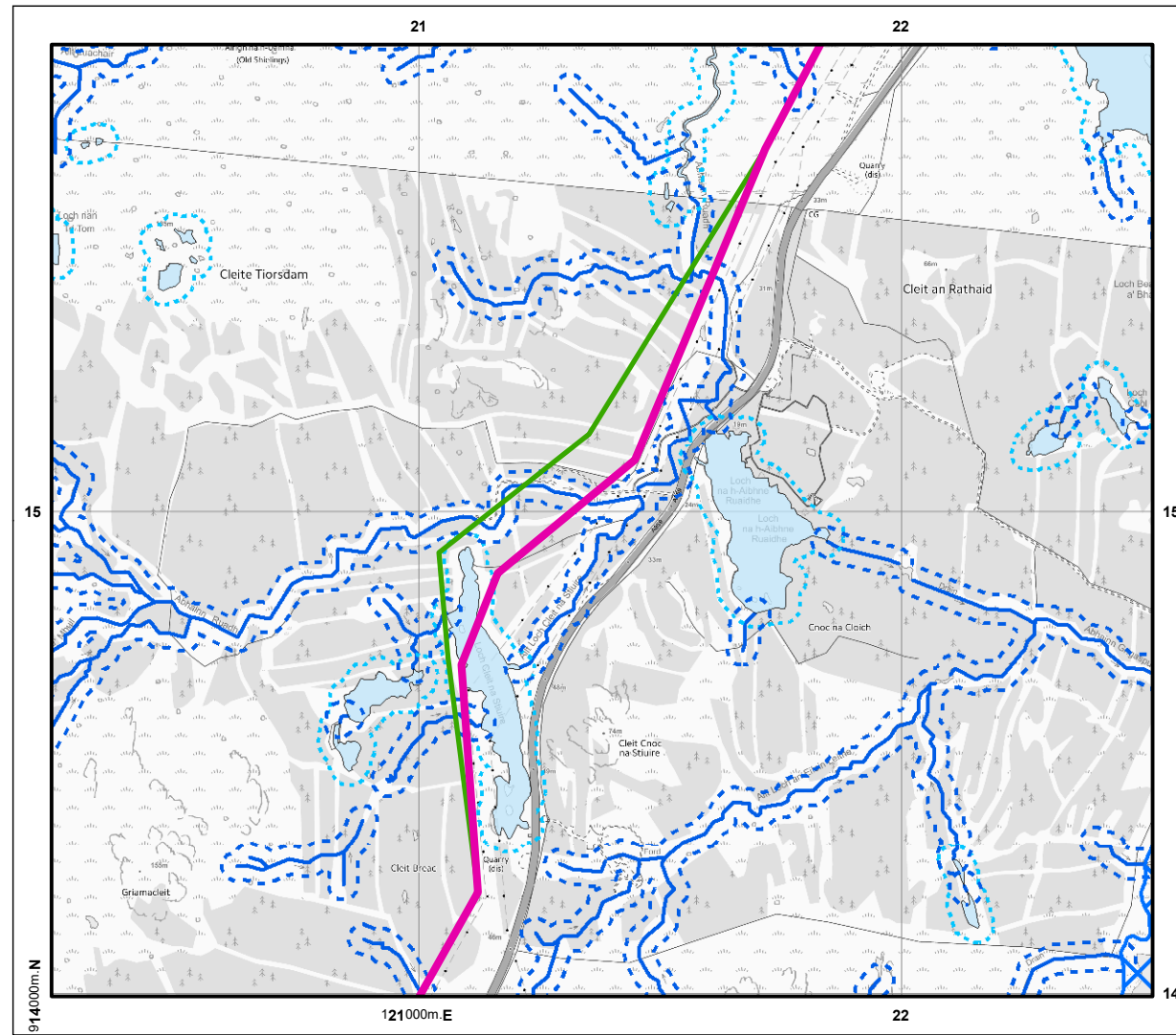
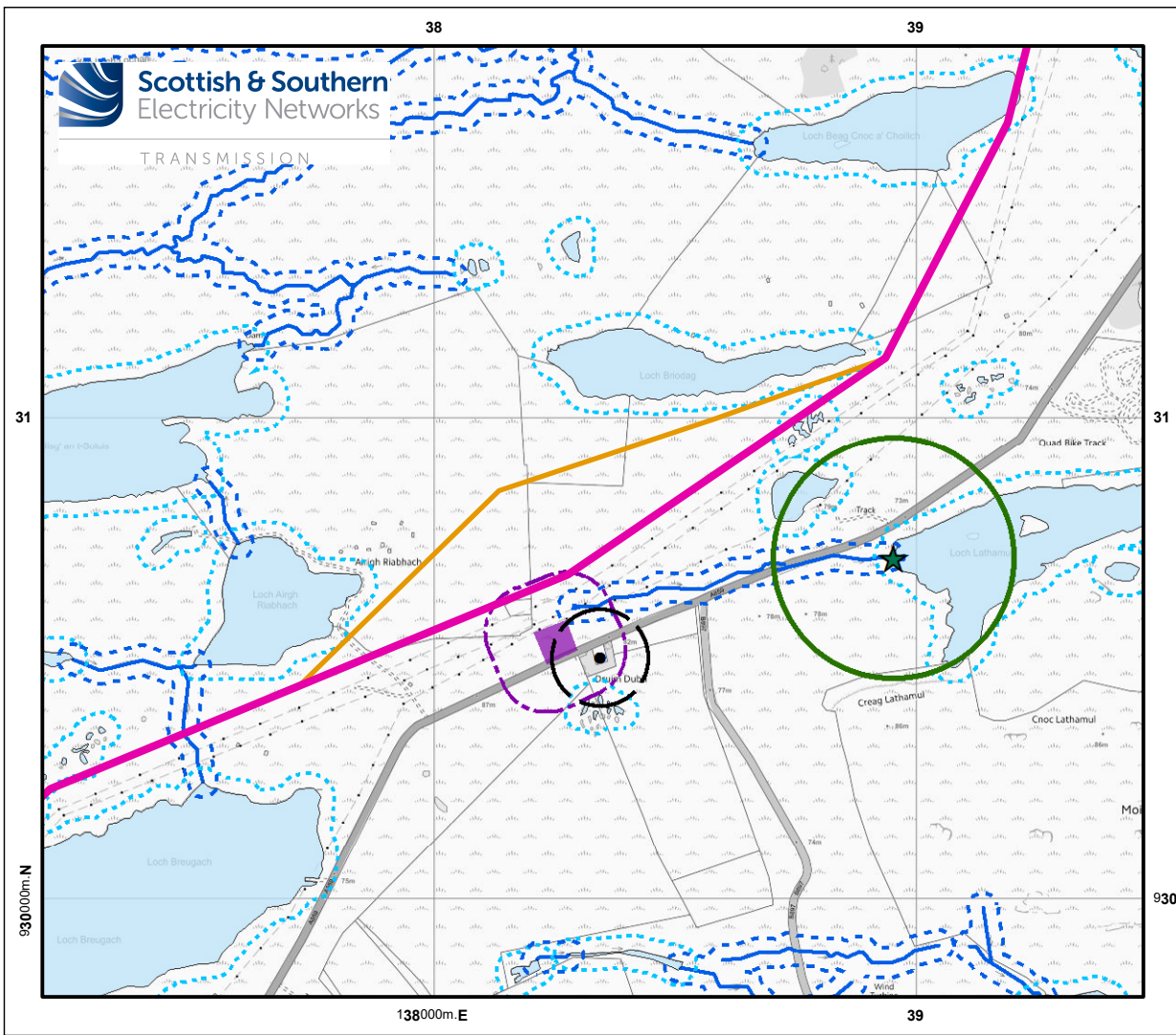
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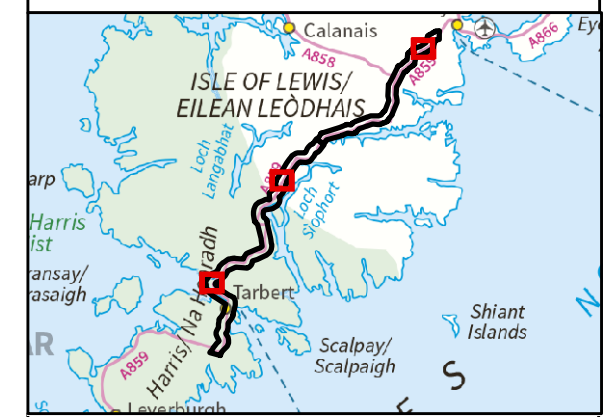
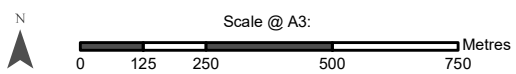
Title:  
Figure 2f :  
Baseline Alignment

