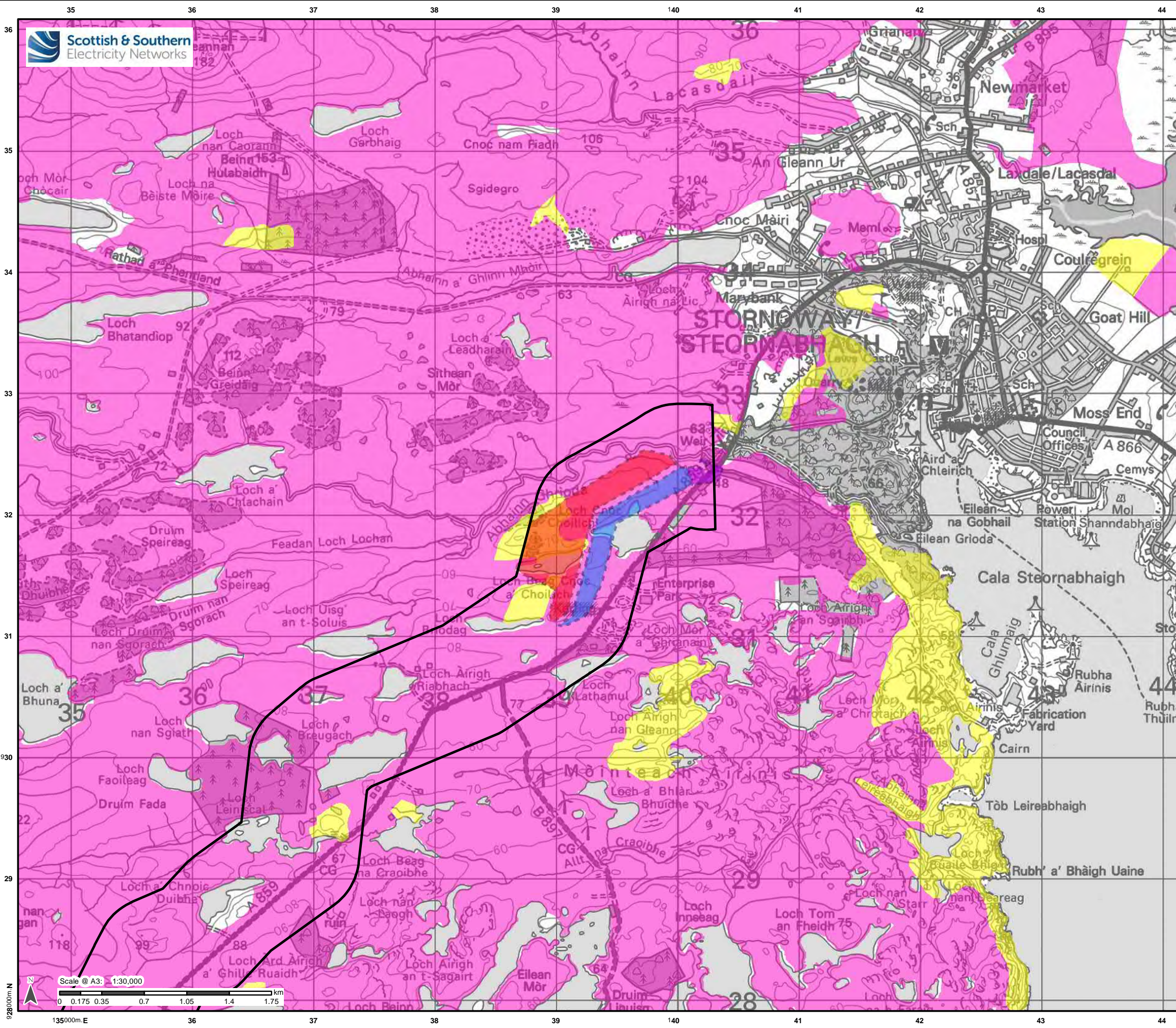
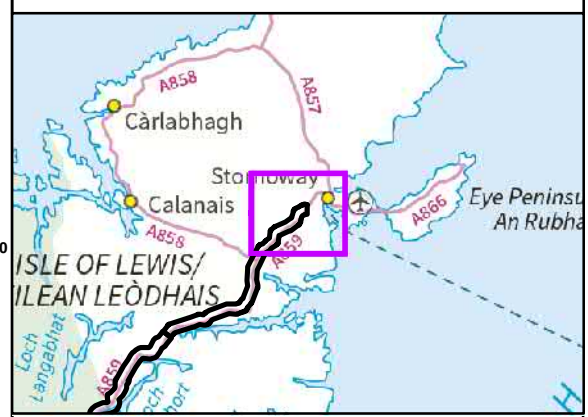


APPENDIX C: SEPTEMBER 2021 CONSULTATION MATERIAL (continued)



Legend

- Proposed Corridor
- Route Options**
- Route 1
- Route Option 1a
- Route Option 1b
- Carbon and Peatland 2016**
- Class 1
- Class 2



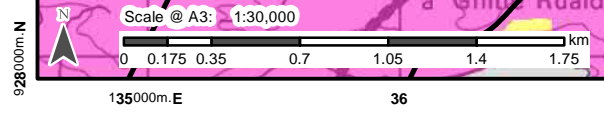
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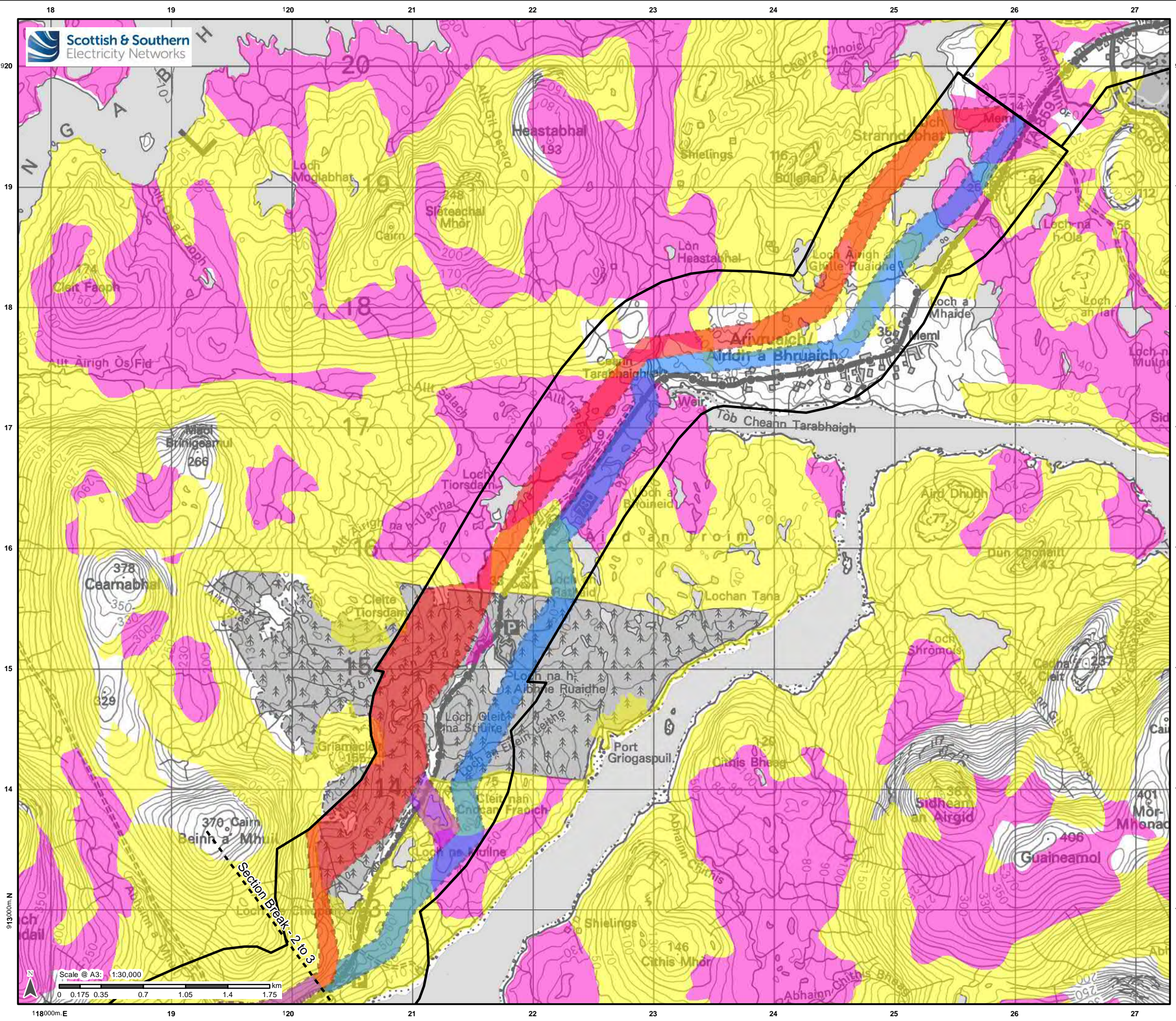
Project No: LT0245
Project: 1620011469

