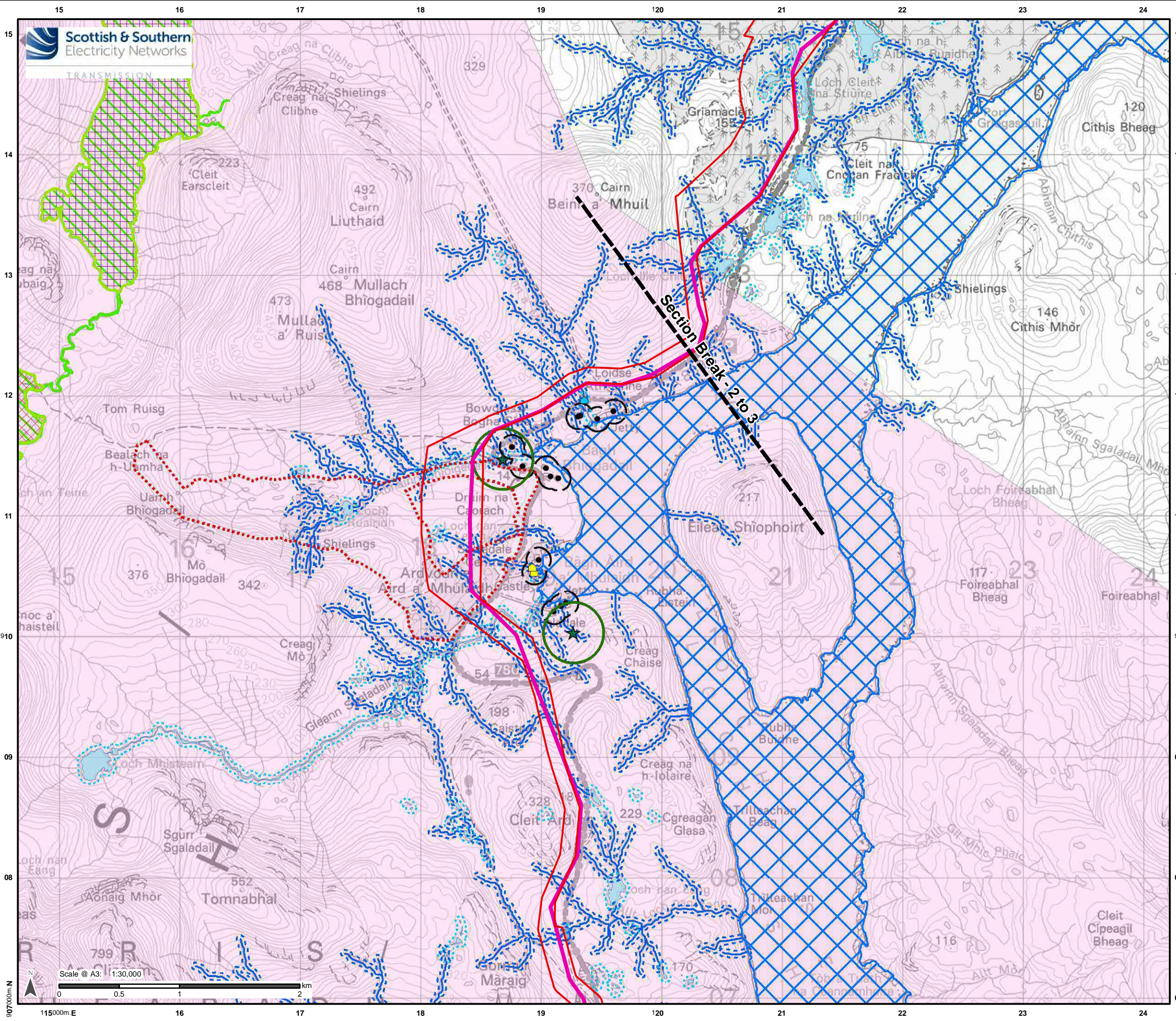
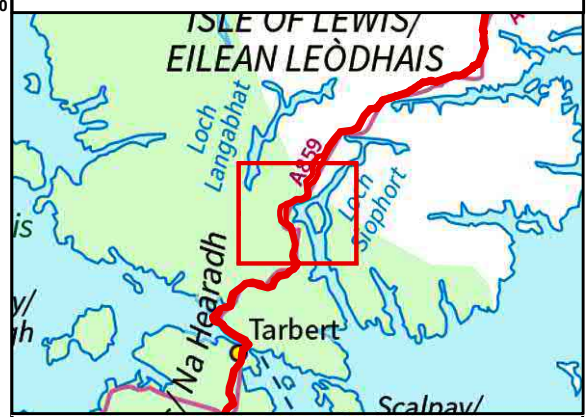


## **APPENDIX D: FEBRUARY 2022 CONSULTATION MATERIAL (continued)**



### 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



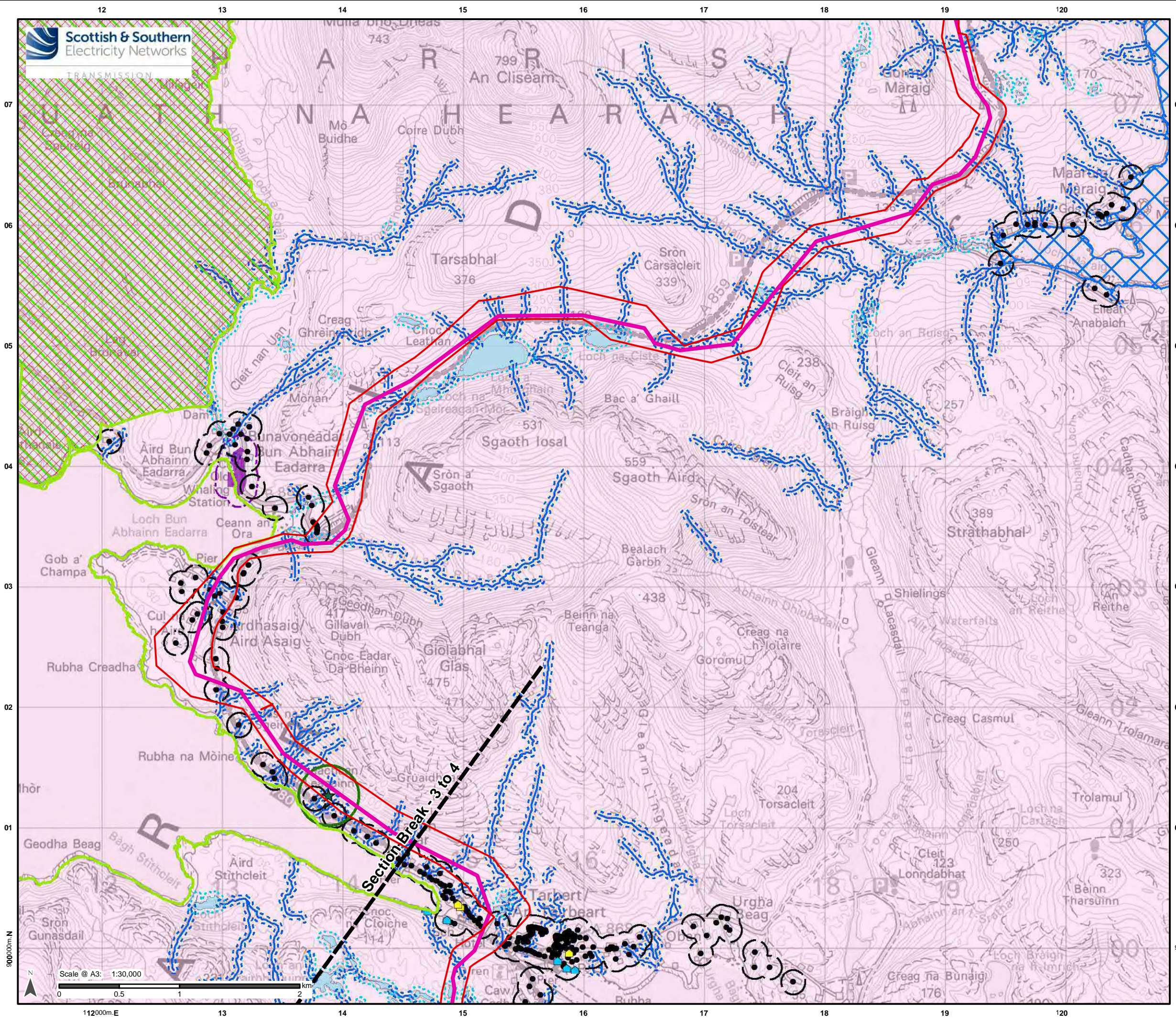
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Project No: LT000245  
Project: 1620011469

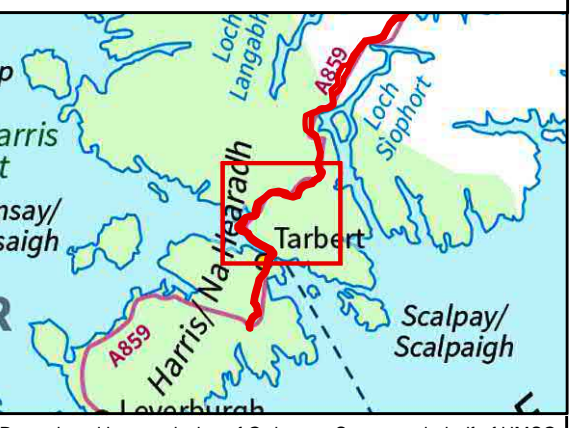
Title:  
Figure 2d :  
Baseline Alignment

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)
  - ▲ 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
  - Waterbody 30m Buffer