Drawn by: CF  
Date: 07/02/2022

Drawing: R162\_11469\_Fig2\_BaselineAlignemnt\_B



- ### Legend
- Baseline Alignment
  - Deviation 1A
  - Deviation 2A
  - Deviation 3A
  - Deviation 3B
  - ★ Private Water Supply
  - Private Water Supply Buffer (250 m)
  - Residential Property
  - Residential Property 100m Buffer
  - Scheduled Monuments
  - Scheduled Monuments 100m Buffer
  - SPA
  - National Scenic Areas
  - Watercourse
  - Watercourse 30m Buffer
  - Waterbody
  - Waterbody 30m Buffer



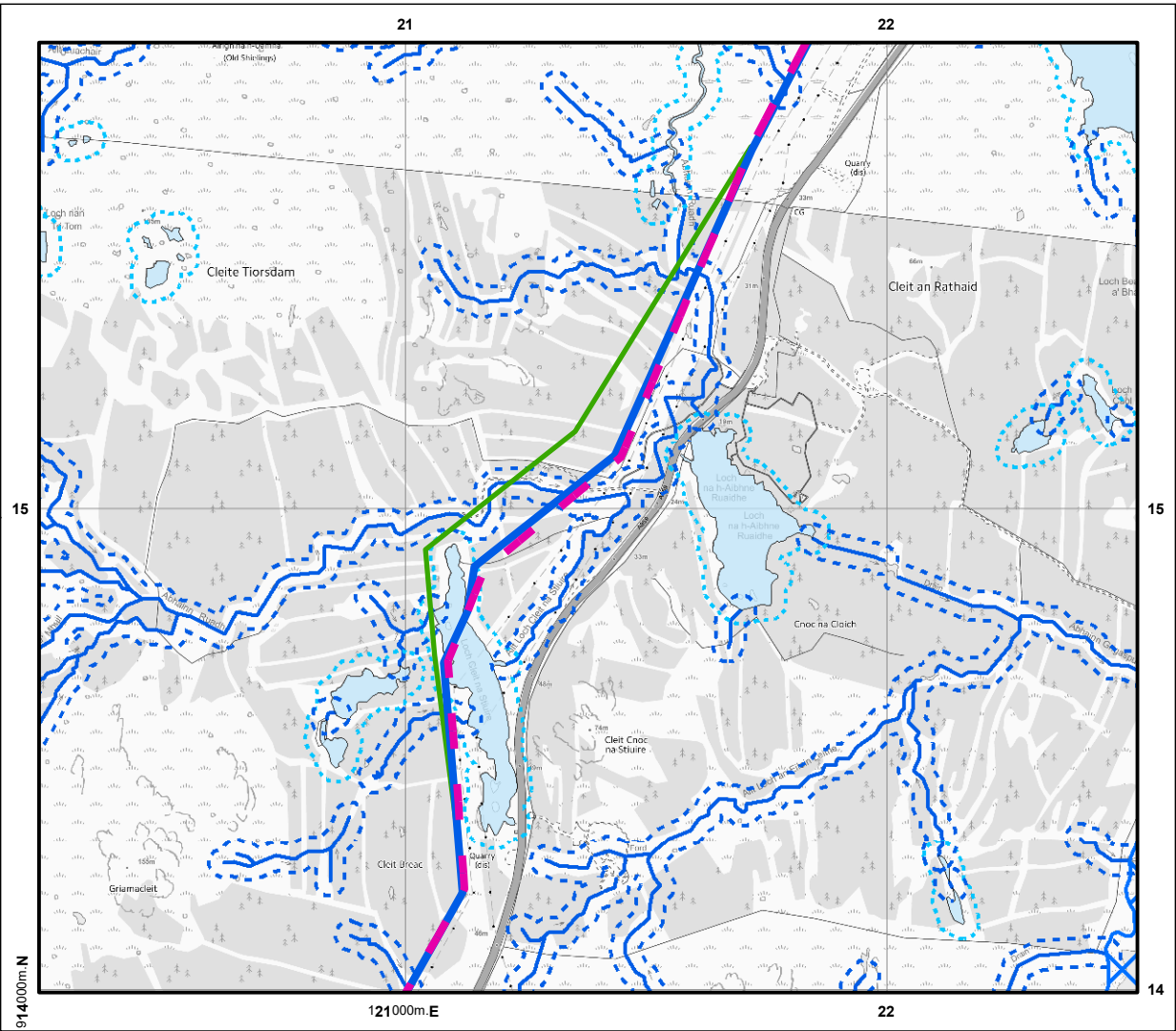
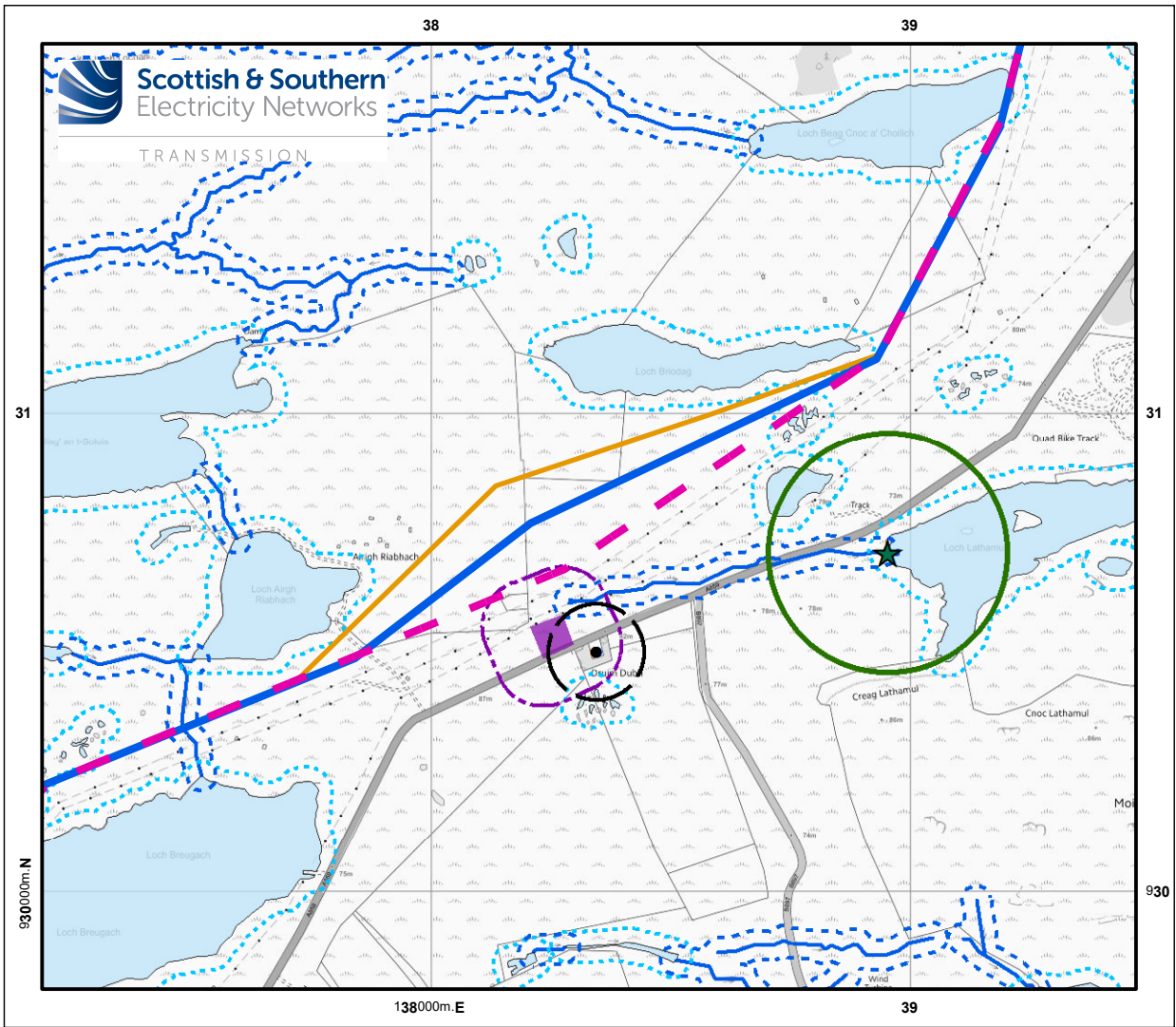
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 Project: 1620011469

Title:  
 Figure 3: Alignment Deviation Options

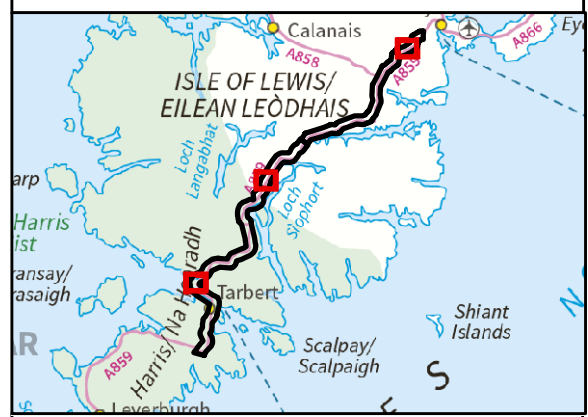
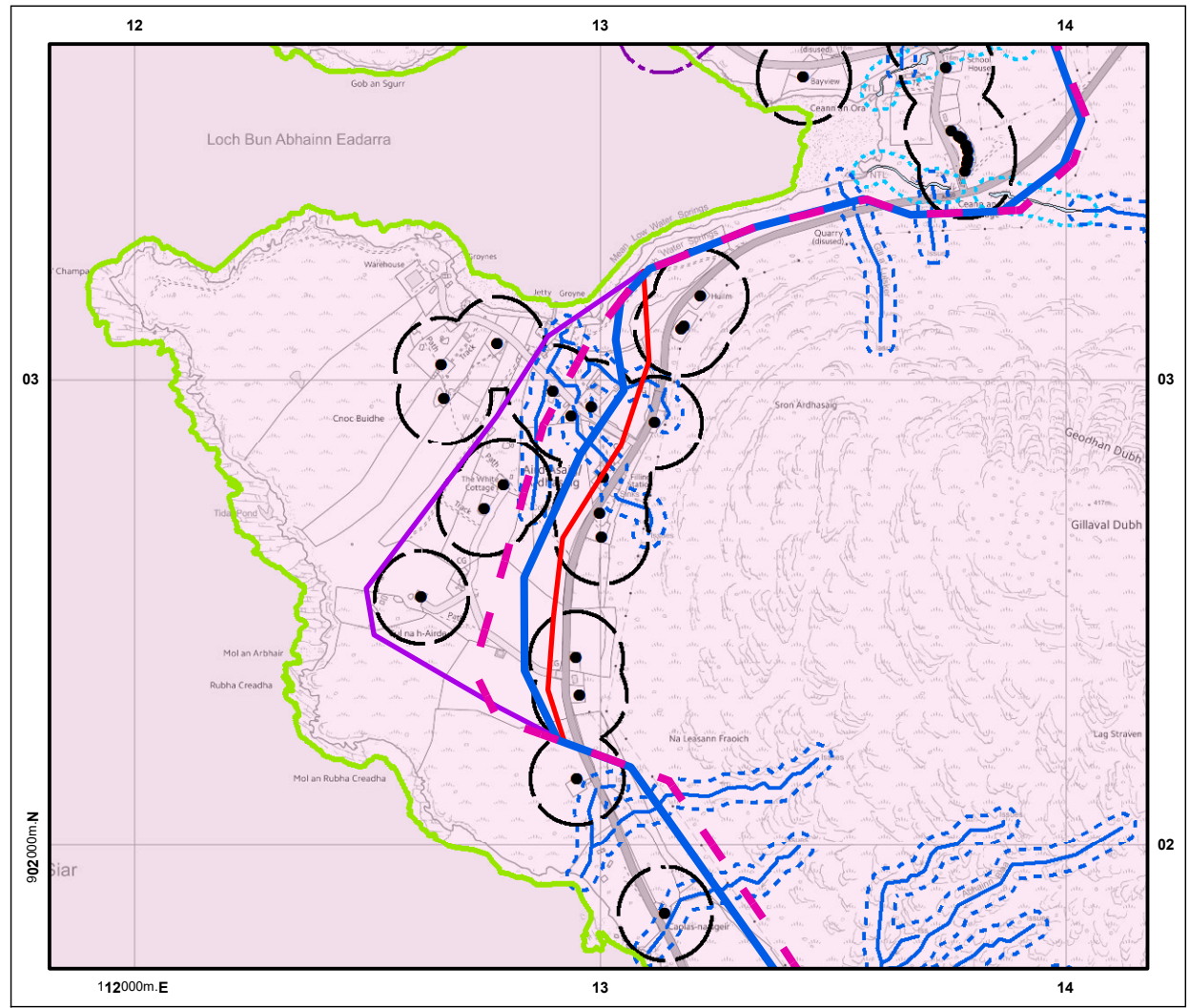
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Drawing: R162\_11469\_Fig3\_AlignmentDeviationOptions\_B