Title:
Figure 5a: Peat

Drawn by: BM
Date: 10/08/2021

Drawing: R162_11469_Fig5_Peat_B.mxd





Legend

- Proposed Corridor
- Section Breaks
- Route Options**
- Route 2
- Route Option 2a
- Route Option 2b
- Route 3
- Carbon and Peatland 2016**
- Class 1
- Class 2



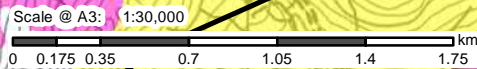
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Project No: LT0245
Project: 1620011469

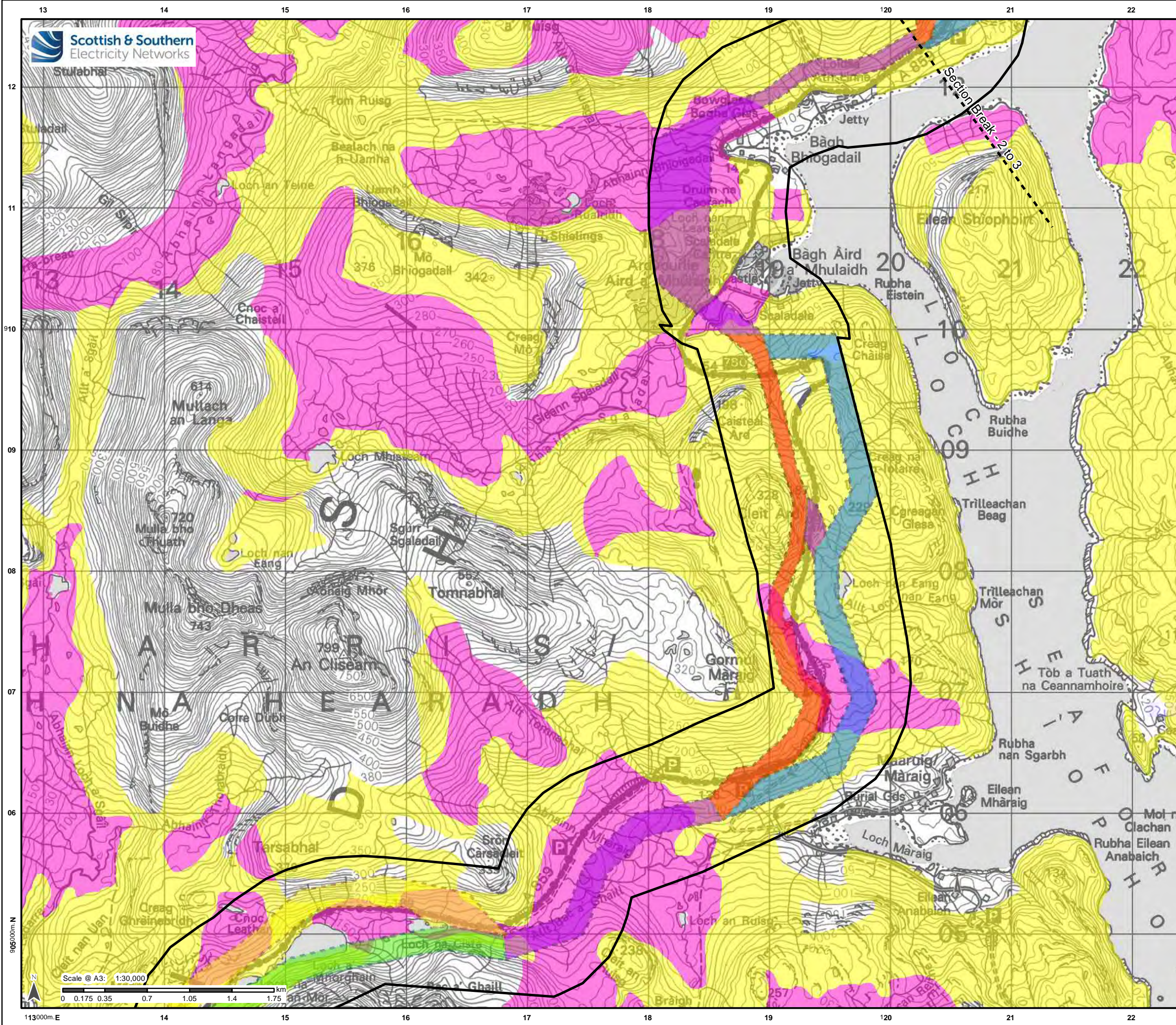
Title:
Figure 5b: Peat

Drawn by: BM Date: 10/08/2021
Drawing: R162_11469_Fig5_Peat_B.mxd

913000m N

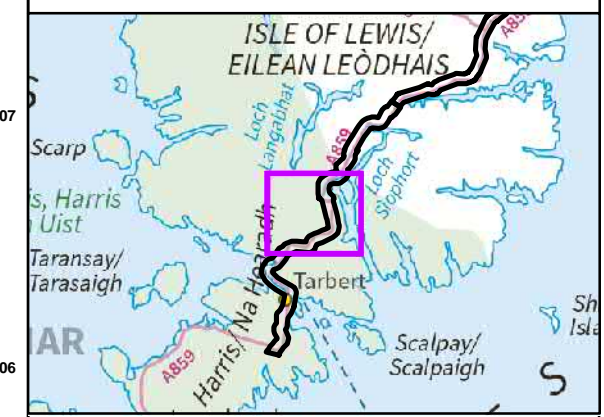


118000m E 19 20 21 22 23 24 25 26 27



Legend

- Proposed Corridor
- Section Breaks
- Route Options**
- Route Option 2a
- Route Option 2b
- Route 3
- Route Option 3a
- Route Option 3b
- Route Option 3c
- Route Option 3d
- Carbon and Peatland 2016**
- Class 1
- Class 2



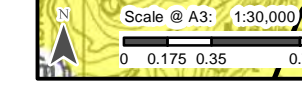
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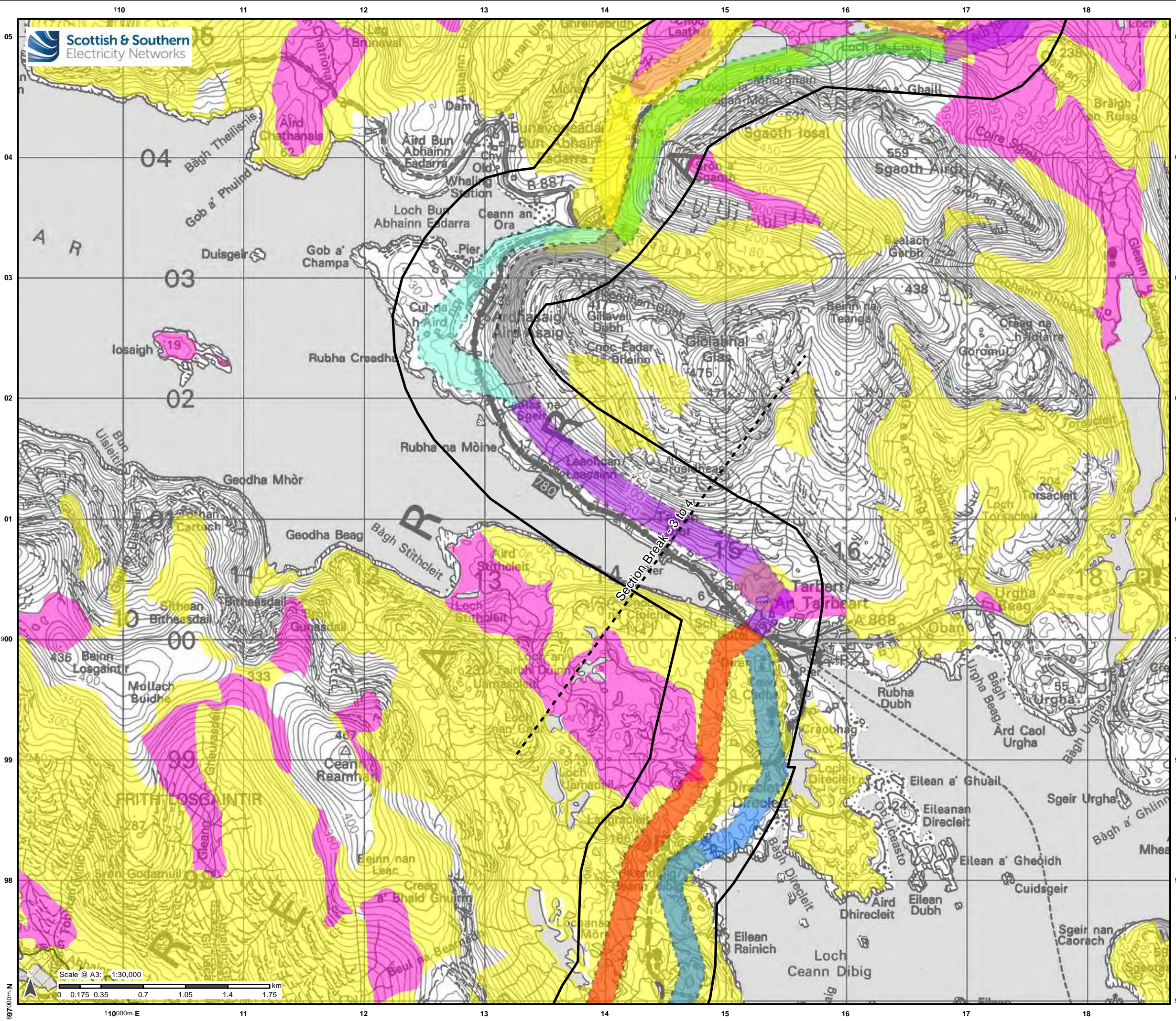
Project No: LT0245
Project: 1620011469