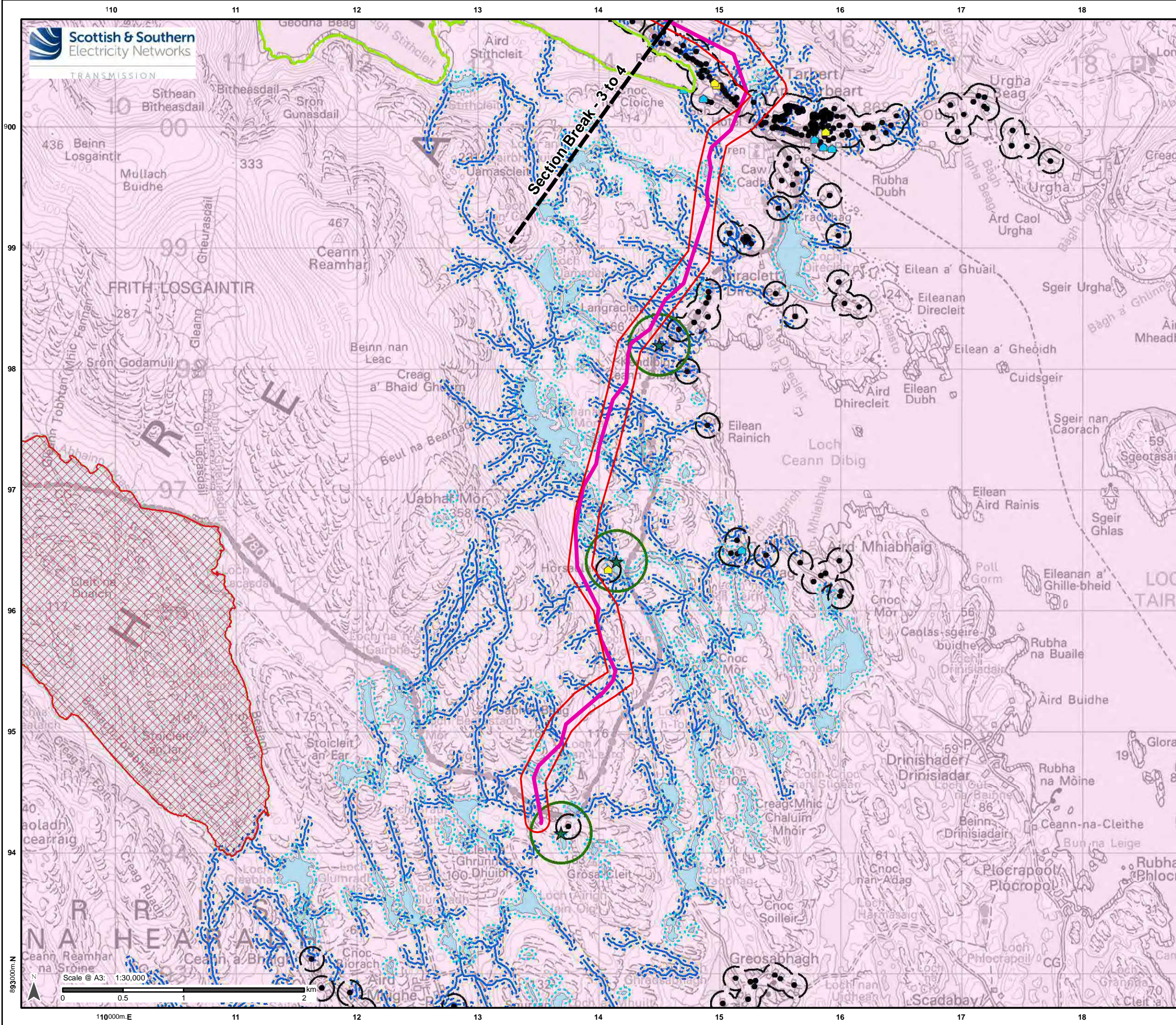
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Project No: LT000245  
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Title:  
Figure 2e :  
Baseline Alignment

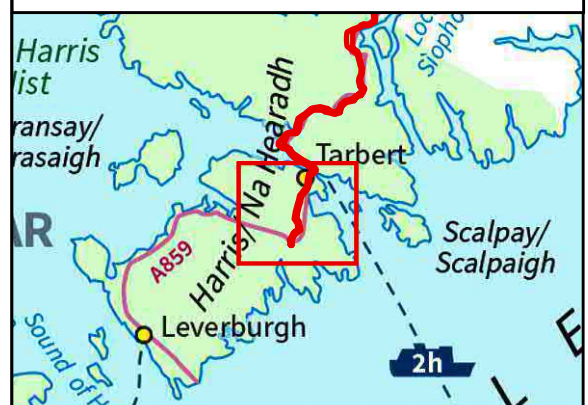
Drawn by: CF Date: 07/02/2022

Drawing: R162\_11469\_Fig2\_BaselineAlignemnt\_B



**Legend**

- LT0245 Proposed Route
- Baseline Alignment
- SPA
- ★ Private Water Supply
- Private Water Supply Buffer (250 m)
- ▲ 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



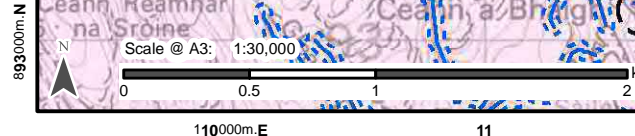
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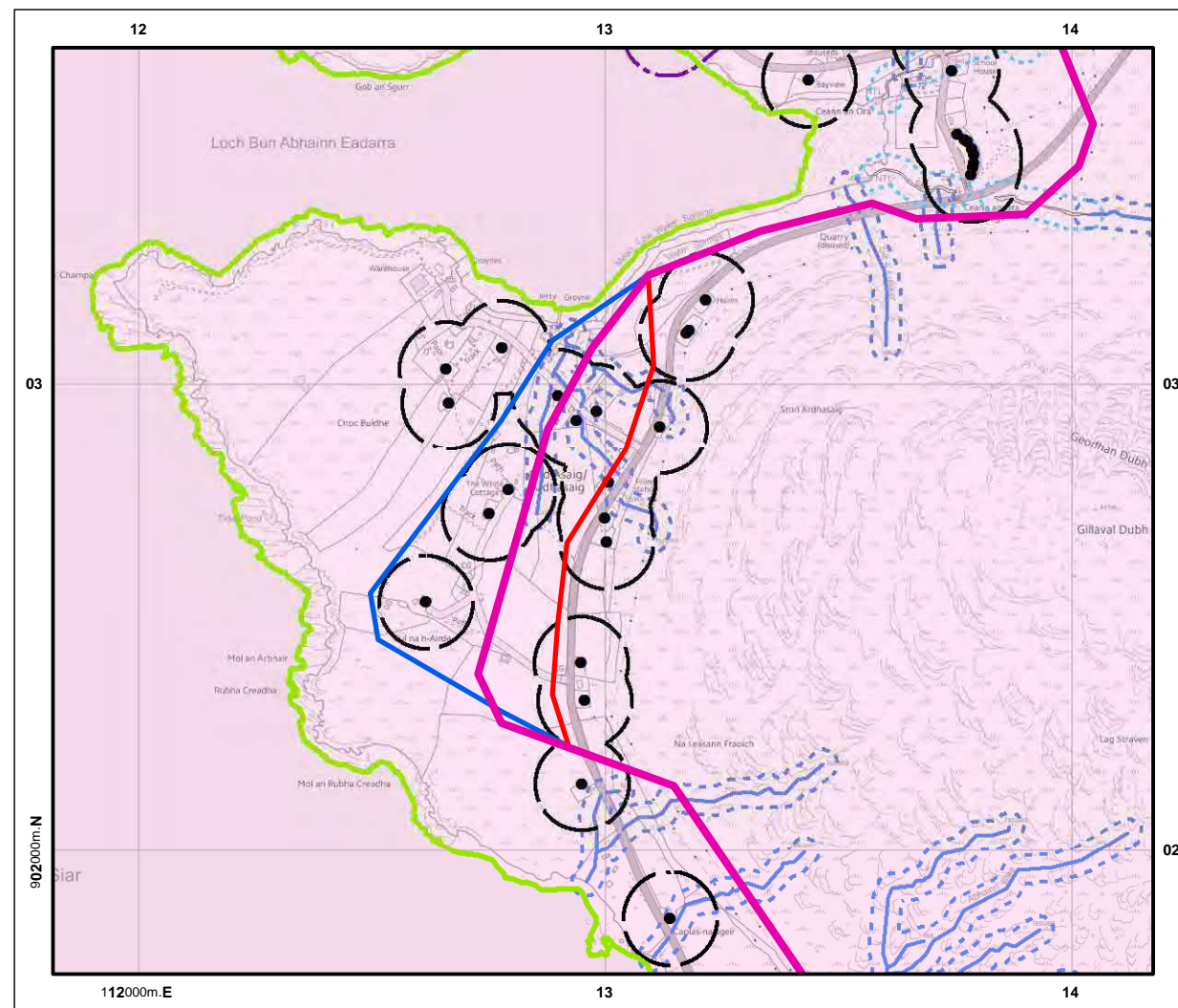
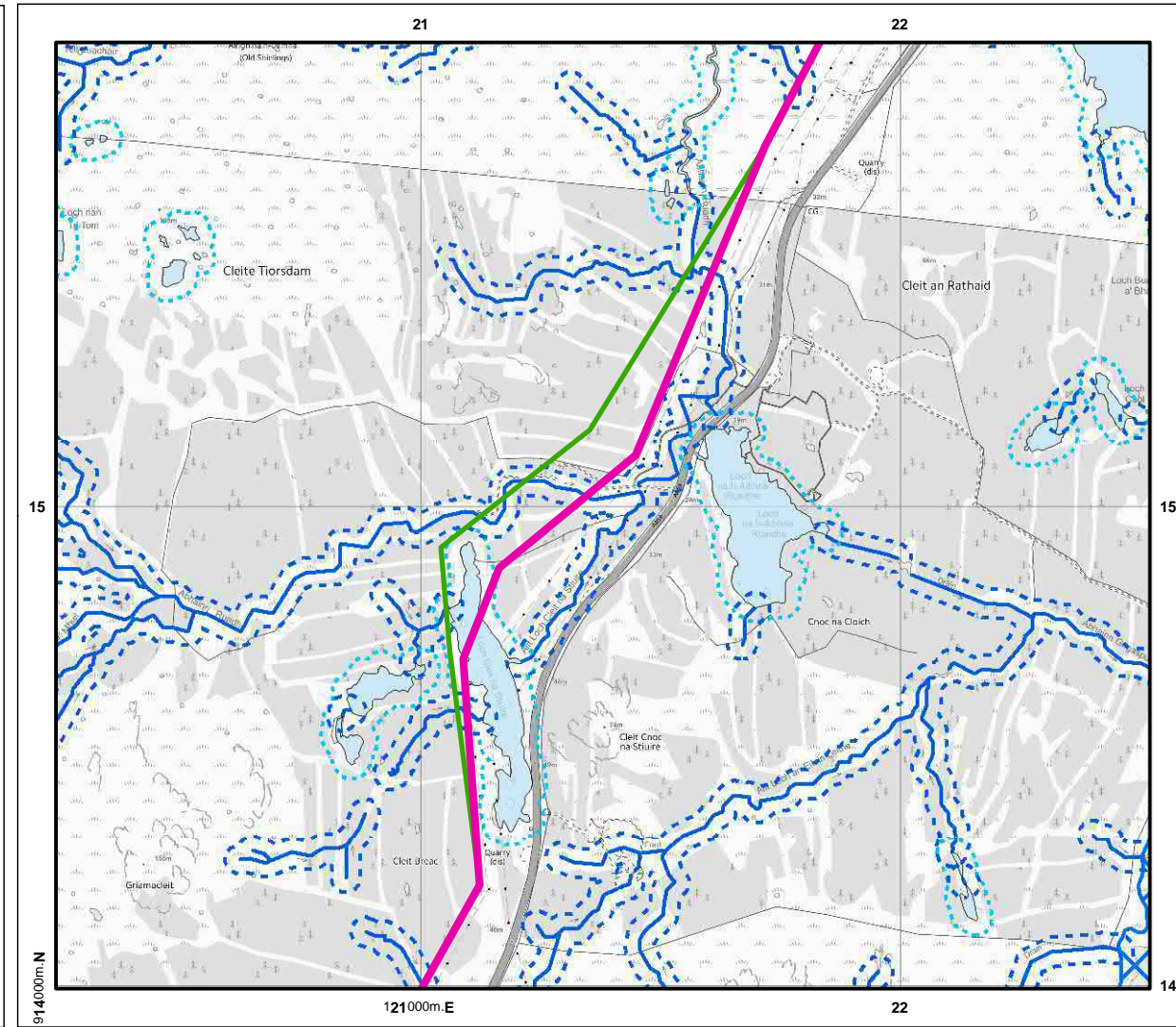
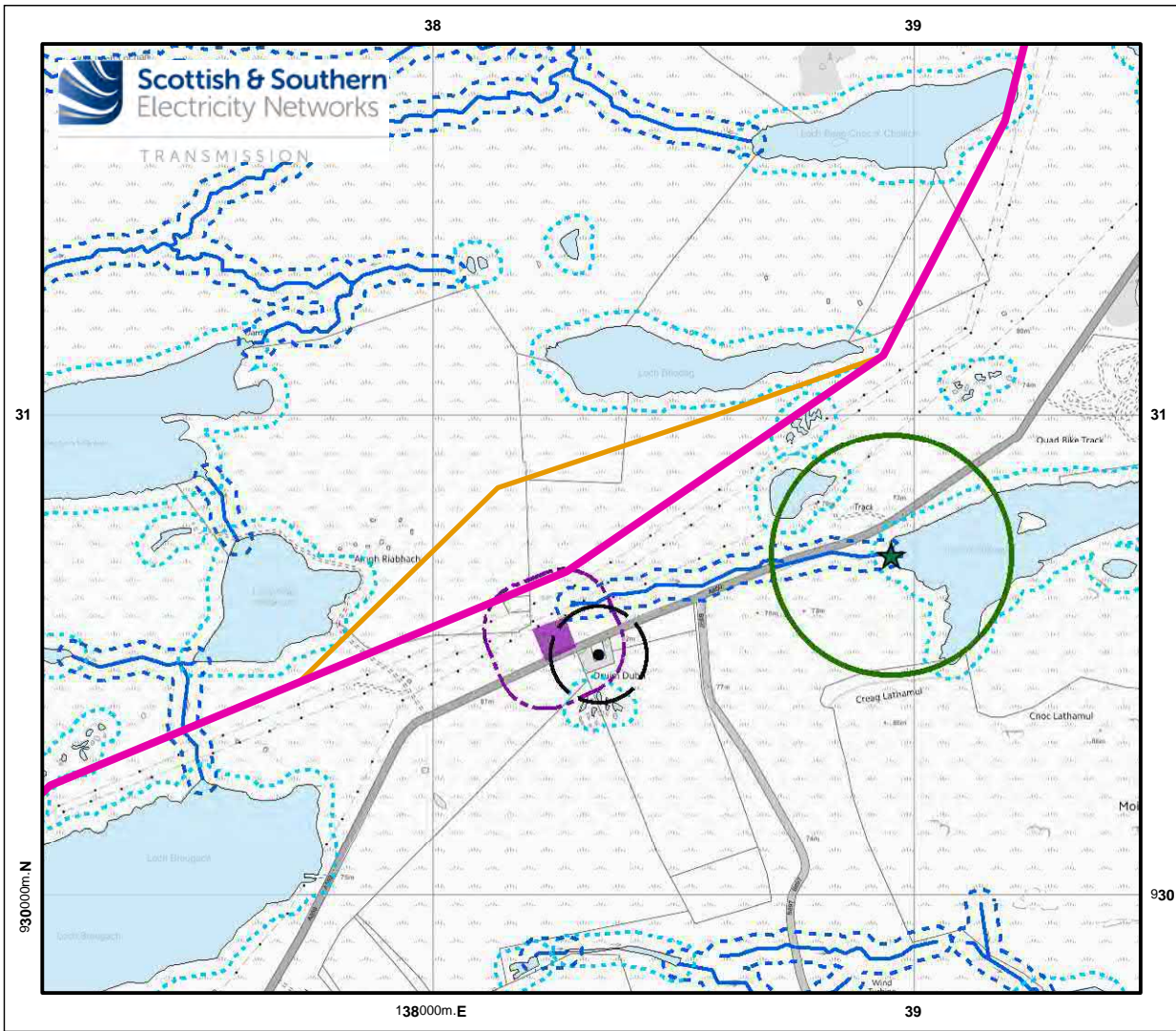
Project No: LT000245  
Project: 1620011469