**Legend**

- Baseline Alignment
- Preferred Alignment
- Deviation 1A
- Deviation 2A
- Deviation 3A
- Deviation 3B
- SPA
- ★ Private Water Supply
- Private Water Supply Buffer (250 m)
- Residential Property
- Residential Property 100m Buffer
- Scheduled Monuments
- Scheduled Monuments 100m Buffer
- National Scenic Areas
- Watercourse
- Watercourse 30m Buffer
- Waterbody
- Waterbody 30m Buffer



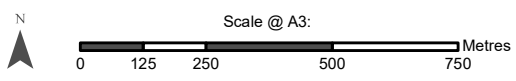
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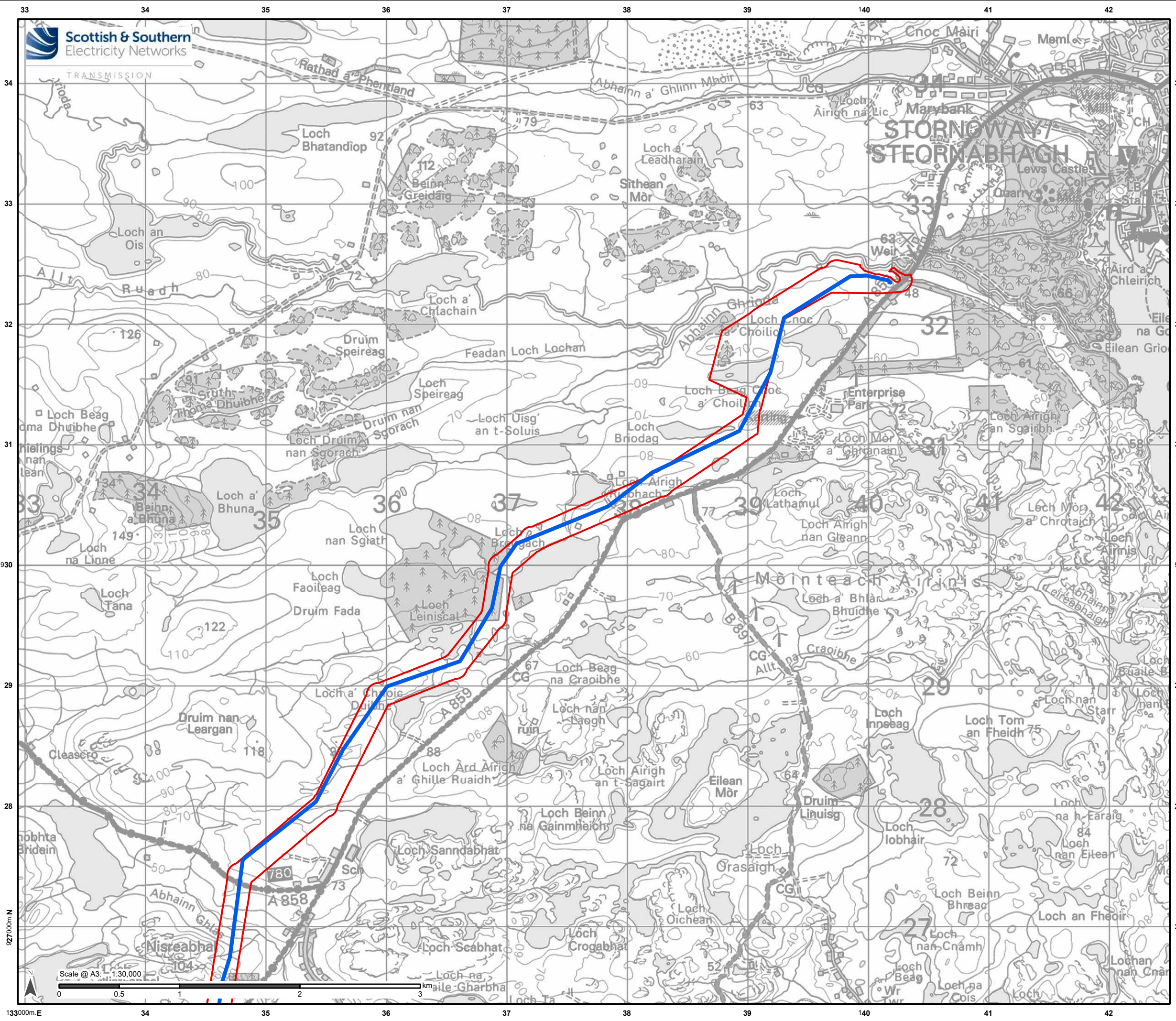
Project No: LT0245  
Project: 1620011469