Title:
Figure 5c: Peat

Drawn by: BM Date: 10/08/2021

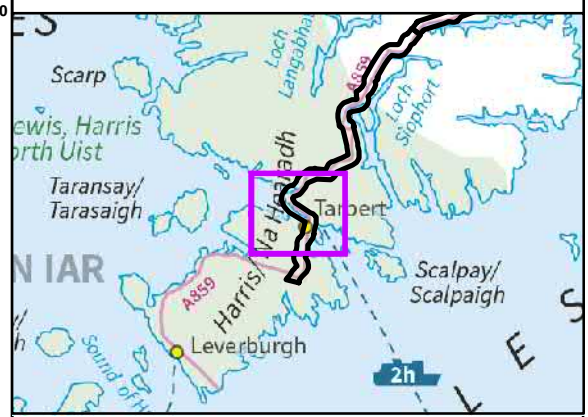
Drawing: R162_11469_Fig5_Peat_B.mxd





Legend

- Proposed Corridor
- Section Breaks
- Route Options**
- Route 3
- Route Option 3c
- Route Option 3d
- Route Option 3e
- Route Option 3f
- Route 4
- Route Option 4a
- Route Option 4b
- Carbon and Peatland 2016**
- Class 1
- Class 2

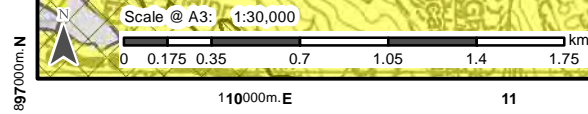


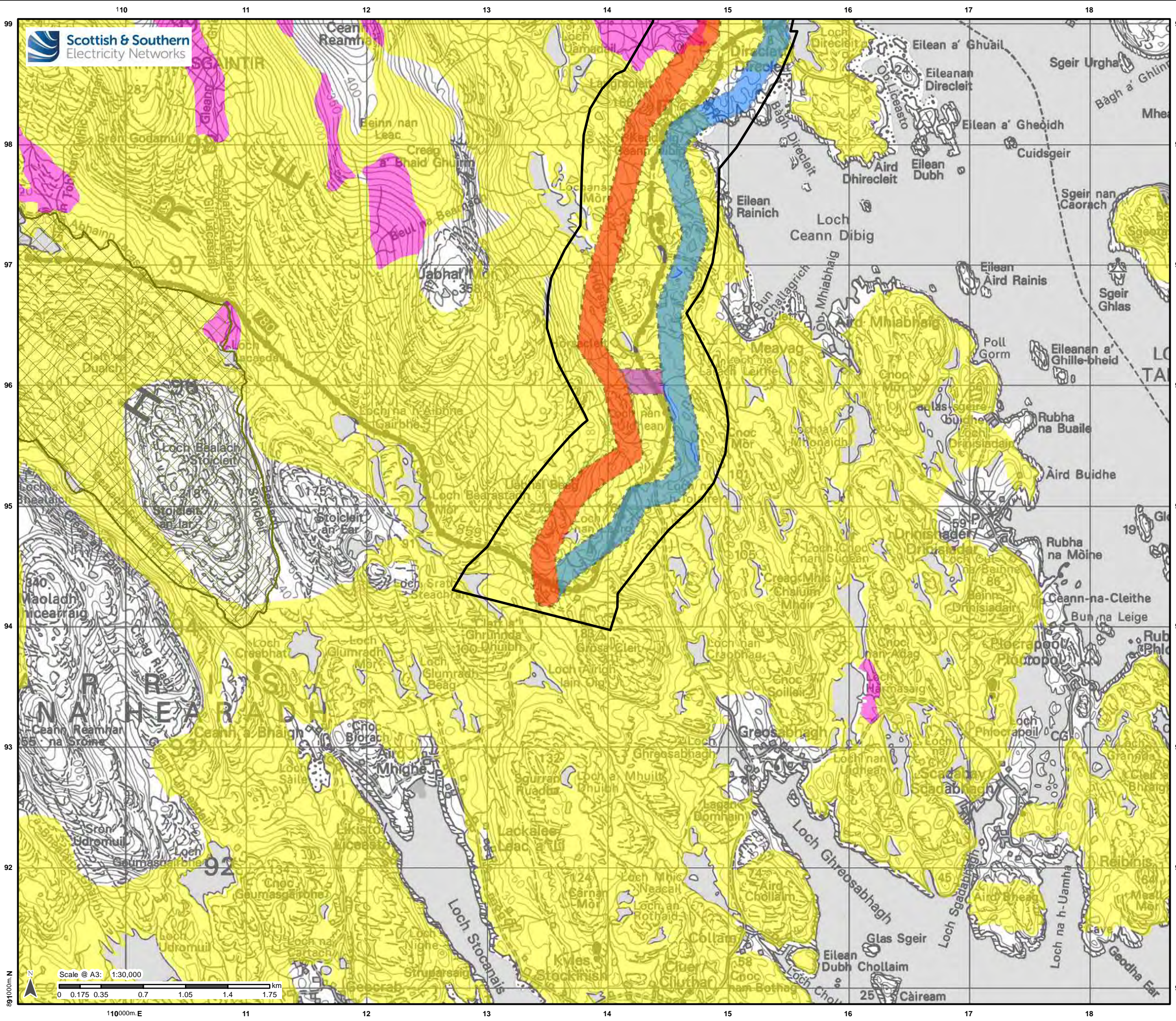
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Project No: LT0245
Project: 1620011469

Title:
Figure 5d: Peat

Drawn by: BM Date: 10/08/2021
Drawing: R162_11469_Fig5_Peat_B.mxd





Legend

- Proposed Corridor
- Route Options**
 - Route 4
 - Route Option 4a
 - Route Option 4b
- Carbon and Peatland 2016**
 - Class 1
 - Class 2