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 No: LT0245

Project: 1620011469

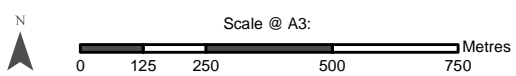
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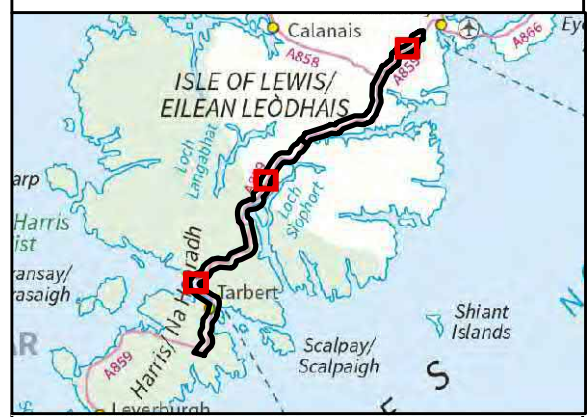
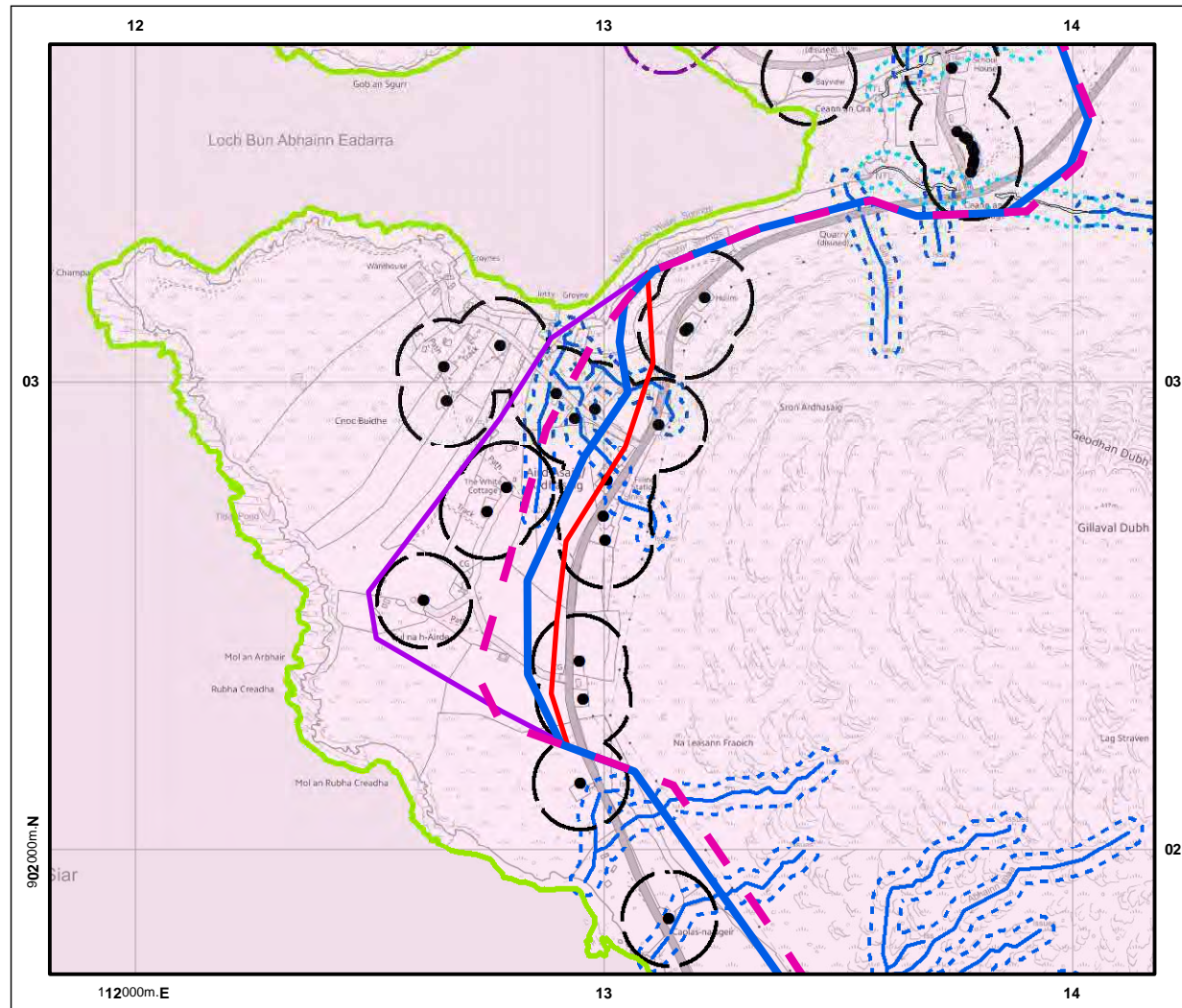
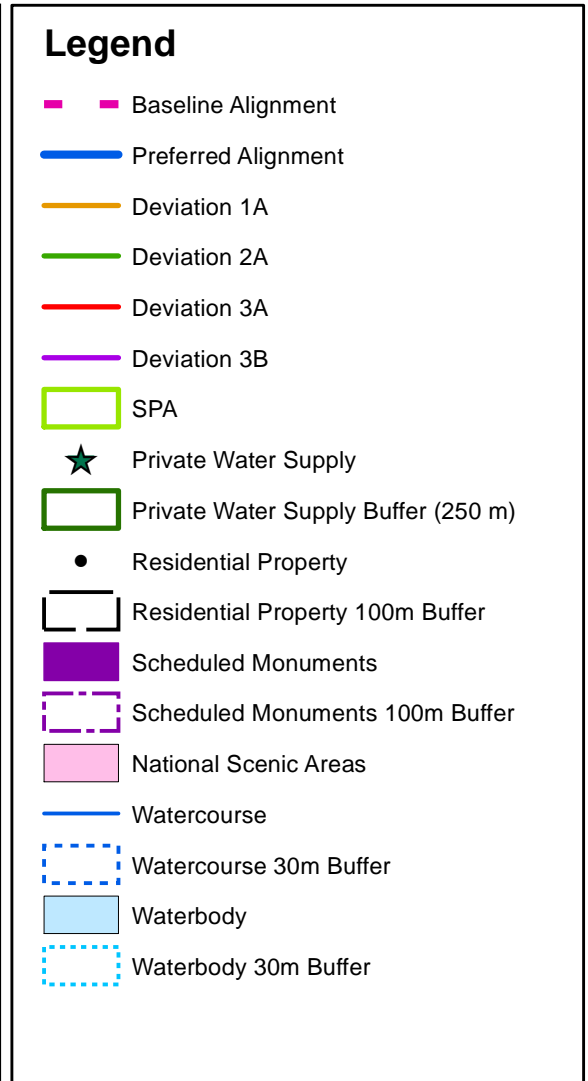
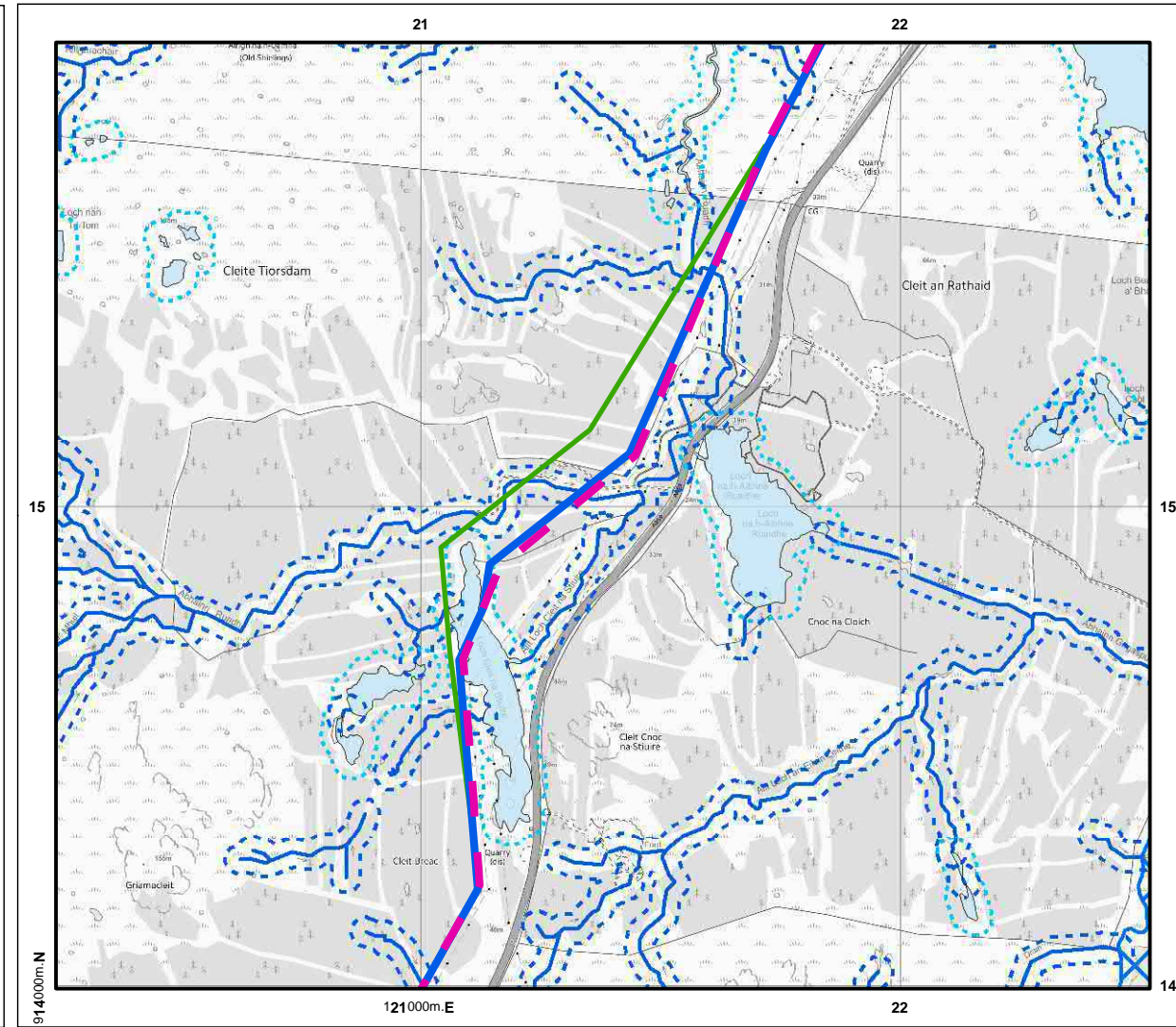