Title:  
Figure 4: Preferred Deviation Options

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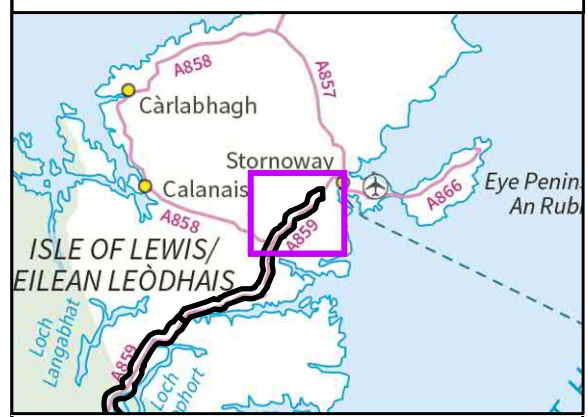
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**Legend**

- Preferred Alignment
- LT0245 Proposed Route



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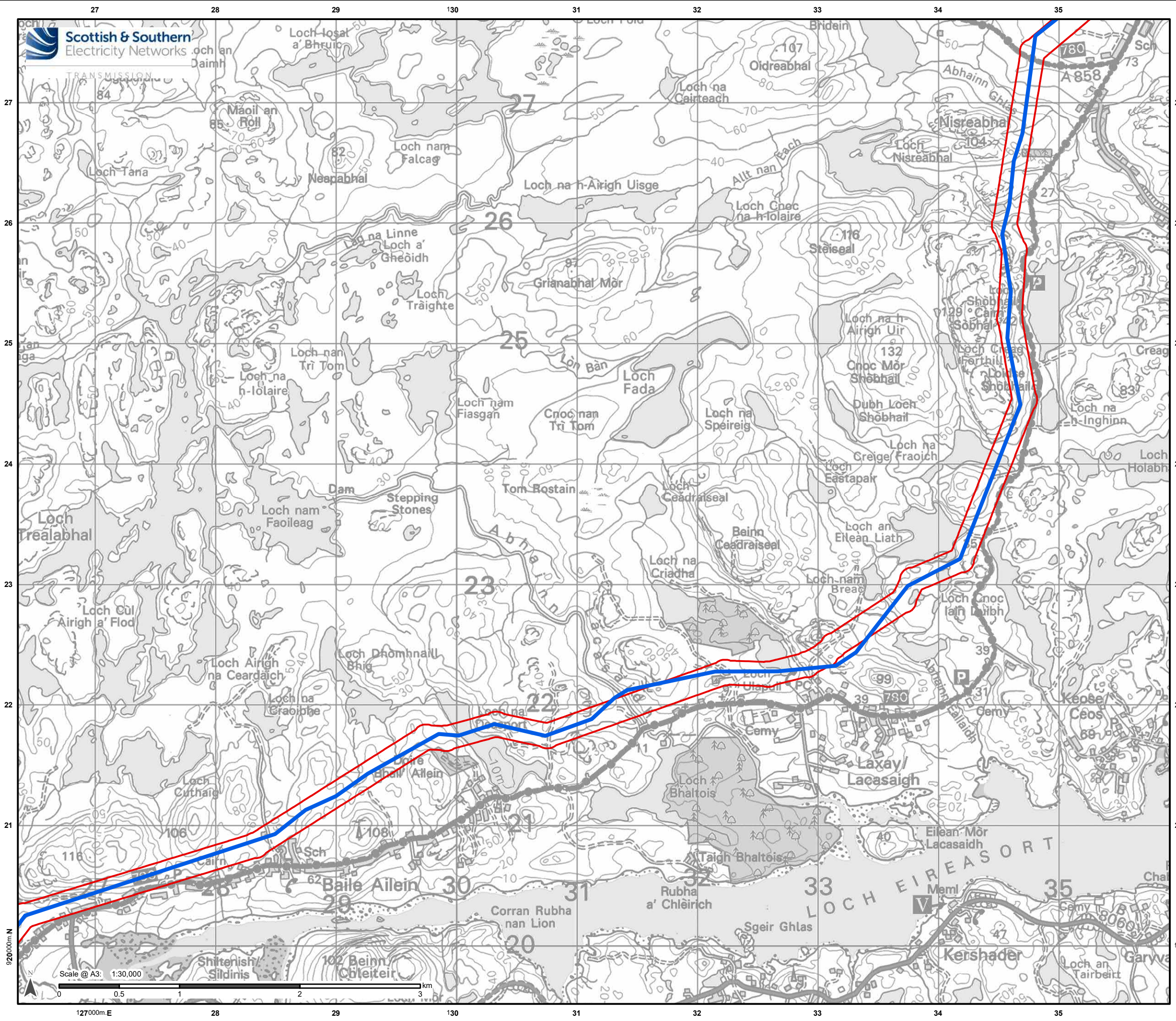
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Project: 1620011469

Title:  
Figure 5a: Preferred Alignment

Drawn by: CF Date: 27/01/2022

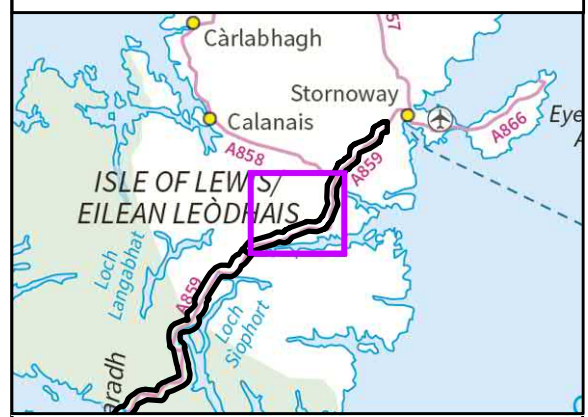
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**Legend**