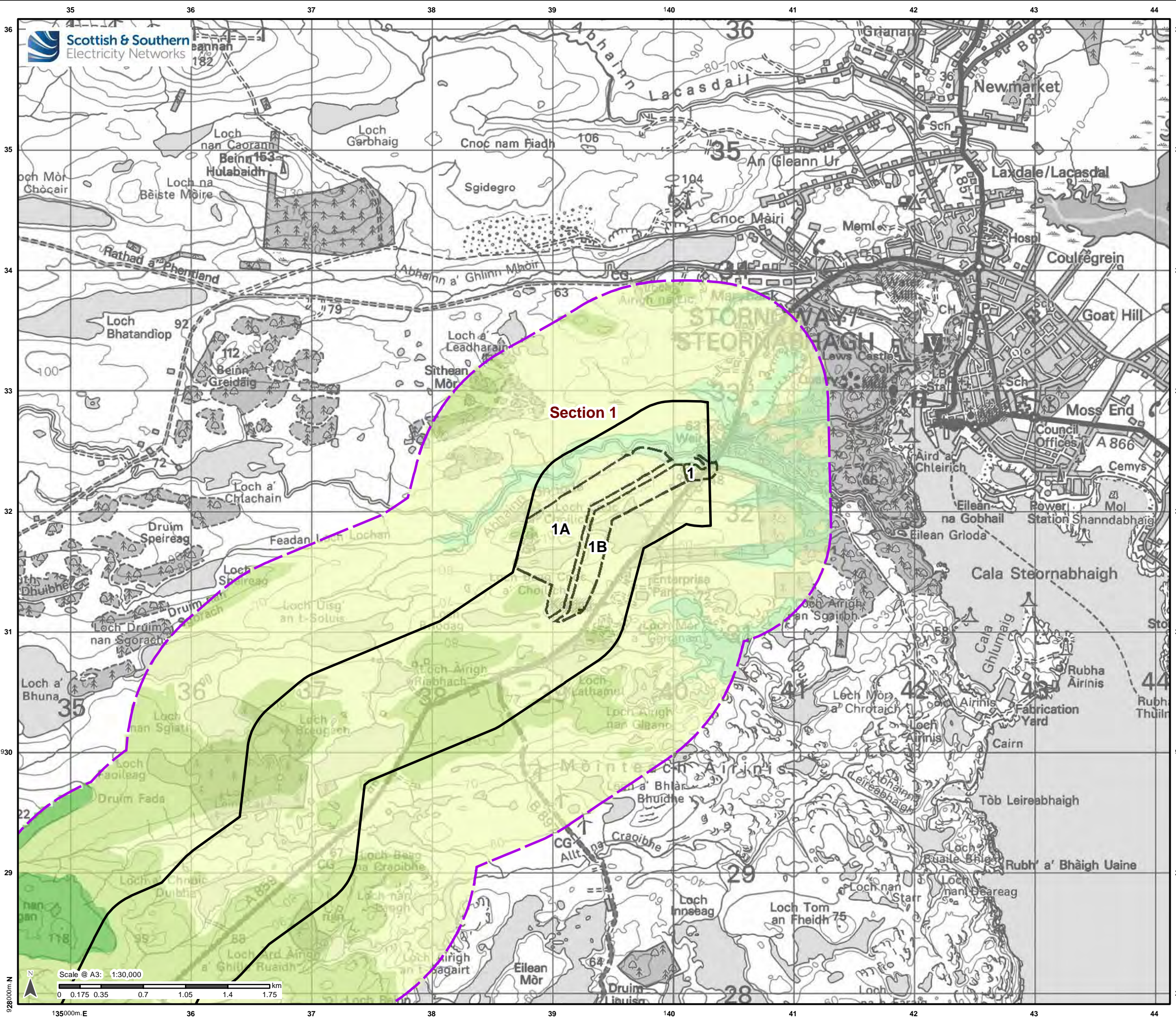
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Project No: LT0245
Project: 1620011469

Title: Figure 5e: Peat

Drawn by: BM Date: 10/08/2021

Drawing: R162_11469_Fig5_Peat_B.mxd

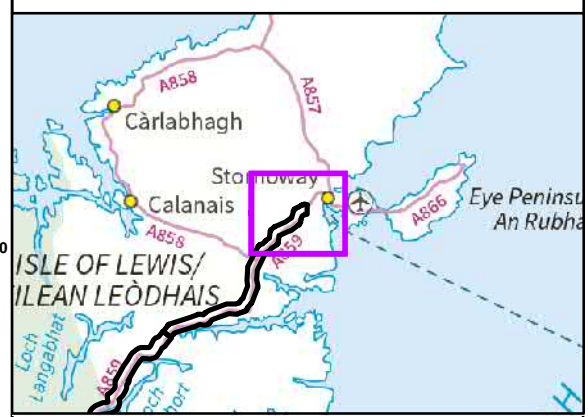


Legend

- Proposed Corridor
- Section Breaks
- Corridor 1km Buffer
- Route Options

Elevation (mAOD)

0	276 - 300
1 - 25	301 - 325
26 - 50	326 - 350
51 - 75	351 - 375
76 - 100	376 - 400
101 - 125	401 - 425
126 - 150	426 - 450
151 - 175	451 - 475
176 - 200	476 - 500
201 - 225	501 - 525
226 - 250	526 - 550
251 - 275	551 - 575



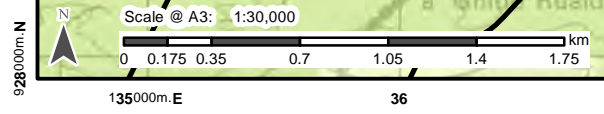
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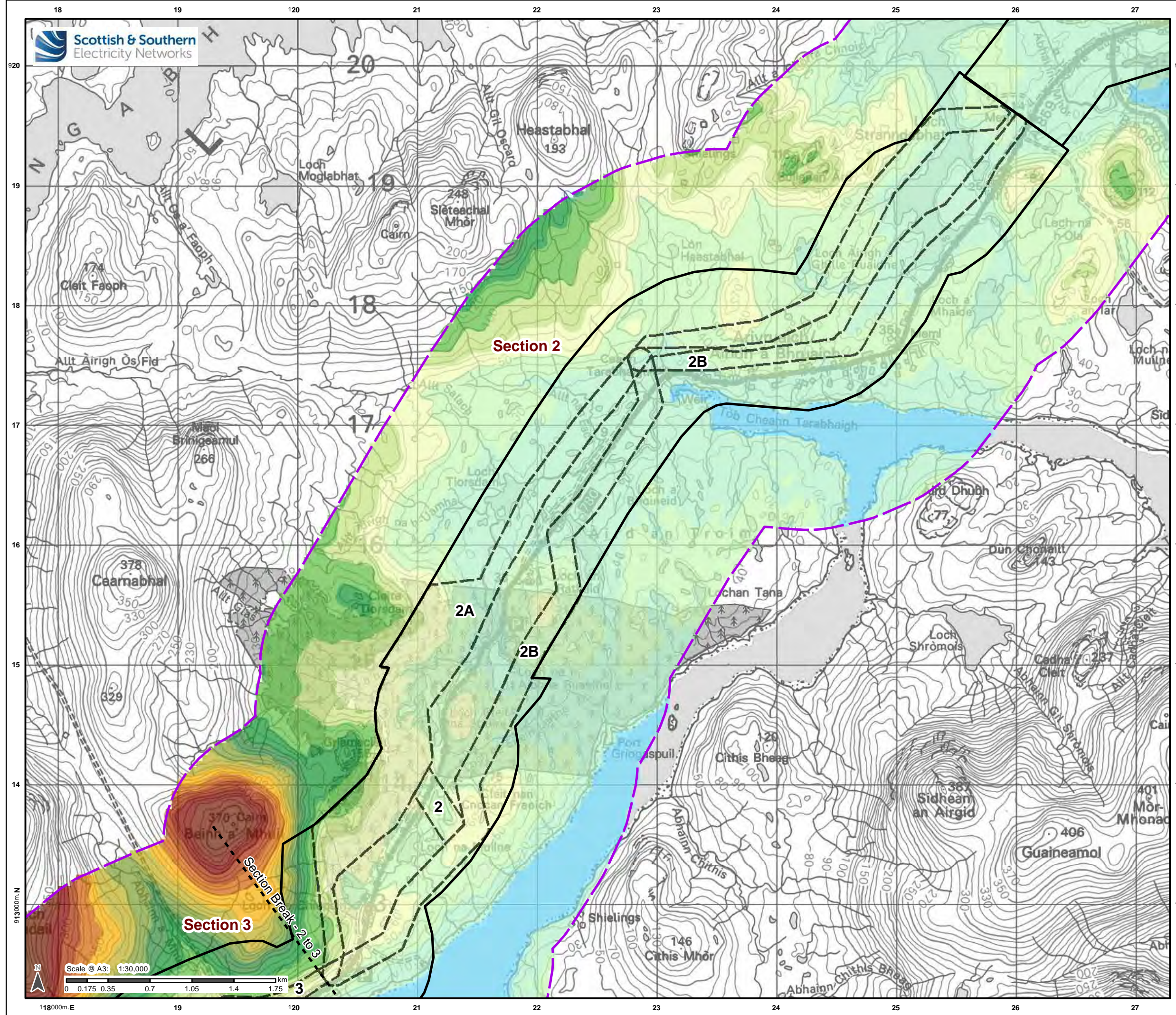
Project No: LT0245
Project: 1620011469

Title:
Figure 6a: Topography

Drawn by: CF Date: 10/08/2021

Drawing: R162_11469_Fig6_Topography_B.mxd





Legend

- Proposed Corridor
- Section Breaks
- Corridor 1km Buffer
- Route Options

Elevation (mAOD)