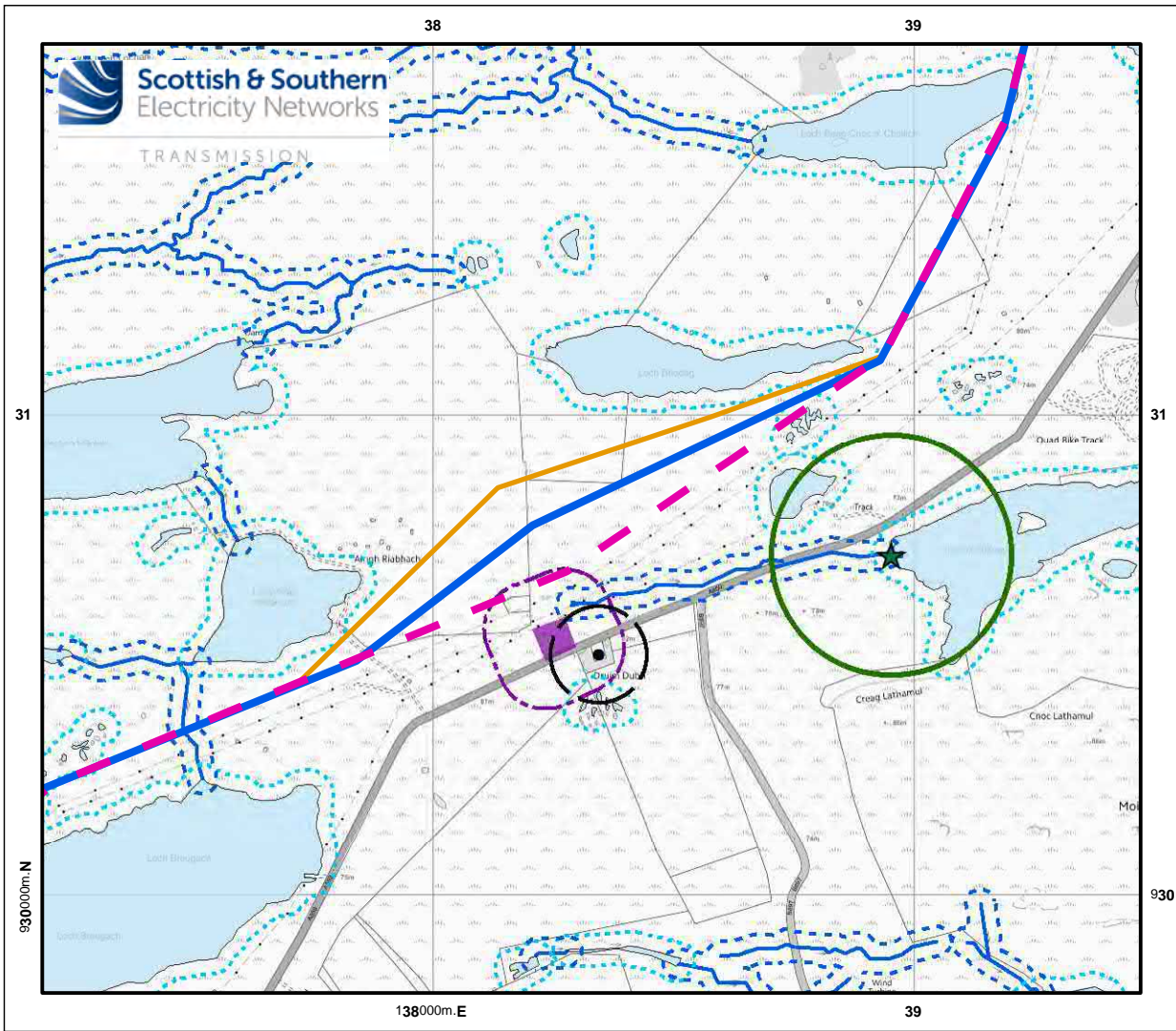
Figure 3: Alignment Deviation Options

Drawn by: CF

Date: 07/02/2022

Drawing: R162\_11469\_Fig3\_AlignmentDeviationOptions\_B





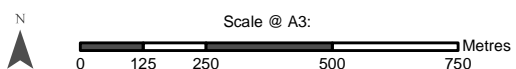
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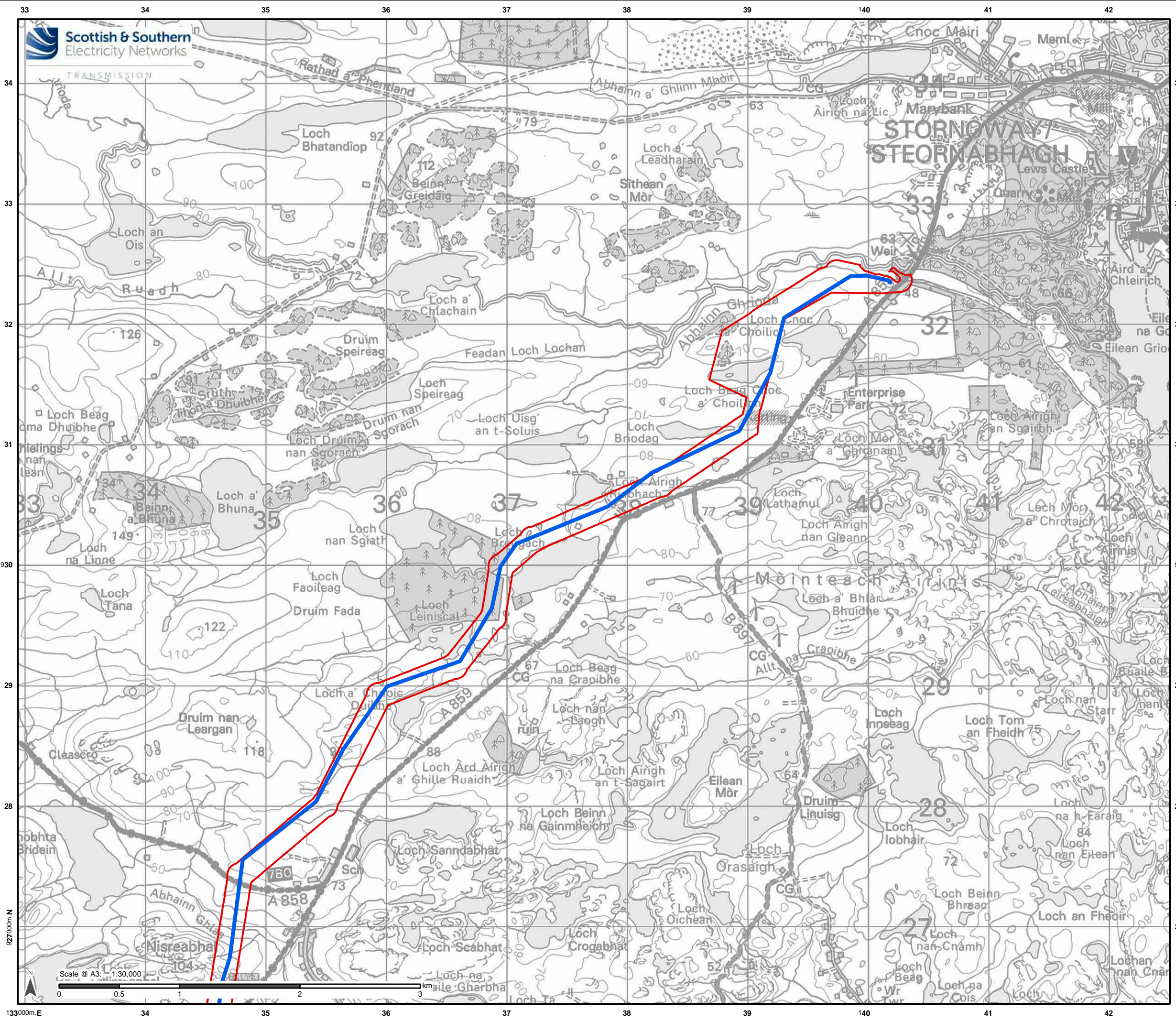
Project No: LT0245  
Project: 1620011469