- Preferred Alignment
- LT0245 Proposed Route



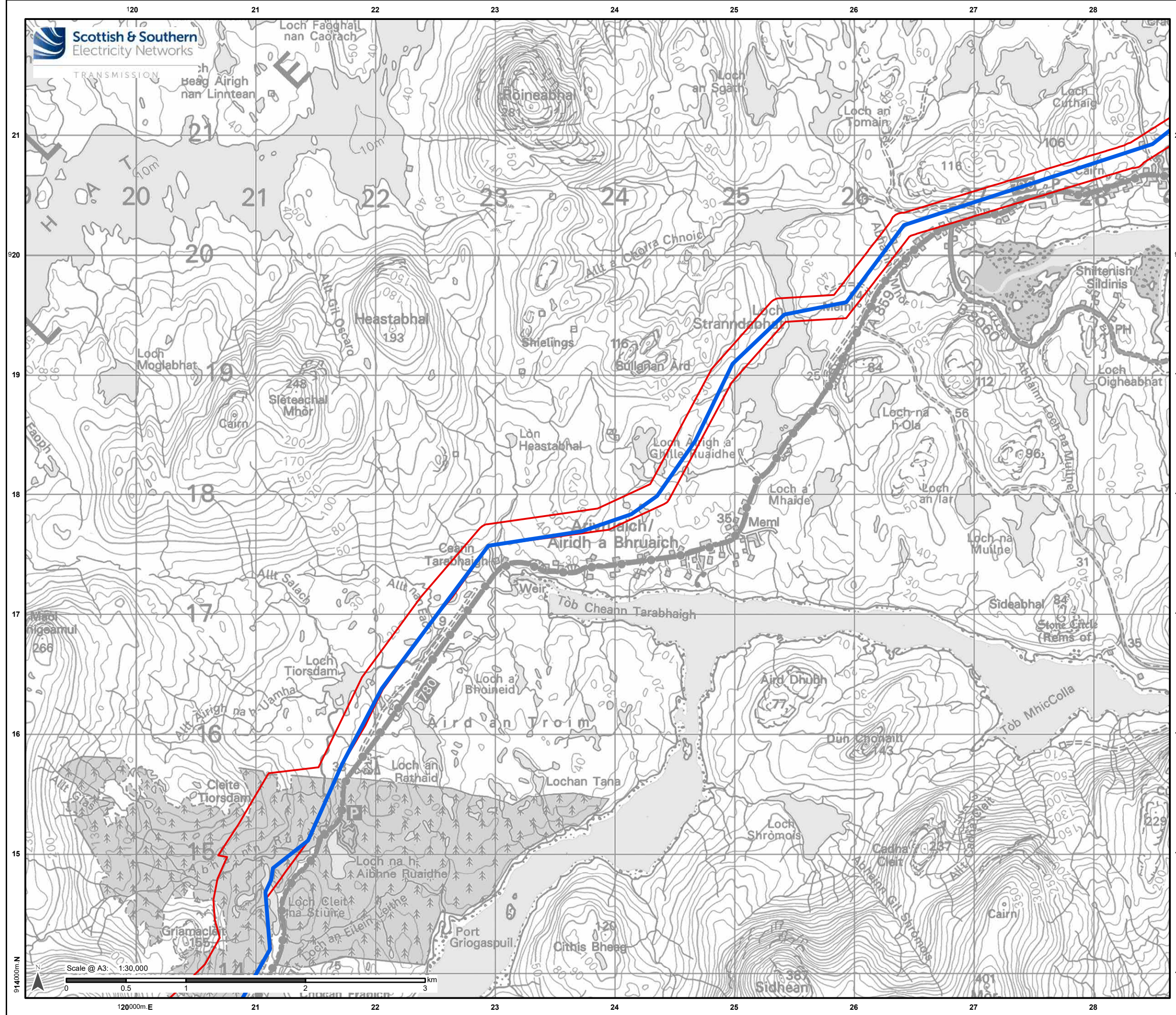
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Project No: LT0245  
Project: 1620011469