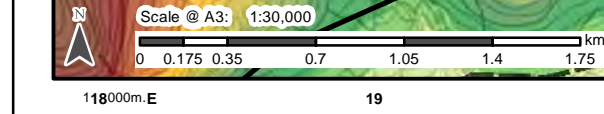
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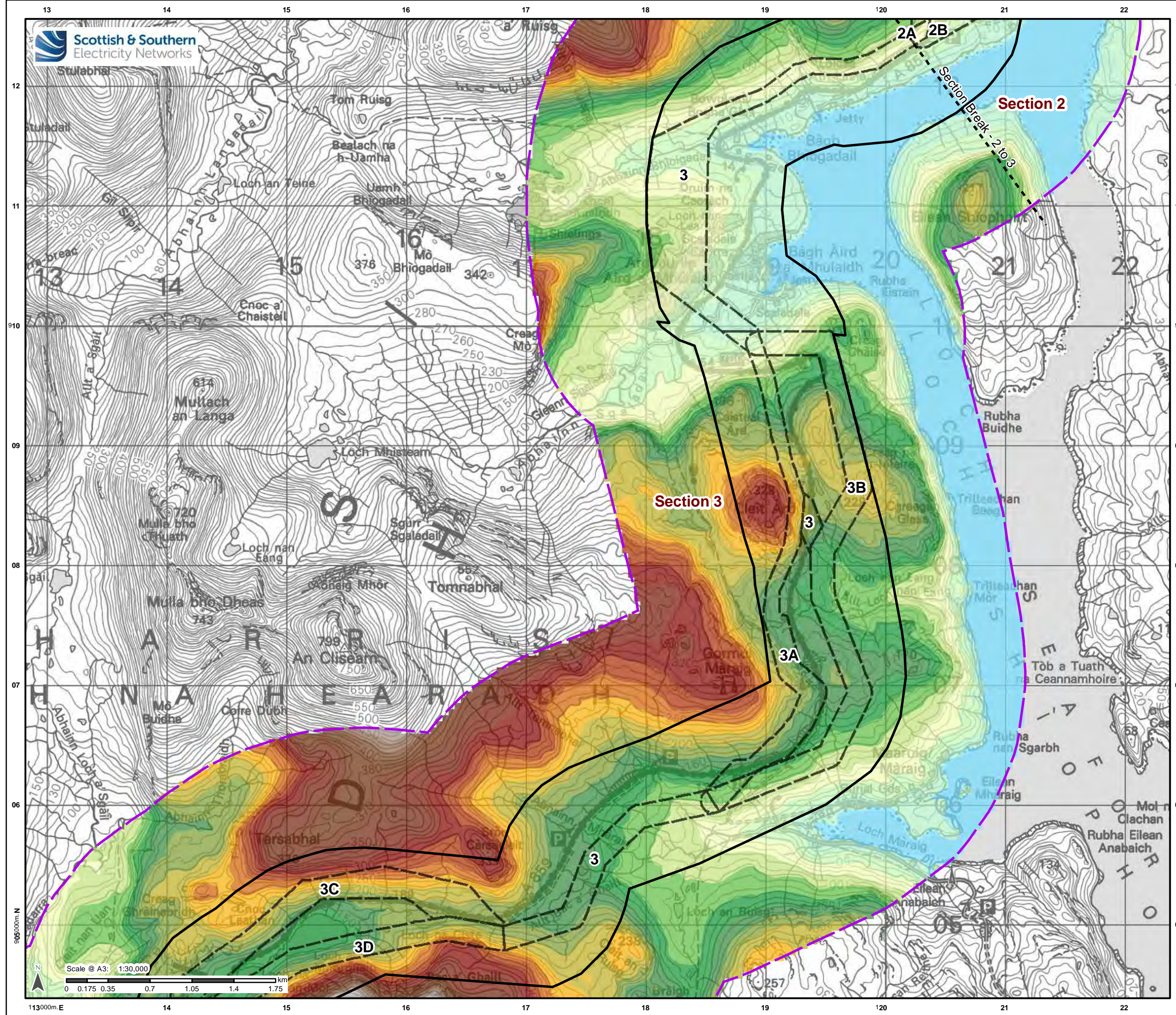
Project No: LT0245
Project: 1620011469

Title:
Figure 6b: Topography

Drawn by: CF Date: 10/08/2021

Drawing: R162_11469_Fig6_Topography_B.mxd



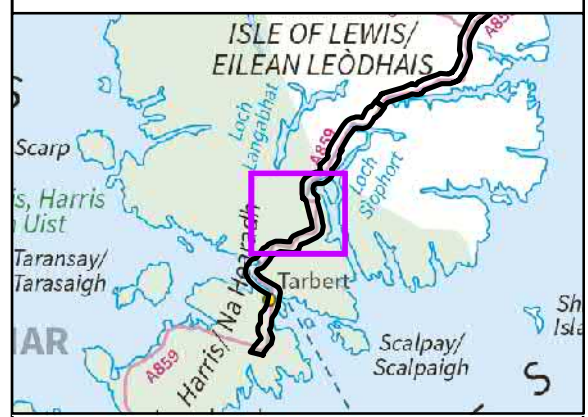


Legend

- Proposed Corridor
- Section Breaks
- Corridor 1km Buffer
- Route Options

Elevation (mAOD)

0	276 - 300
1 - 25	301 - 325
26 - 50	326 - 350
51 - 75	351 - 375
76 - 100	376 - 400
101 - 125	401 - 425
126 - 150	426 - 450
151 - 175	451 - 475
176 - 200	476 - 500
201 - 225	501 - 525
226 - 250	526 - 550
251 - 275	551 - 575



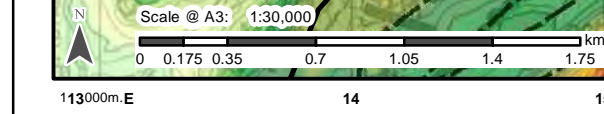
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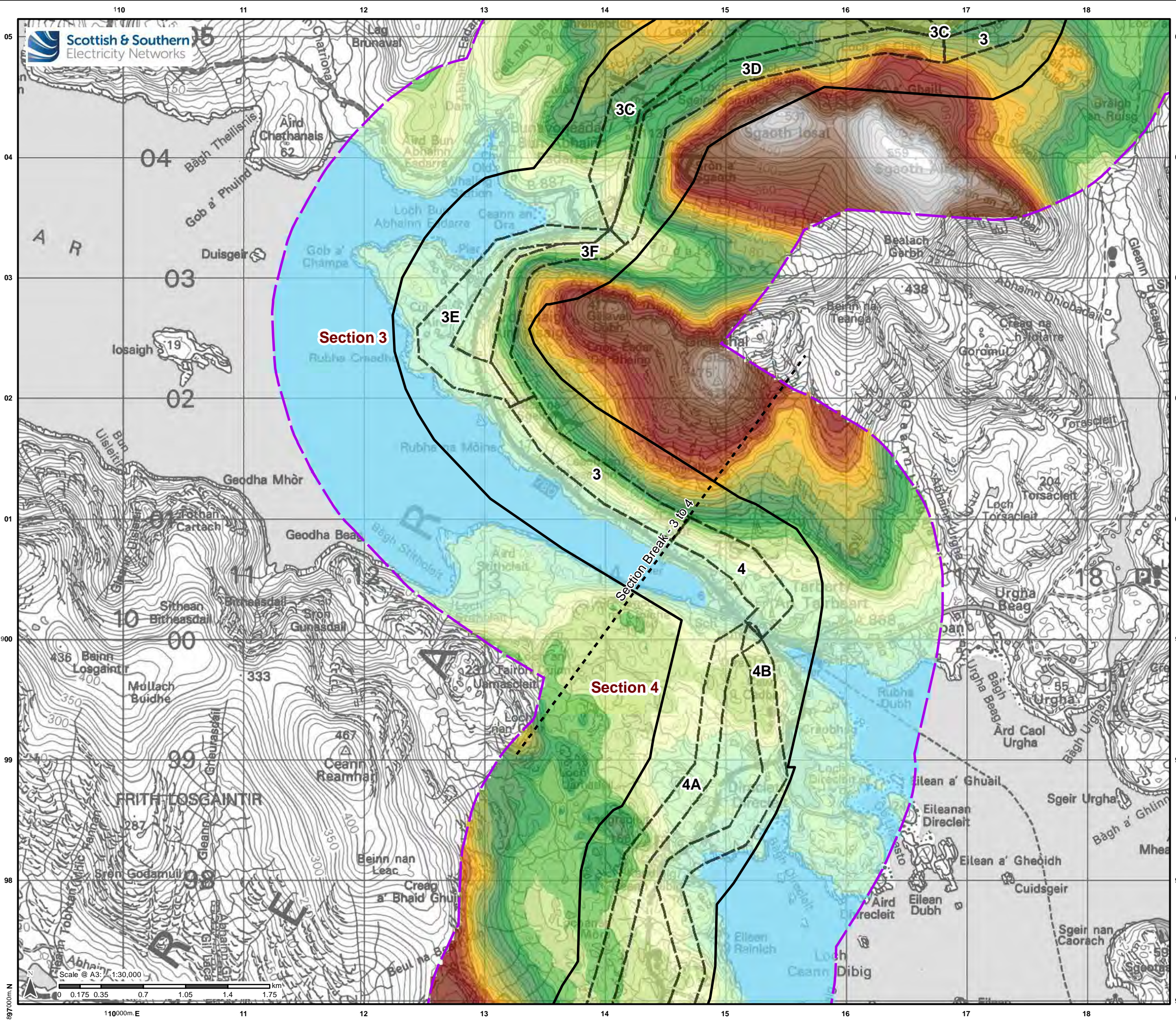
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Title:
Figure 6c: Topography