Title:  
Figure 4: Preferred Deviation Options

Drawn by: CF Date: 07/02/2022

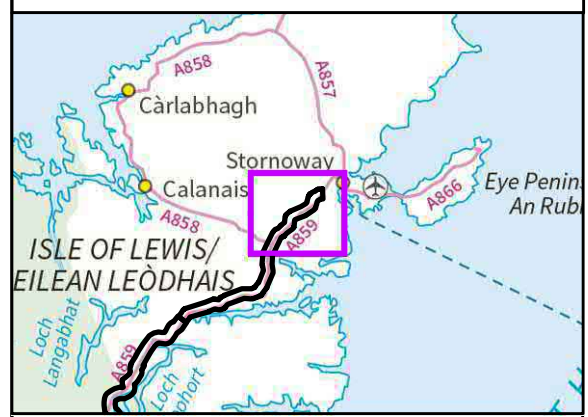
Drawing: R162\_11469\_Fig4\_PreferredDeviationOptions\_B





**Legend**

- Preferred Alignment
- LT0245 Proposed Route



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Project: 1620011469

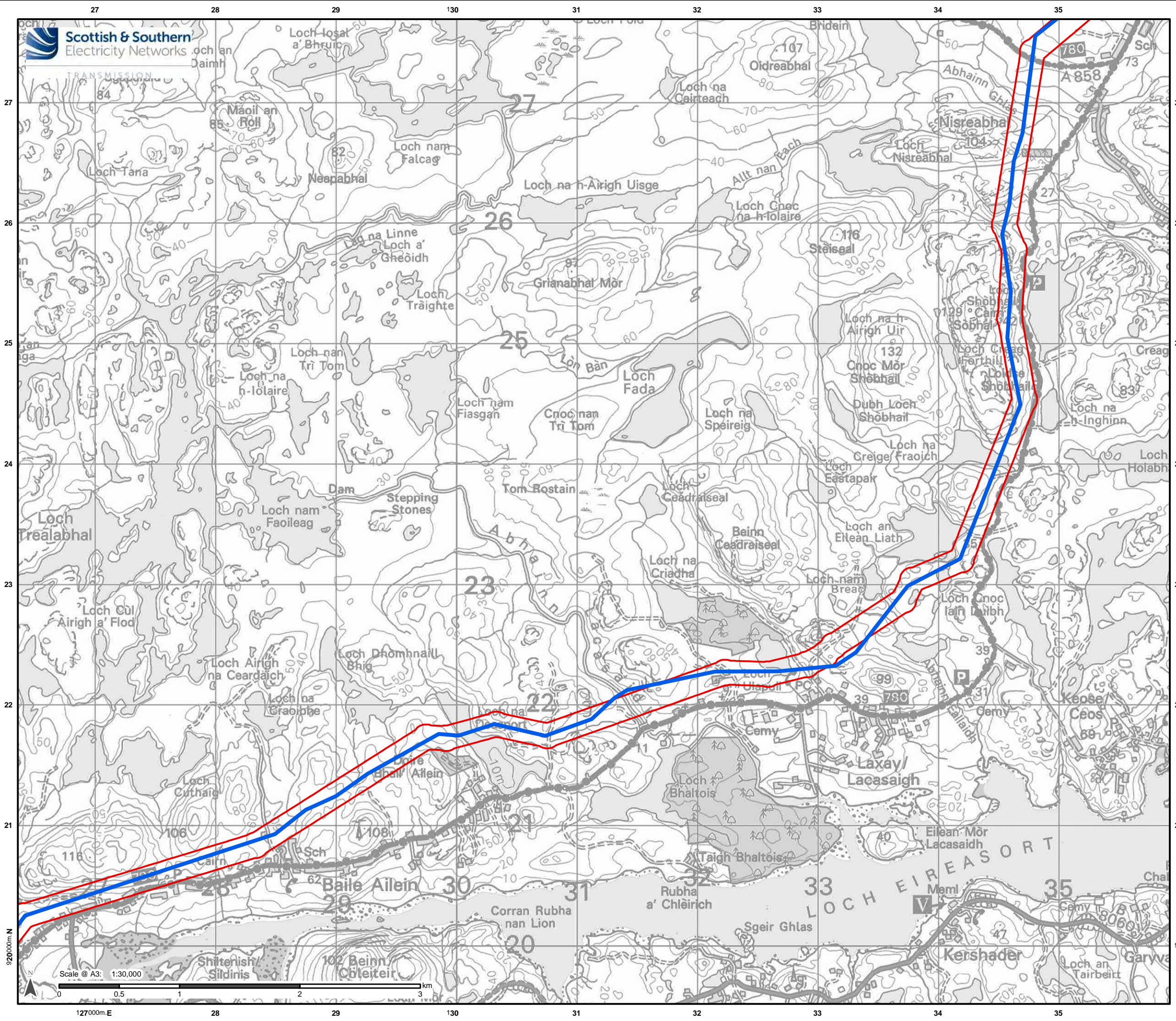
Title:  
Figure 5a: Preferred Alignment

Drawn by: CF Date: 27/01/2022

Drawing: R162\_11469\_Fig5\_PreferredAlignment\_A

Scale @ A3: 1:30,000

133000m E 34 35 36 37 38 39 140 41 42



**Legend**

- Preferred Alignment
- LT0245 Proposed Route



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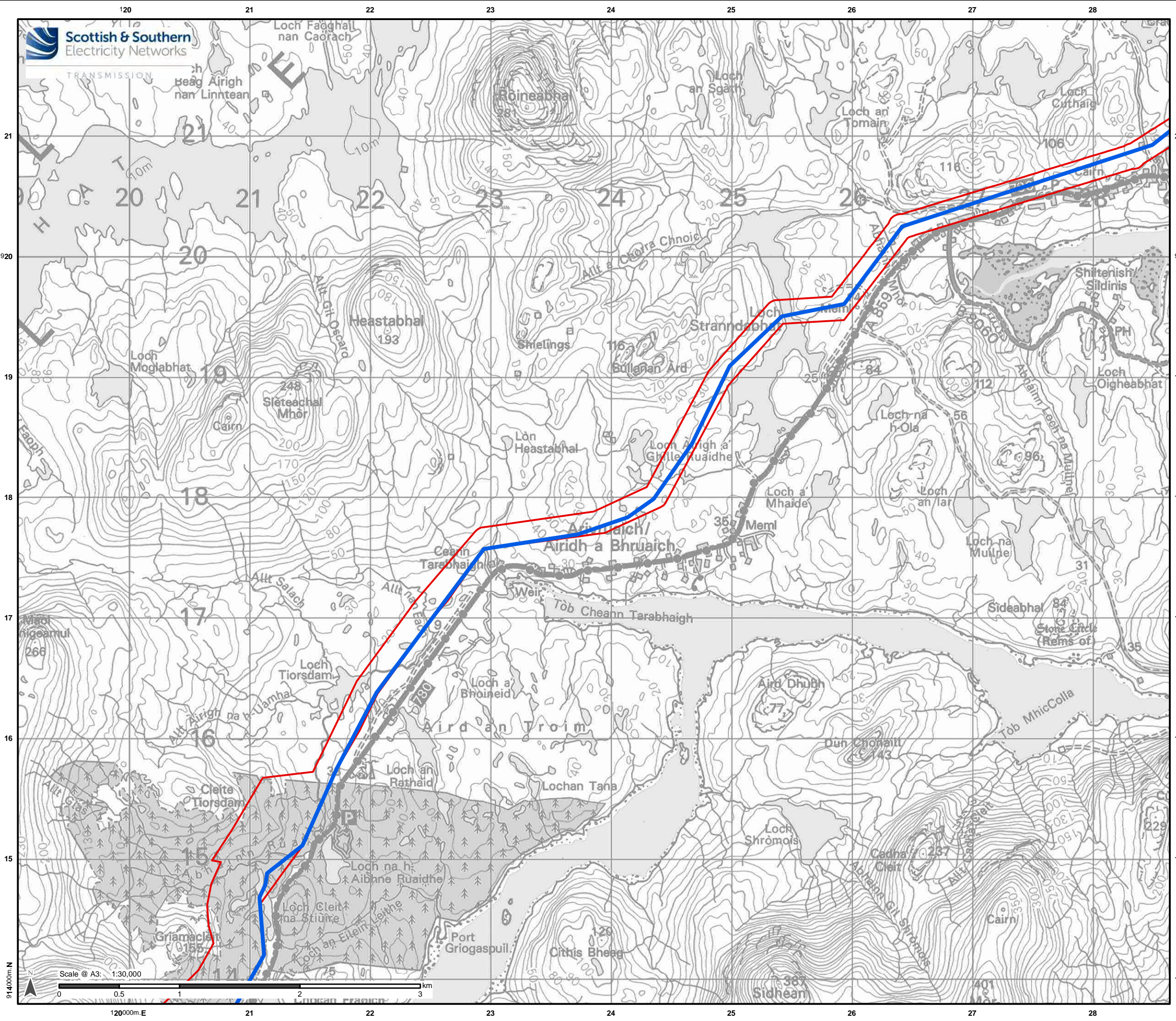
Project No: LT0245  
Project: 1620011469