Title:  
Figure 5b: Preferred Alignment

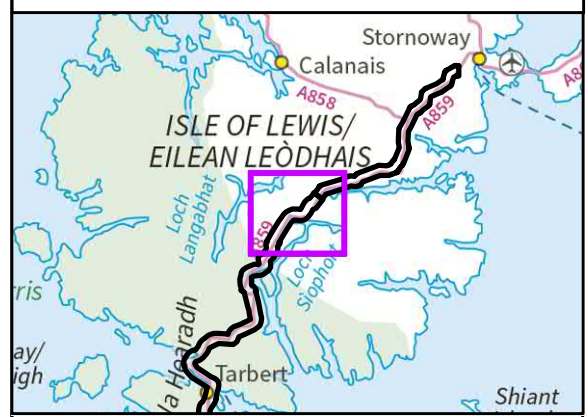
Drawn by: CF Date: 27/01/2022

Drawing: R162\_11469\_Fig5\_PreferredAlignment\_A



**Legend**

- Preferred Alignment
- LT0245 Proposed Route



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Project: 1620011469

Title:  
Figure 5c: Preferred Alignment

Drawn by: CF Date: 27/01/2022

Drawing: R162\_11469\_Fig5\_PreferredAlignment\_A

914000m.N

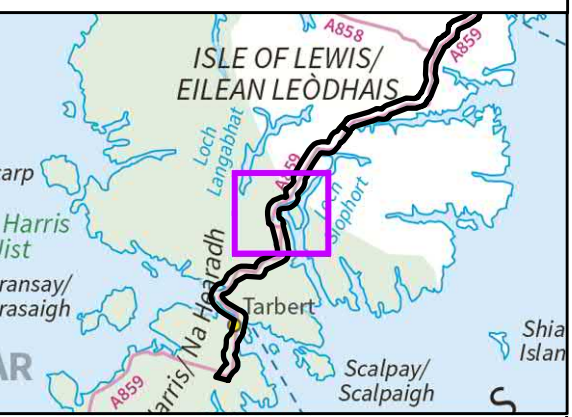
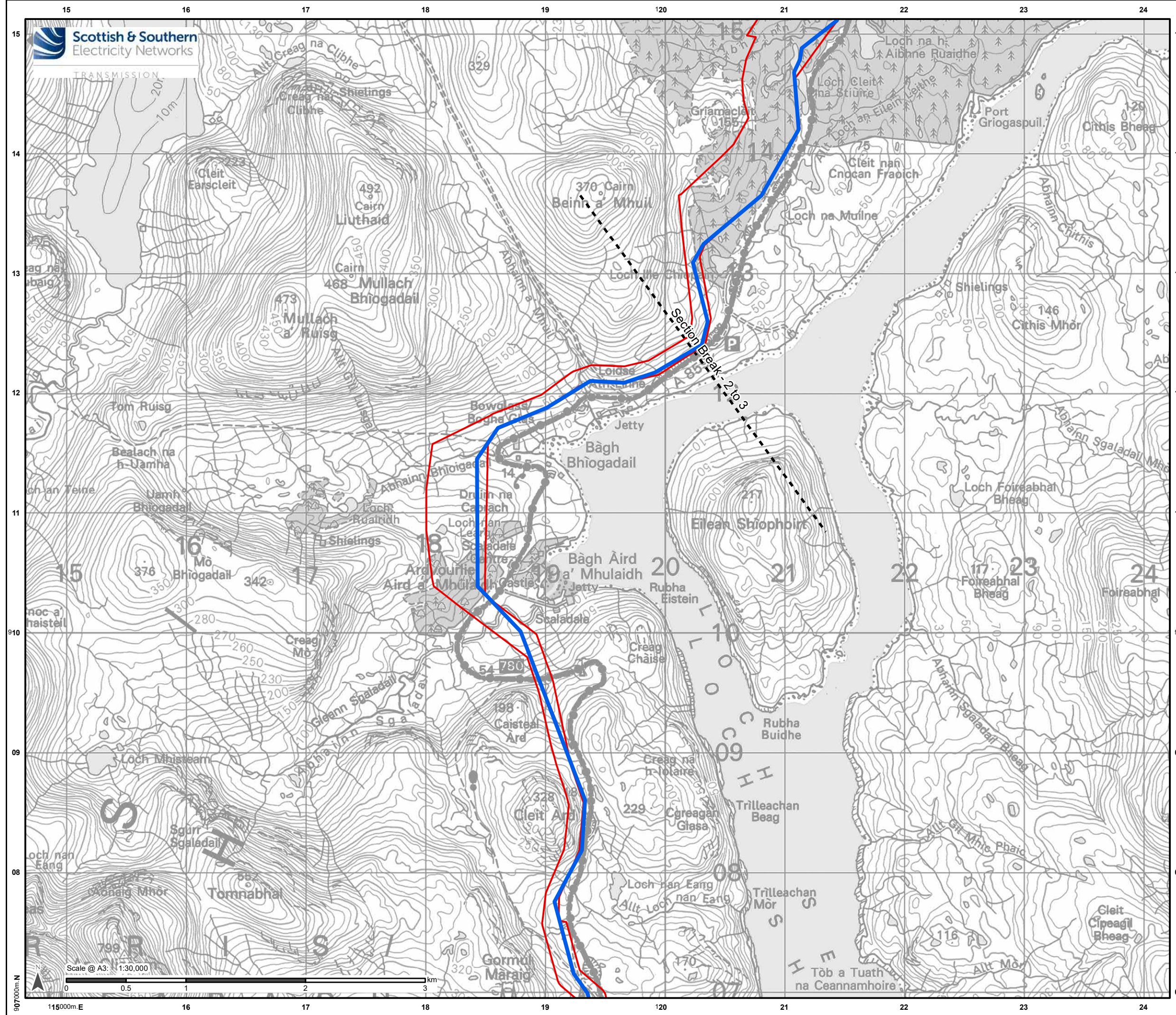
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**Legend**

- Preferred Alignment
- LT0245 Proposed Route



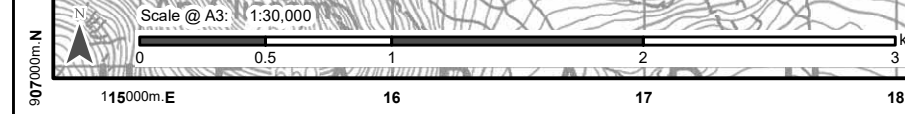
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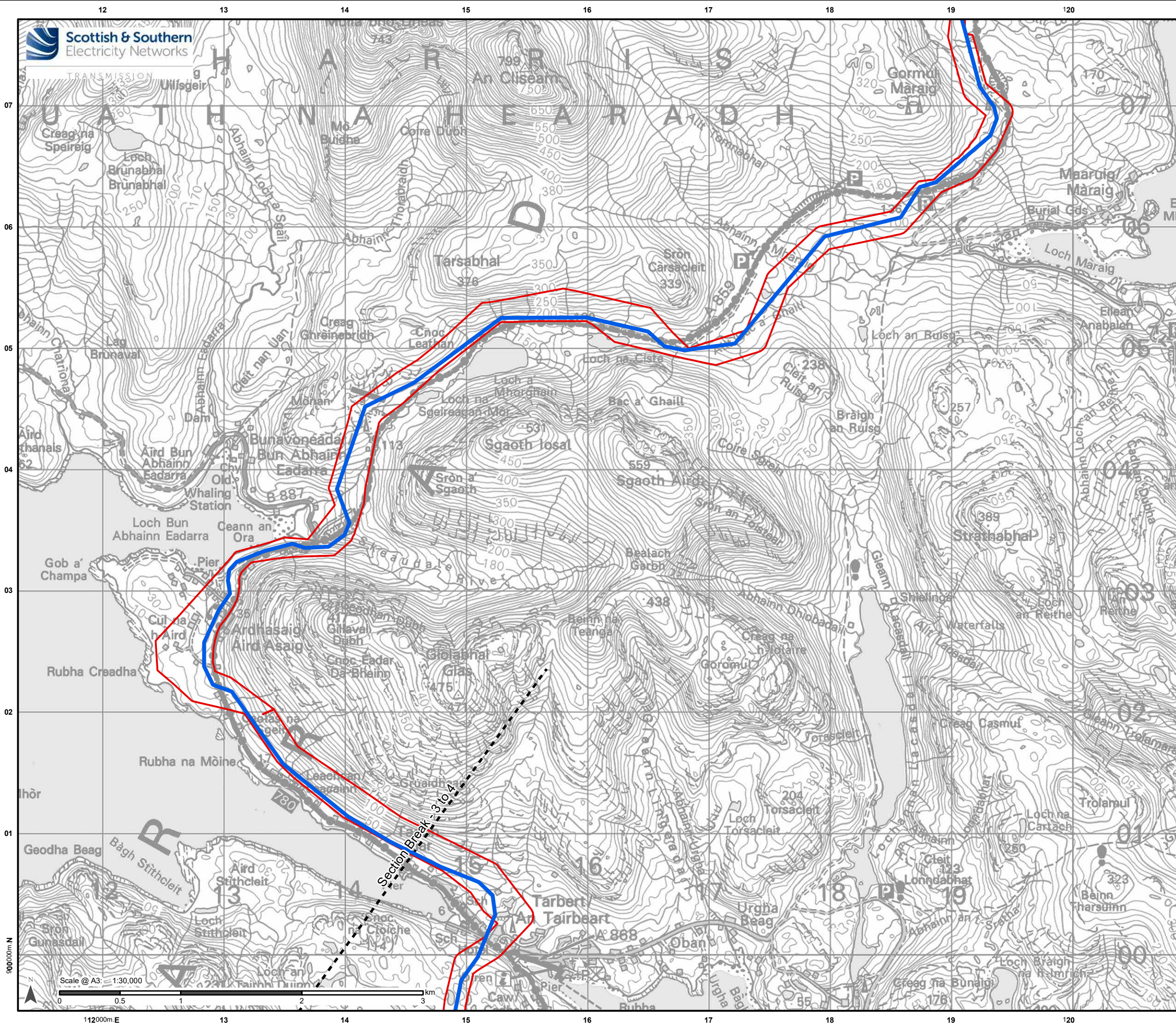
Project No: LT0245  
Project: 1620011469