Drawn by: CF Date: 10/08/2021

Drawing: R162_11469_Fig6_Topography_B.mxd



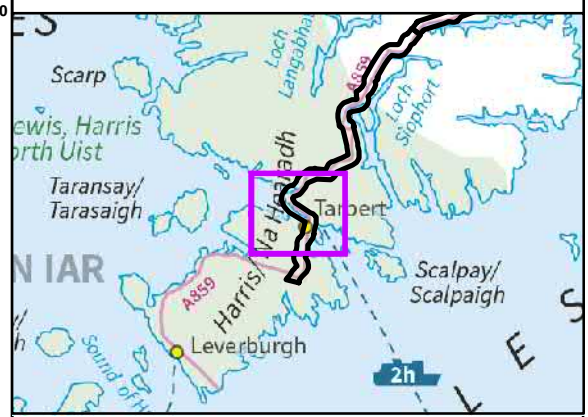


Legend

- Proposed Corridor
- Section Breaks
- Corridor 1km Buffer
- Route Options

Elevation (mAOD)

	0		276 - 300
	1 - 25		301 - 325
	26 - 50		326 - 350
	51 - 75		351 - 375
	76 - 100		376 - 400
	101 - 125		401 - 425
	126 - 150		426 - 450
	151 - 175		451 - 475
	176 - 200		476 - 500
	201 - 225		501 - 525
	226 - 250		526 - 550
	251 - 275		551 - 575



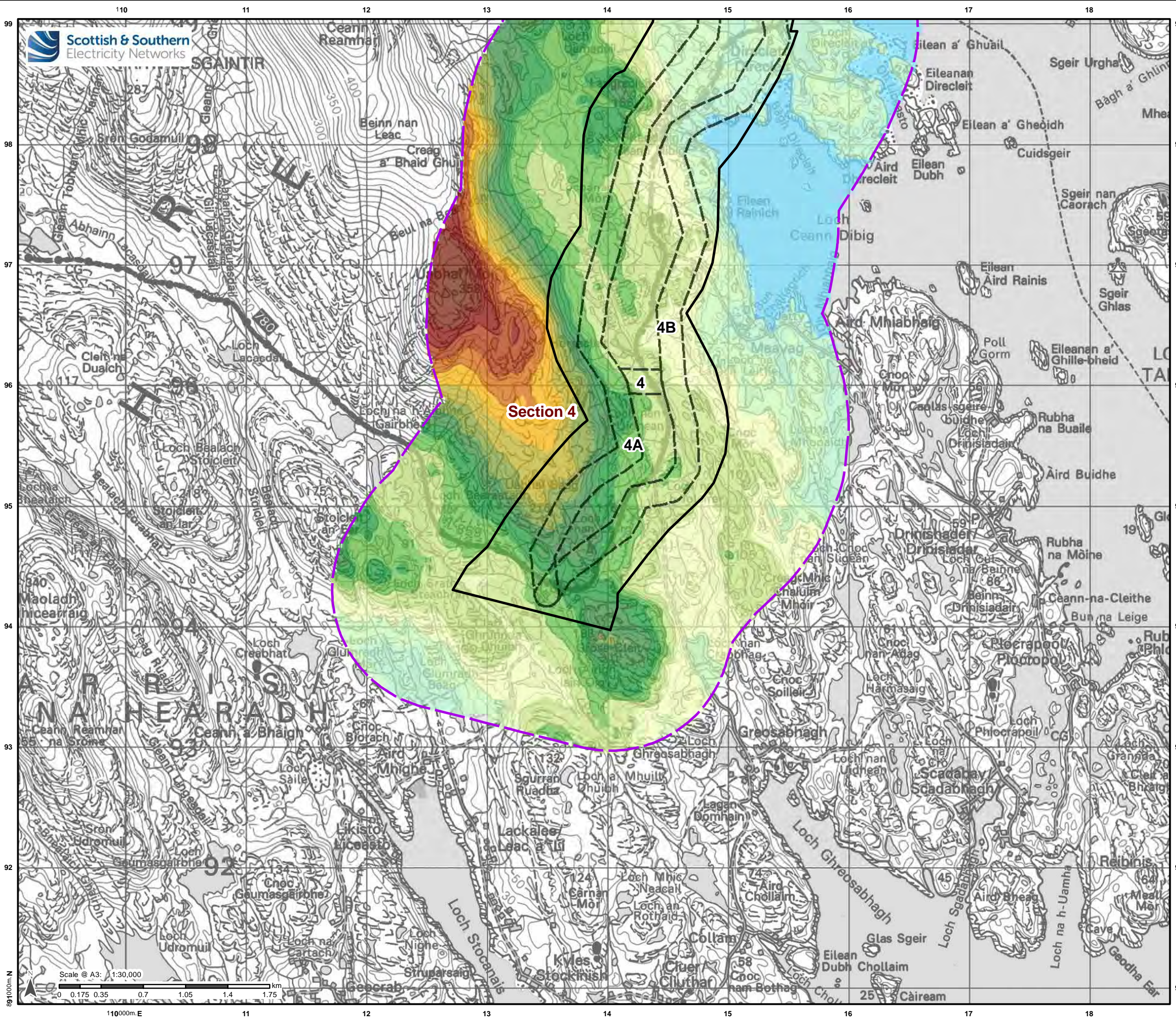
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Project No: LT0245
Project: 1620011469

Title:
Figure 6d: Topography

Drawn by: CF Date: 10/08/2021

Drawing: R162_11469_Fig6_Topography_B.mxd

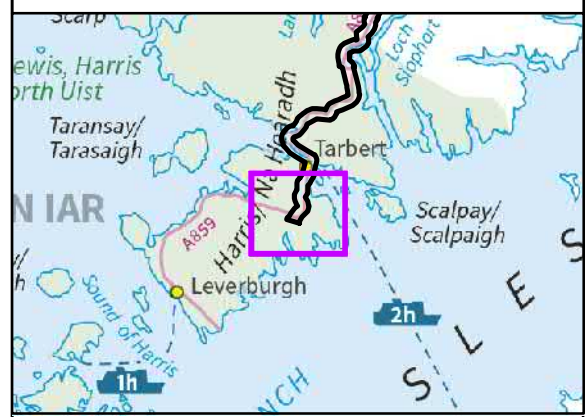


Legend

- Proposed Corridor
- Section Breaks
- Corridor 1km Buffer
- Route Options

Elevation (mAOD)

	0		276 - 300
	1 - 25		301 - 325
	26 - 50		326 - 350
	51 - 75		351 - 375
	76 - 100		376 - 400
	101 - 125		401 - 425
	126 - 150		426 - 450
	151 - 175		451 - 475
	176 - 200		476 - 500
	201 - 225		501 - 525
	226 - 250		526 - 550
	251 - 275		551 - 575