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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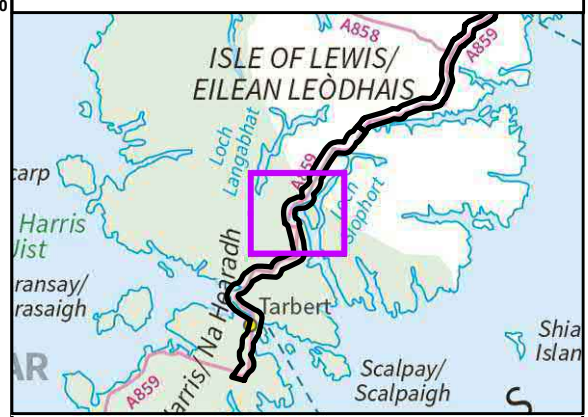
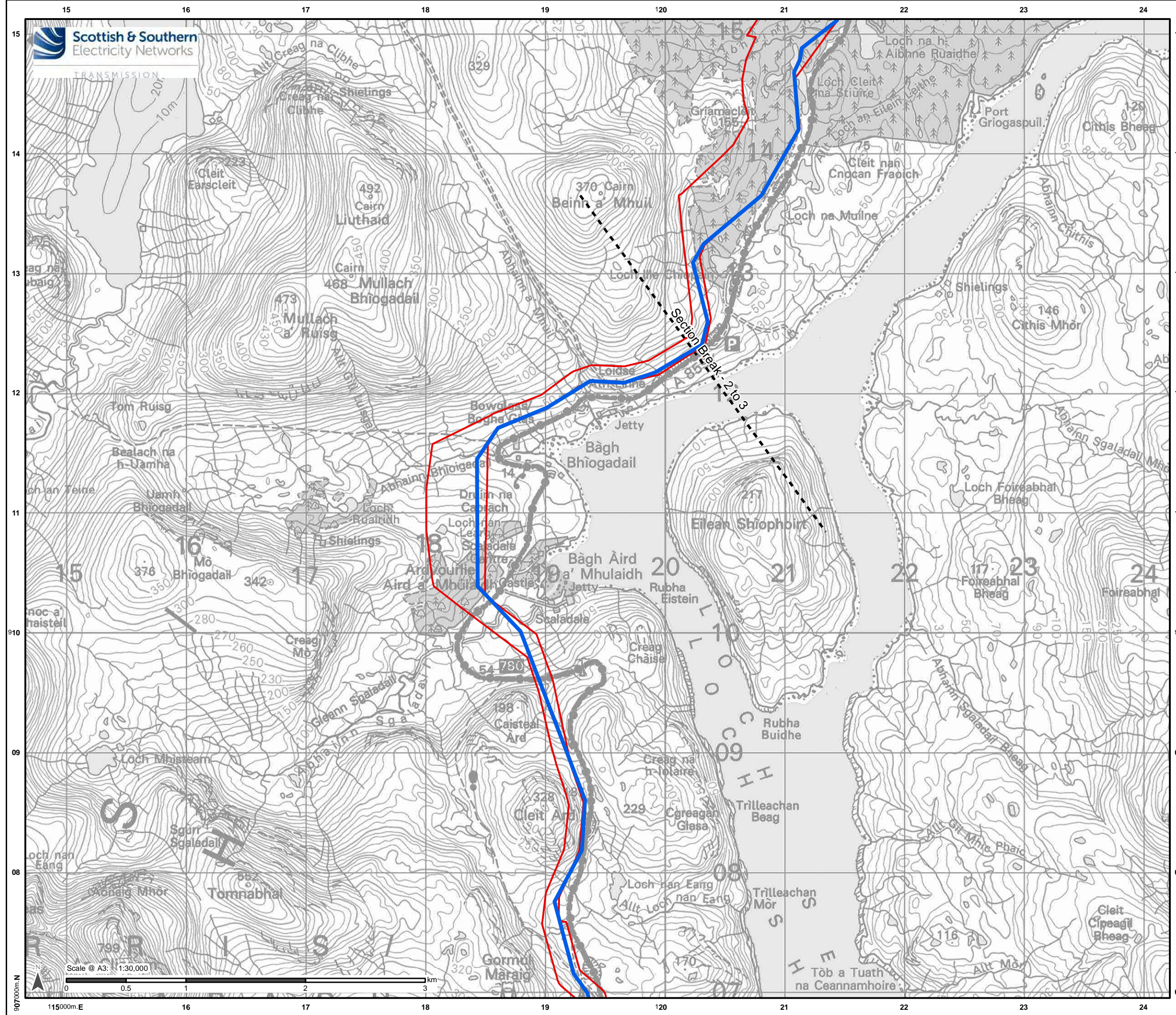
Title:  
Figure 5c: Preferred Alignment

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 5d: Preferred Alignment

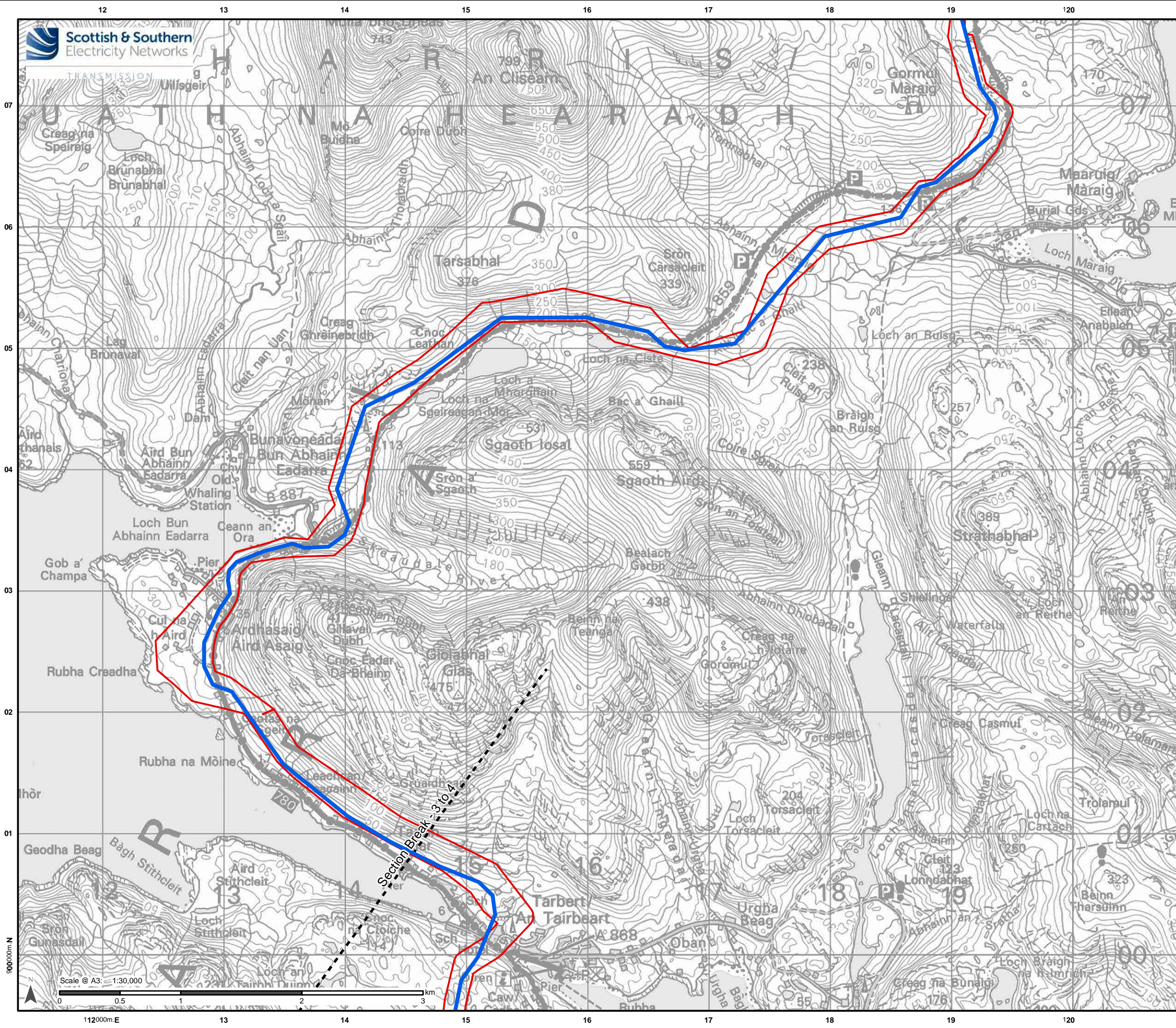
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Date: 27/01/2022