Title:  
Figure 5d: Preferred Alignment

Drawn by: CF Date: 27/01/2022

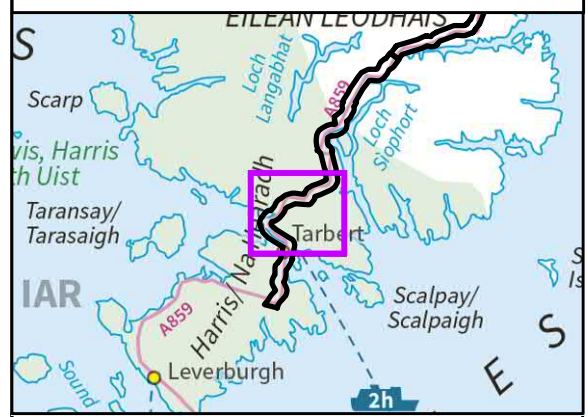
Drawing: R162\_11469\_Fig5\_PreferredAlignment\_A





**Legend**

- Preferred Alignment
- LT0245 Proposed Route



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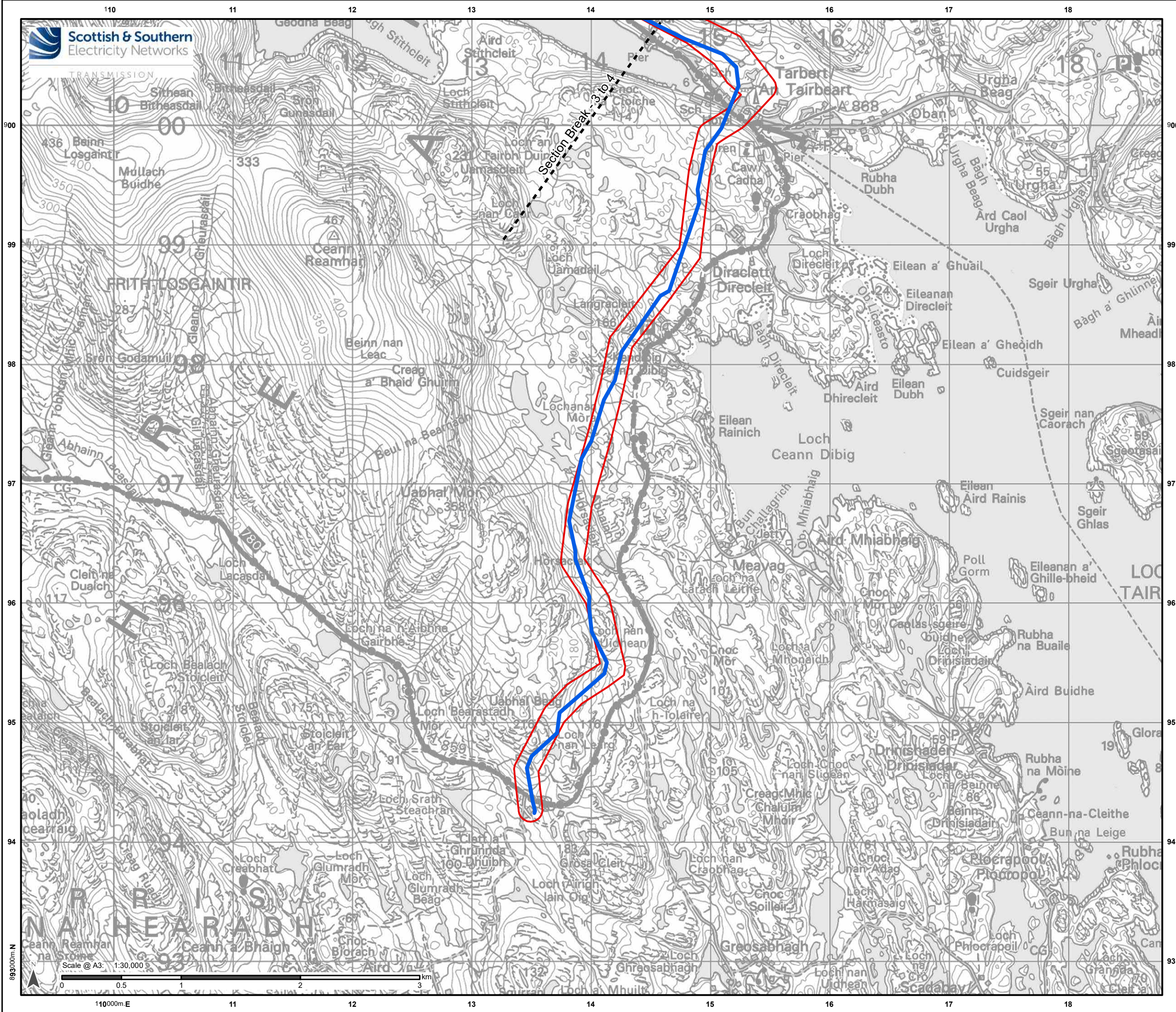
Project No: LT0245  
Project: 1620011469

Title:  
Figure 5e: Preferred Alignment

Drawn by: CF Date: 27/01/2022

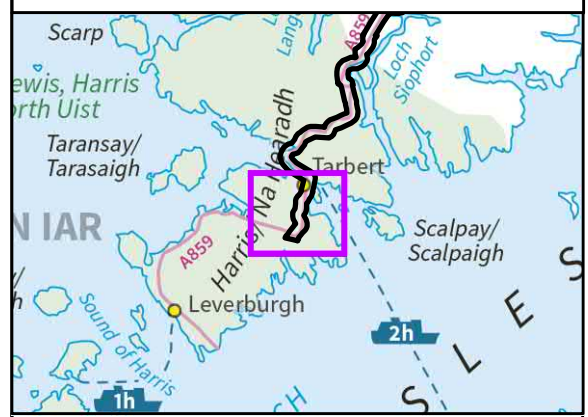
Drawing: R162\_11469\_Fig5\_PREFERREDALIGNMENT\_A





**Legend**

- Preferred Alignment
- LT0245 Proposed Route



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Project No: LT0245  
Project: 1620011469

Title:  
Figure 5f: Preferred Alignment

Drawn by: CF Date: 27/01/2022

Drawing: R162\_11469\_Fig5\_PreferredAlignment\_A