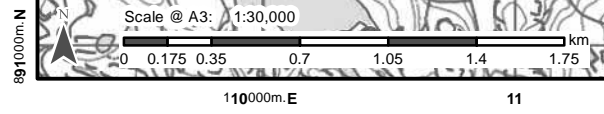
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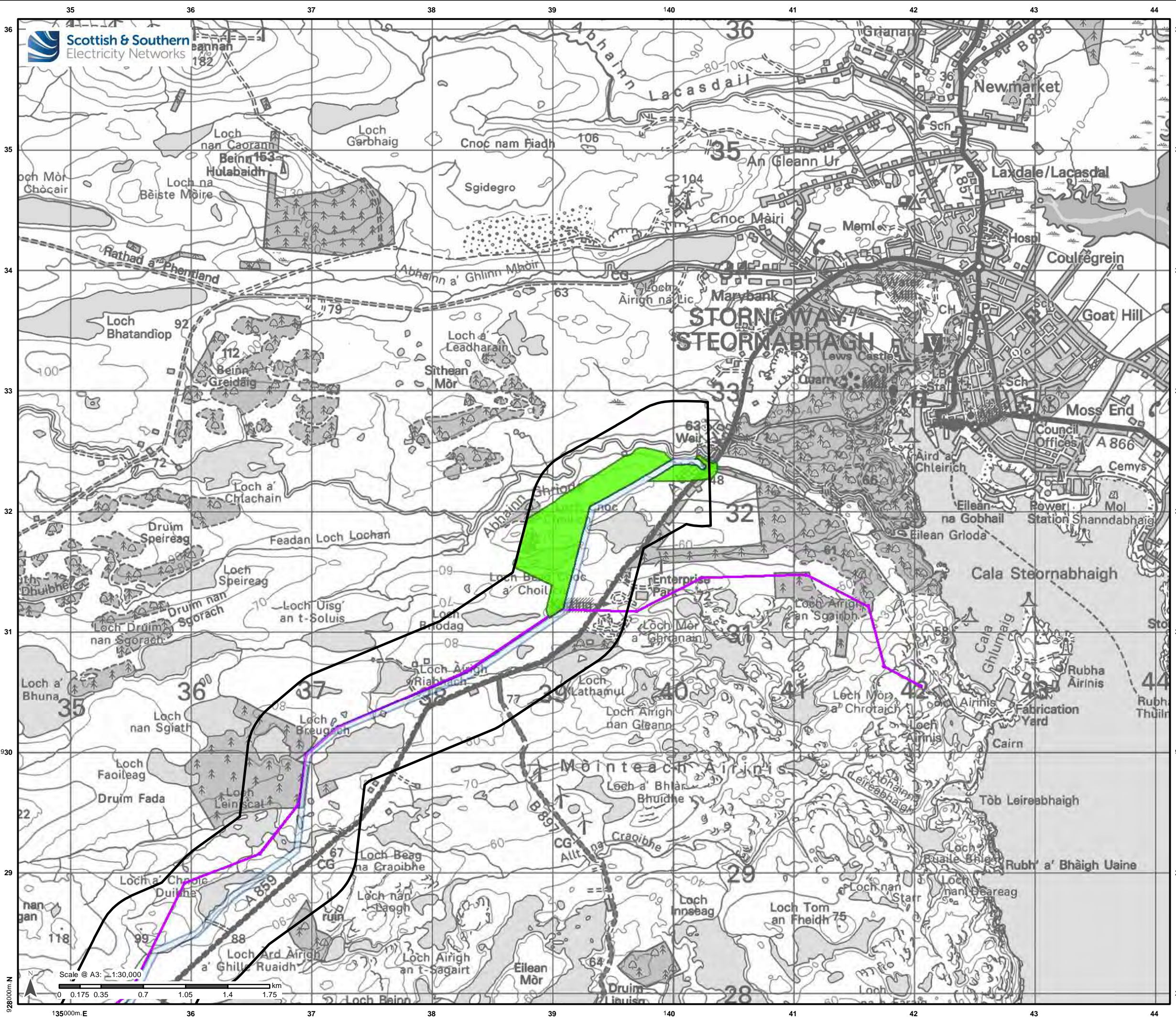
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Title:
Figure 6e: Topography

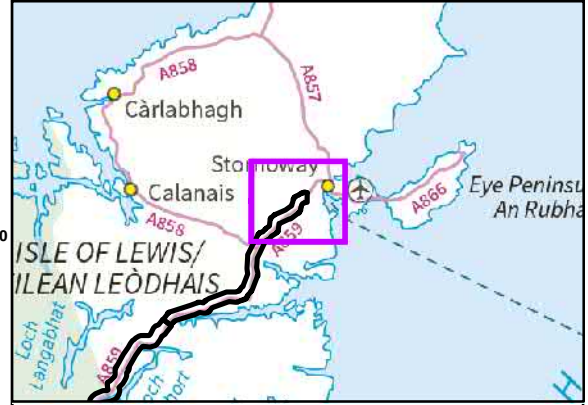
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Date: 10/08/2021

Drawing: R162_11469_Fig6_Topography_B.mxd





- Legend**
- Proposed Corridor
 - Existing Network 25 m Buffer
 - Preferred Route
 - LT15 Alignment



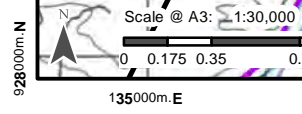
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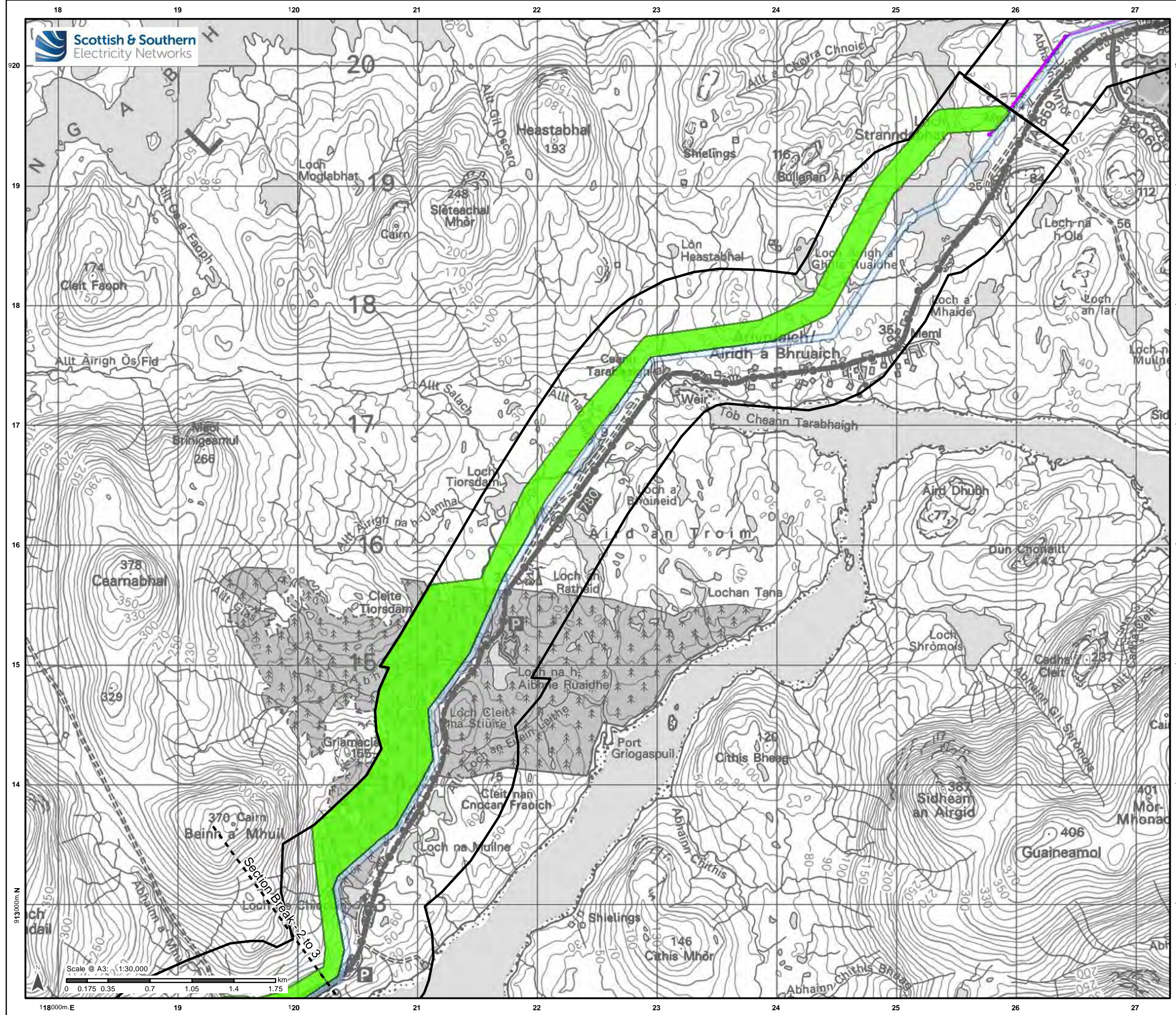
Project No: LT0245
Project: 1620011469

Title:
Figure 7a: Preferred Route

Drawn by: CO Date: 10/08/2021

Drawing: R162_11469_Fig7_PREFERRED Route_C.mxd





- Legend**
- Proposed Corridor
 - Existing Network 25 m Buffer
 - Preferred Route
 - LT15 Alignment



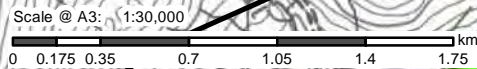
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Project No: LT0245
Project: 1620011469