Drawing: R162\_11469\_Fig5\_PreferredAlignment\_A



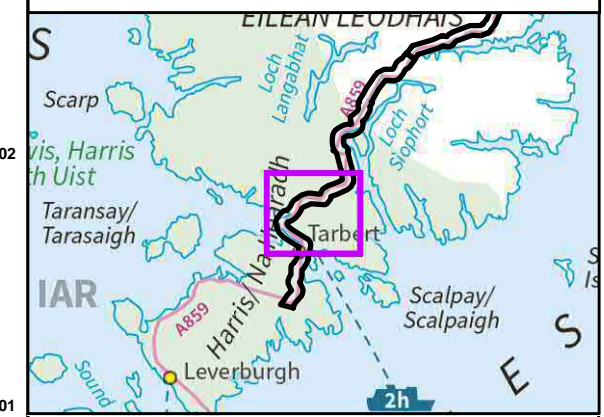
907000m.N

115000m.E 16 17 18 19 20 21 22 23 24



**Legend**

- Preferred Alignment
- LT0245 Proposed Route



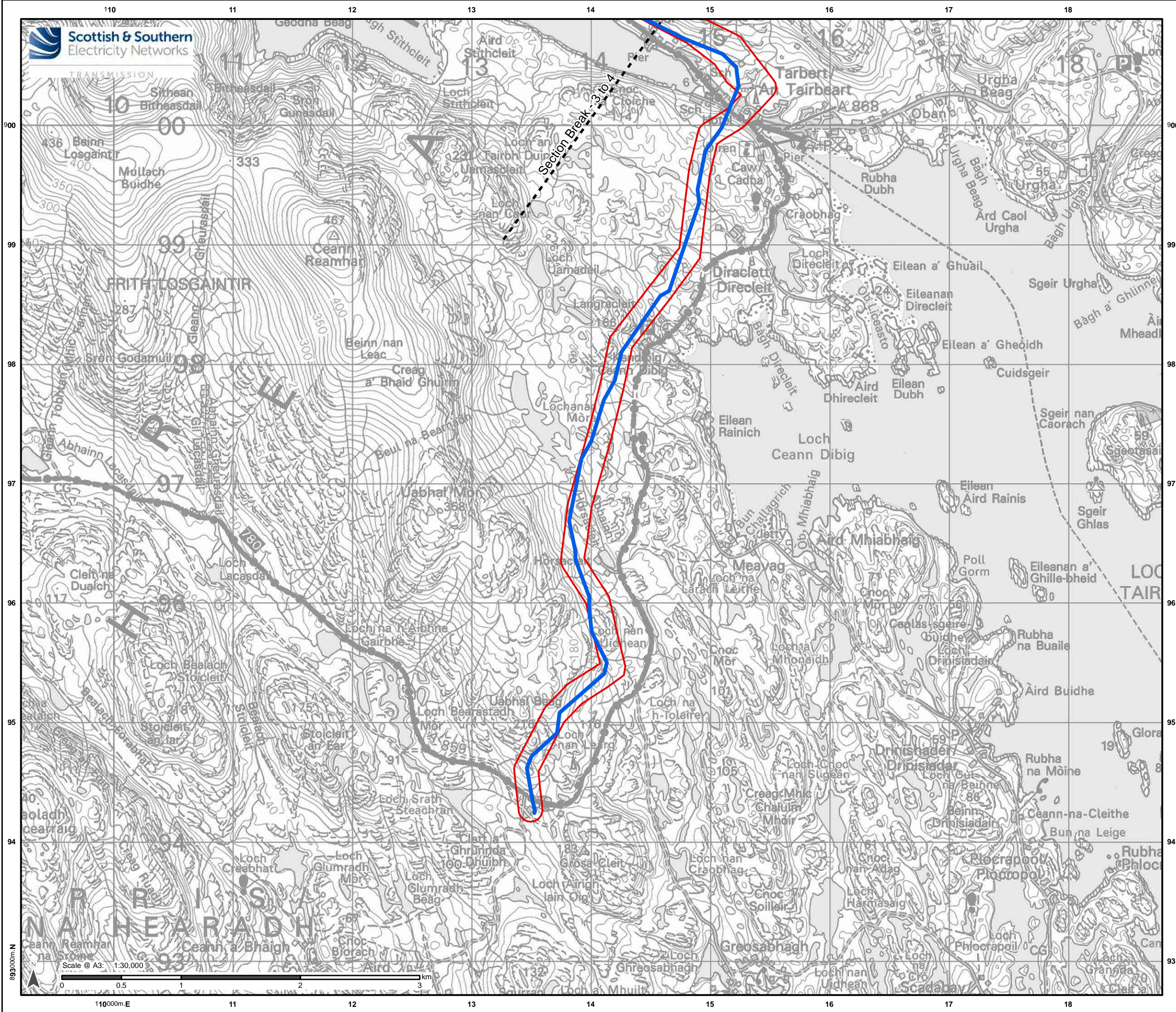
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Project No: LT0245  
Project: 1620011469

Title:  
Figure 5e: Preferred Alignment

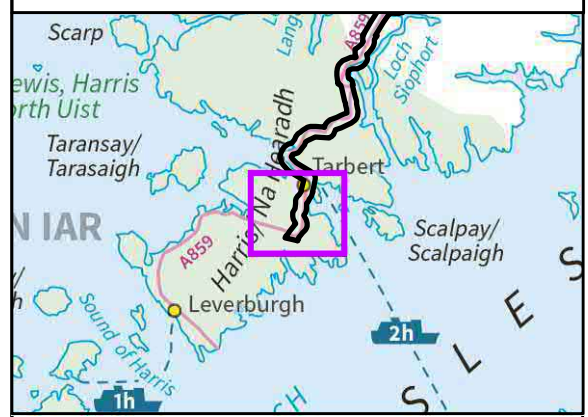
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Drawing: R162\_11469\_Fig5\_PreferredAlignment\_A



**Legend**

- Preferred Alignment
- LT0245 Proposed Route



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Project No: LT0245  
Project: 1620011469

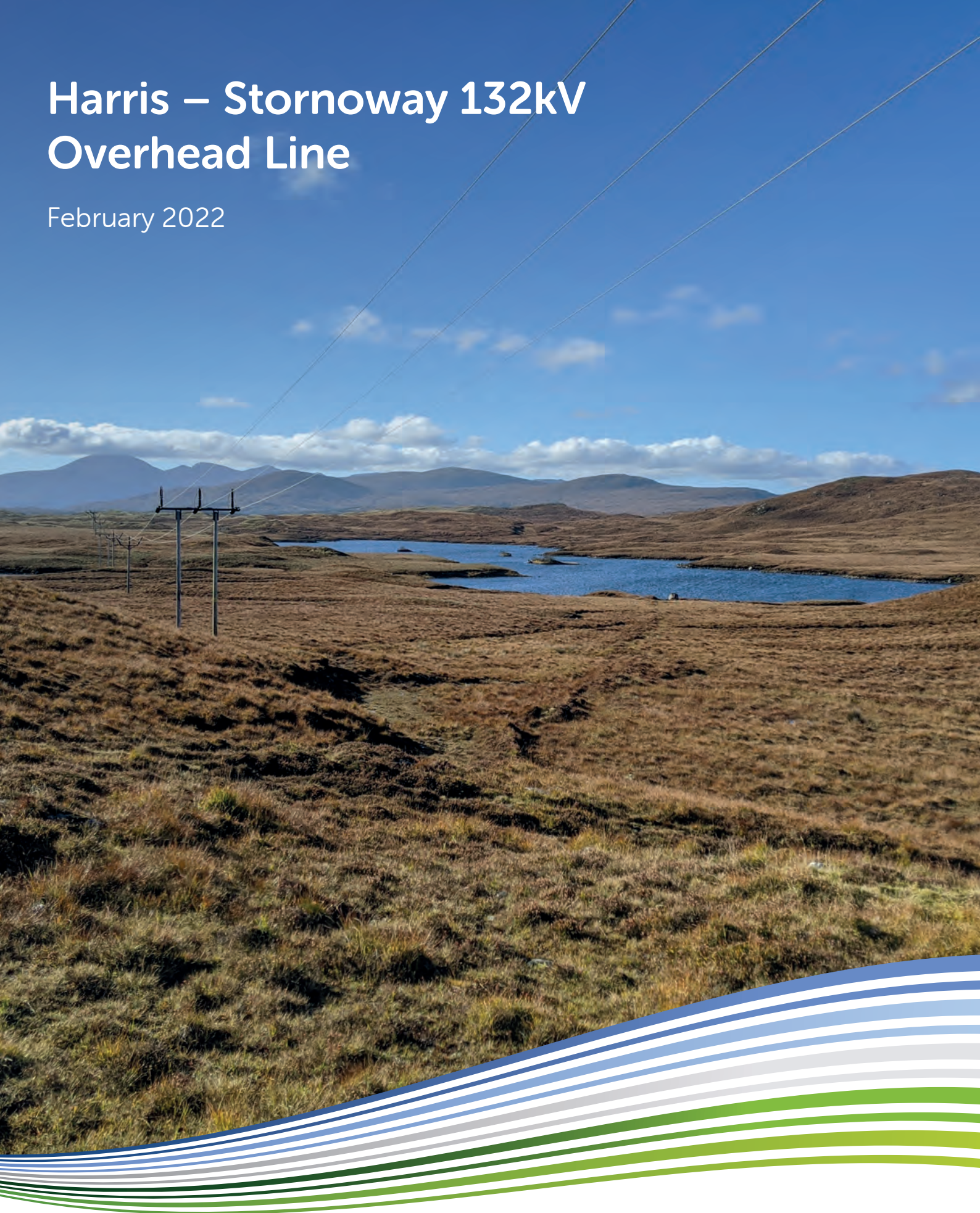
Title:  
Figure 5f: Preferred Alignment

Drawn by: CF Date: 27/01/2022

Drawing: R162\_11469\_Fig5\_PreferredAlignment\_A

# Harris – Stornoway 132kV Overhead Line

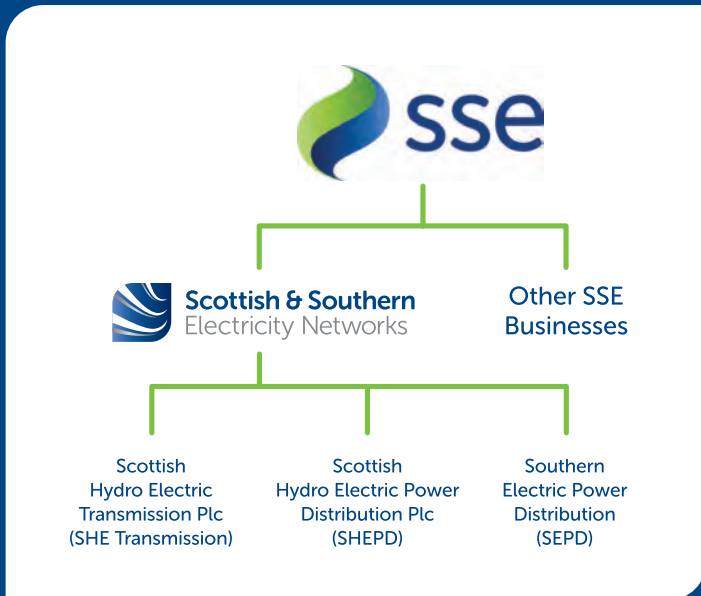
February 2022



**Scottish & Southern**  
Electricity Networks

# 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.



In total we maintain about 5,000km 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 750m above sea level and up to 250km 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.

## 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 lines, 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 plans.

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.

## Overview of Transmission Projects



# Project need and overview

## Project overview

The existing 132kV overhead line (OHL) runs for approximately 58km between Harris and Stornoway and due to its location, the line has been susceptible to severe storm damage, with high winds affecting the region, requiring ongoing maintenance work and monitoring. Therefore we are now proposing to upgrade the network in the area, to improve network reliability and main security of supply of electricity by replacing the existing line and constructing a new overhead line.

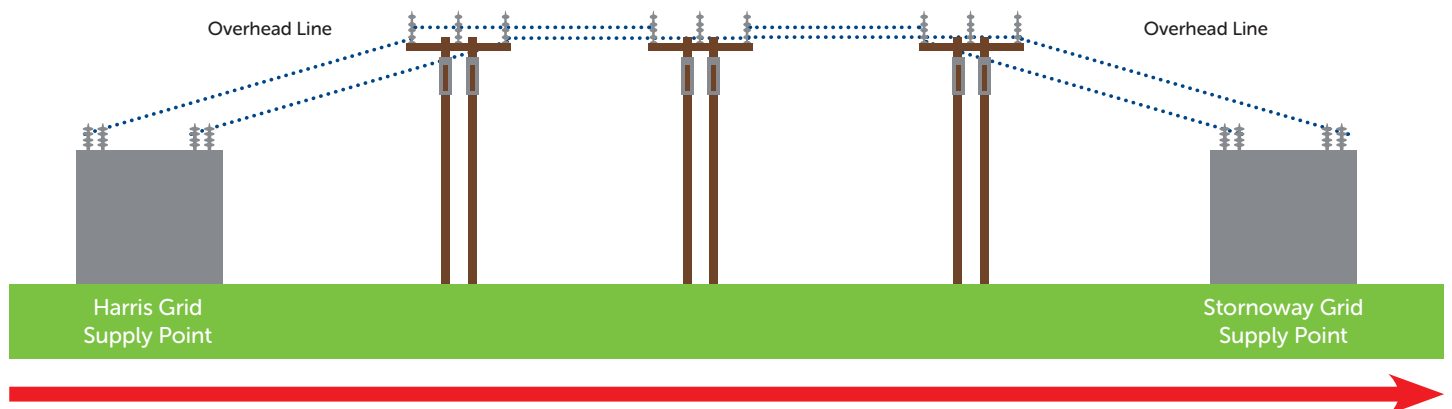
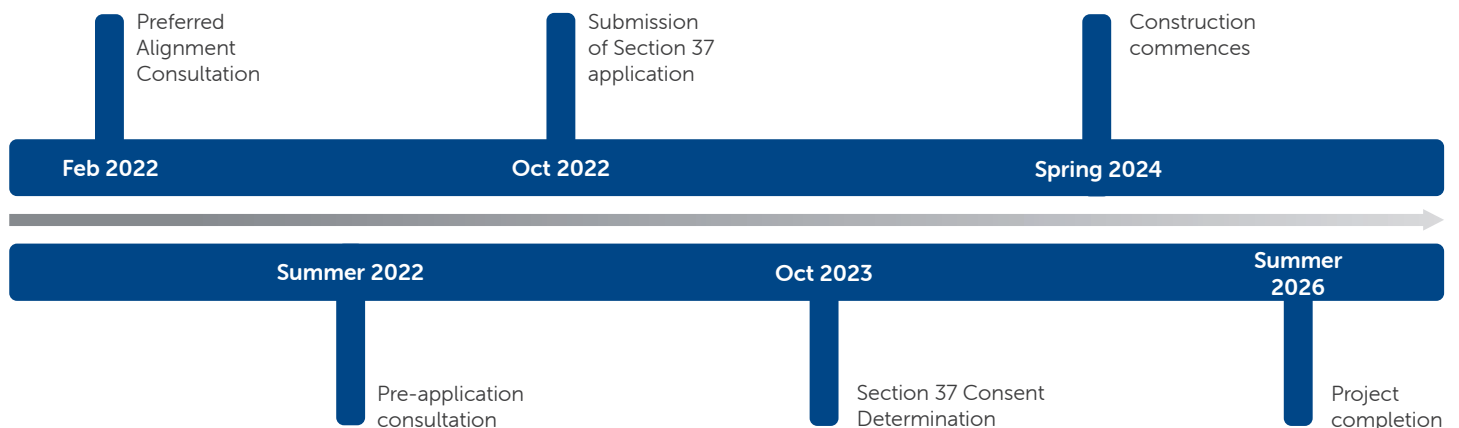
The project is looking to construct an offline 132kV OHL wood pole trident line between Harris Grid Supply Point and Stornoway Grid Supply Point, replacing the existing single pole trident design with a new "H" Pole trident wood pole line.

## Main elements

- Single circuit trident double wood pole overhead line
- Access tracks
- Works on existing Distribution OHLs in proximity to new 132kV OHL
- Full dismantling of existing wood pole circuit once new OHL circuit is live.

## Project timeline

Current forecasted programme subject to change

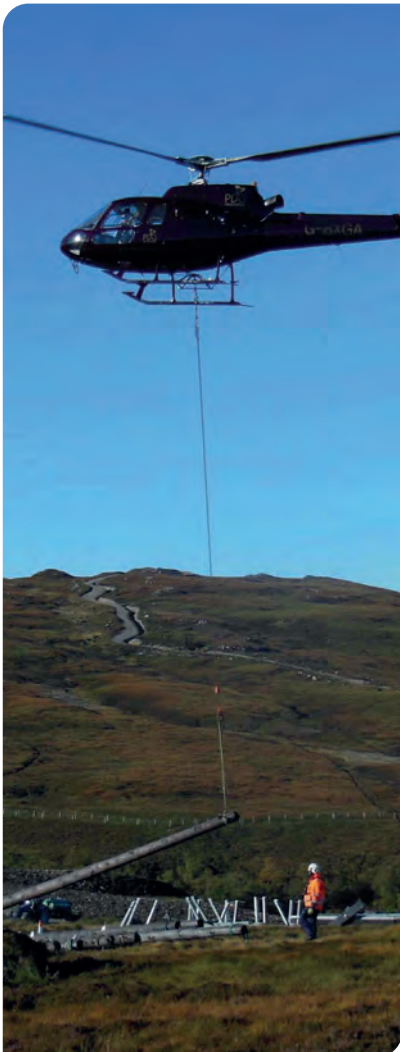


# Construction of an overhead wood pole line

A typical H wood pole installation generally requires foundations of approximately 2.5 metres by 3.0 metres and to a depth of around 2.0 metres. To minimise construction impact and the requirement for access tracks helicopters are used wherever possible to help deliver the materials to the site.

The picture below shows a typical helicopter delivery of the steel work used on the top of a pole and the baulk timbers used in the foundation at the base of each structure.

Helicopters are also used to assist with the stringing of the conductors.



Above is a typical example of an angle wood pole which requires additional stays. Please note the stays will not be on the non-angle poles.



## Construction of access tracks

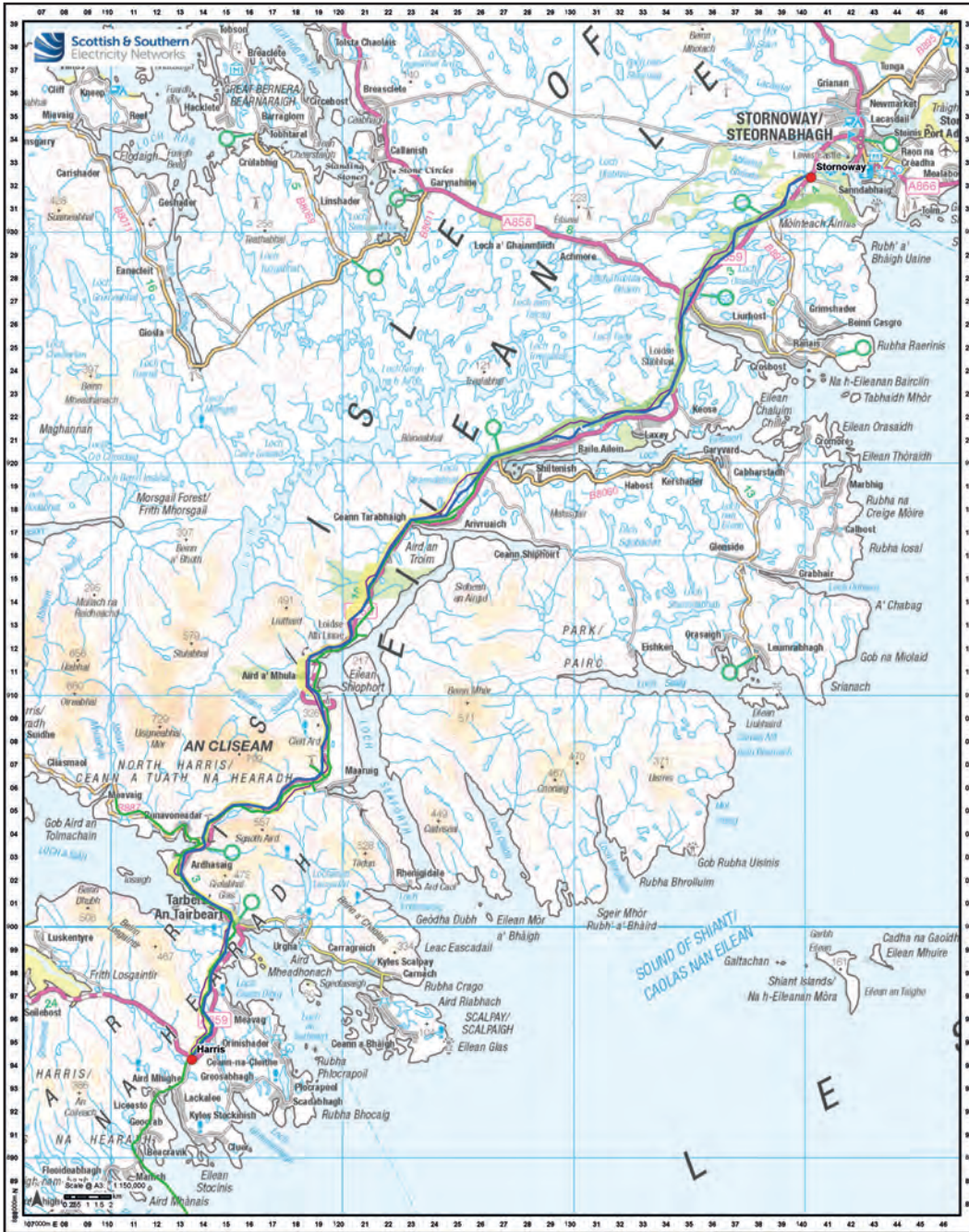
Access tracks will only be constructed where access by all-terrain vehicles cannot cope with the conditions.

Access tracks will be constructed with imported and/or locally won material.

It is not envisioned that access tracks will be retained after construction of the overhead line.



# Preferred Alignment



## Selection of the Preferred Alignment

There are two connection points which have been identified as part of this project. The first one is at Harris grid supply substation which is located just south of Tarbert, Harris. The second is at Stornoway substation on Lewis.

Given the constraints of the Island environment in scale, the extent of challenging physical environs and the extent of environmental designations, combined with the requirement to replace existing infrastructure.

A viable alignment has been identified for the whole connection based on the corridor and route previously consulted on. The alignment still follows the existing overhead line which this project is set to replace.

This largely follows the A859 from Harris substation just south of Tarbert and heads north along the roadside to Stornoway substation in Lewis. This is the shortest route which offers a viable engineering solution for the new overhead line.

All consultation documentation is available from our project website:  
[www.ssen-transmission.co.uk/projects/harris-stornoway-132kv-ohl](http://www.ssen-transmission.co.uk/projects/harris-stornoway-132kv-ohl)

# Preferred Alignment

## Preferred Alignment 1 of 6