Title:
Figure 7b: Preferred Route

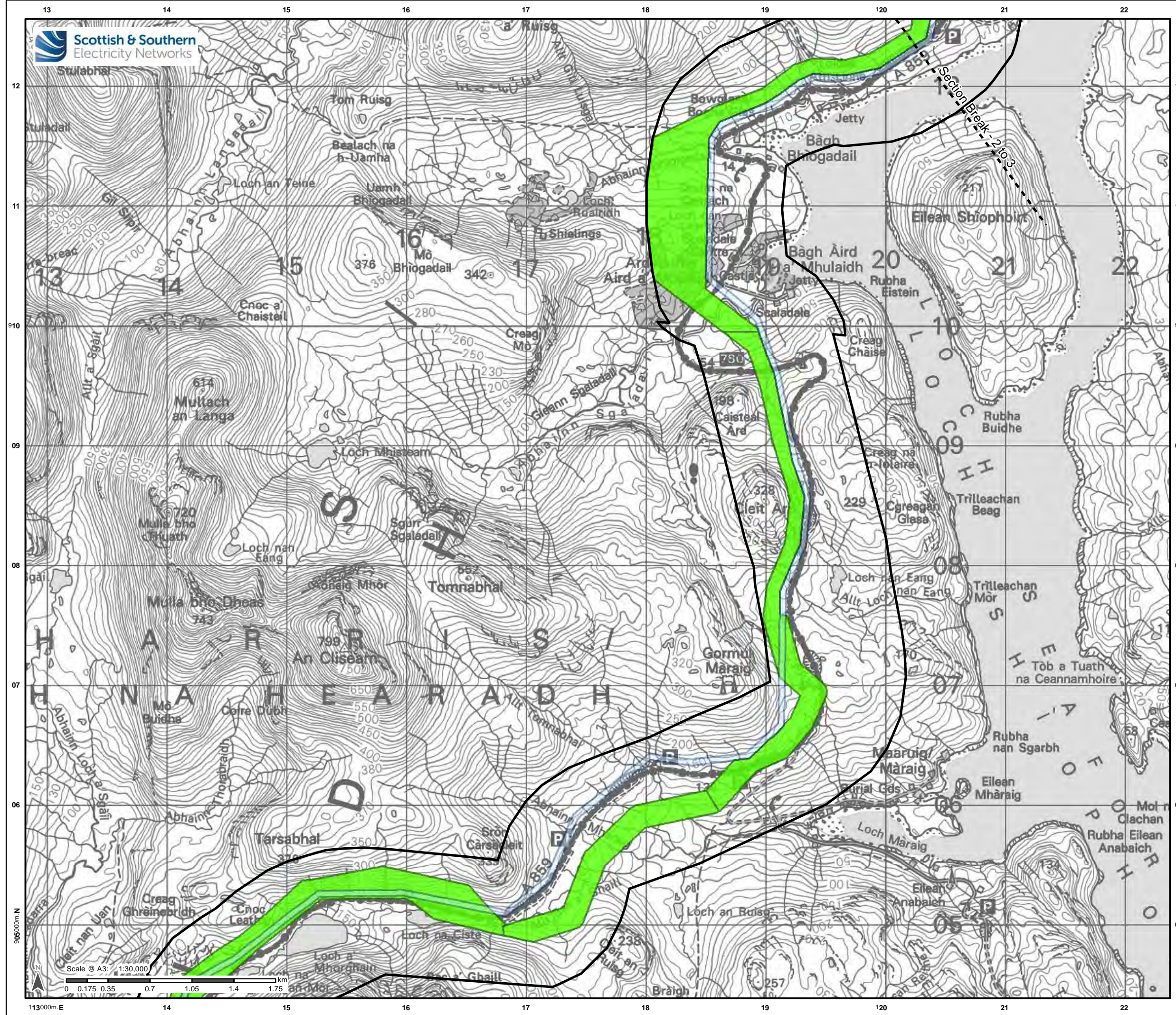
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

Drawing: R162_11469_Fig7_PREFERRED Route_C.mxd

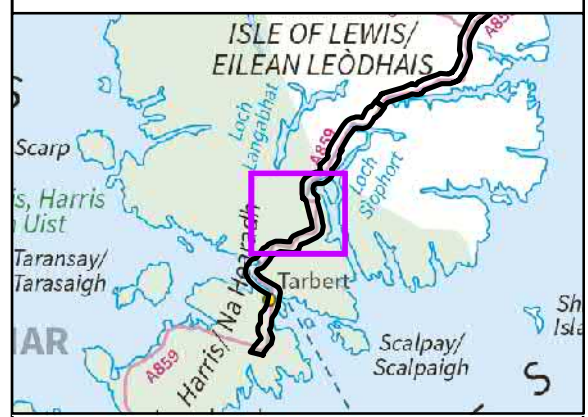


913000m N

118000m E 19 20 21 22 23 24 25 26 27



- Legend**
-  Proposed Corridor
 -  Existing Network 25 m Buffer
 -  Preferred Route



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Project No: LT0245
Project: 1620011469

Title:
Figure 7c: Preferred Route




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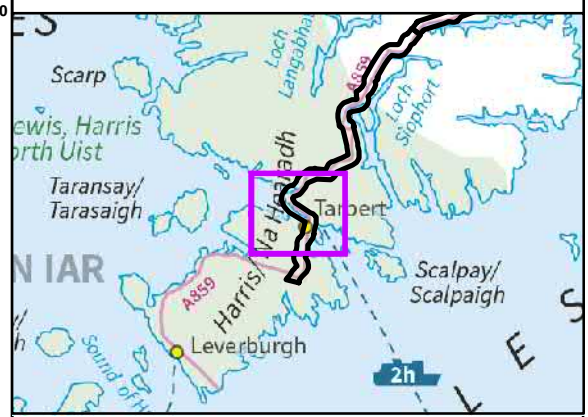
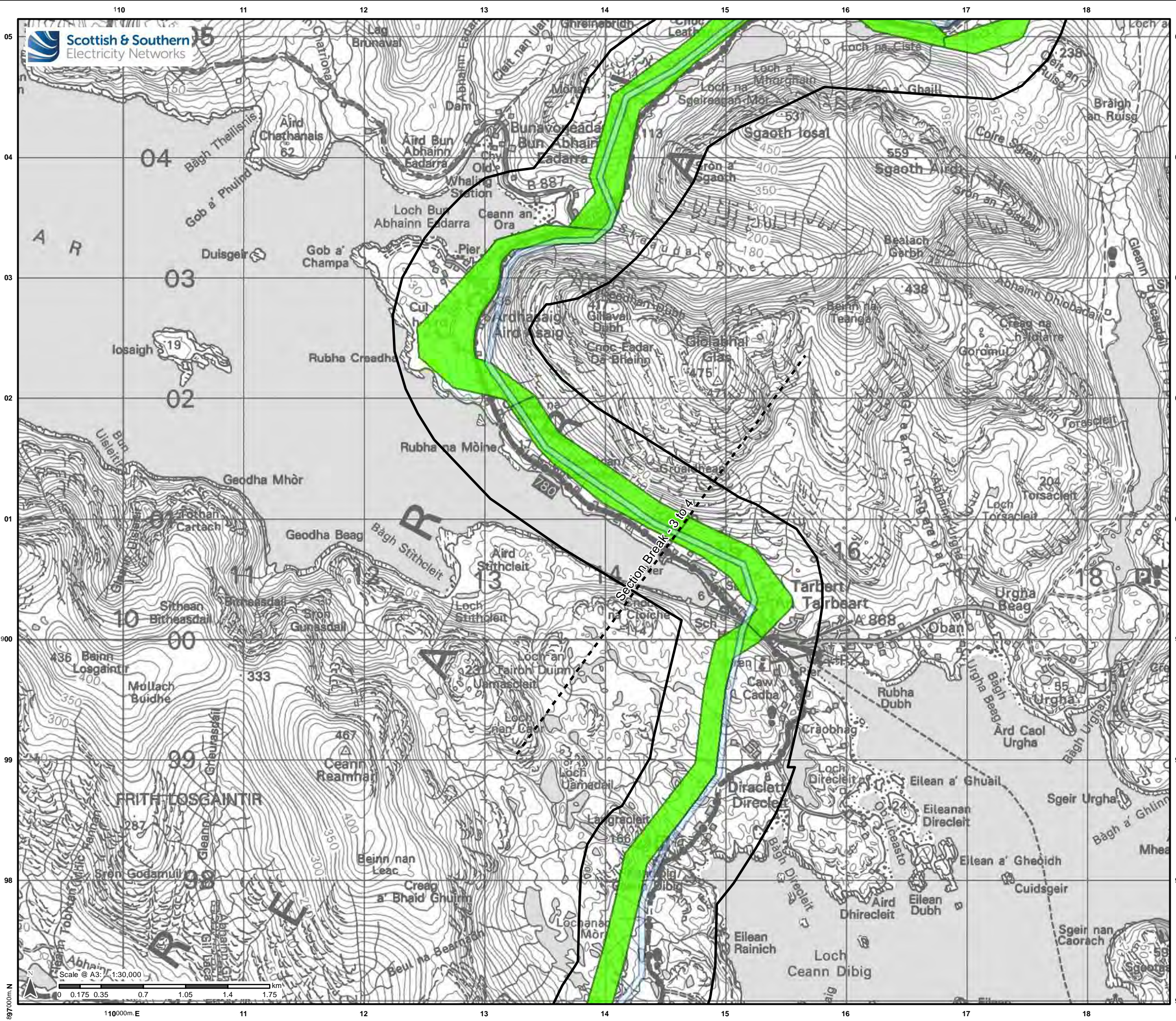
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905000m.N

Scale @ A3: 1:30,000
0 0.175 0.35 0.7 1.05 1.4 1.75 km

Legend

-  Proposed Corridor
-  Existing Network 25 m Buffer
-  Preferred Route



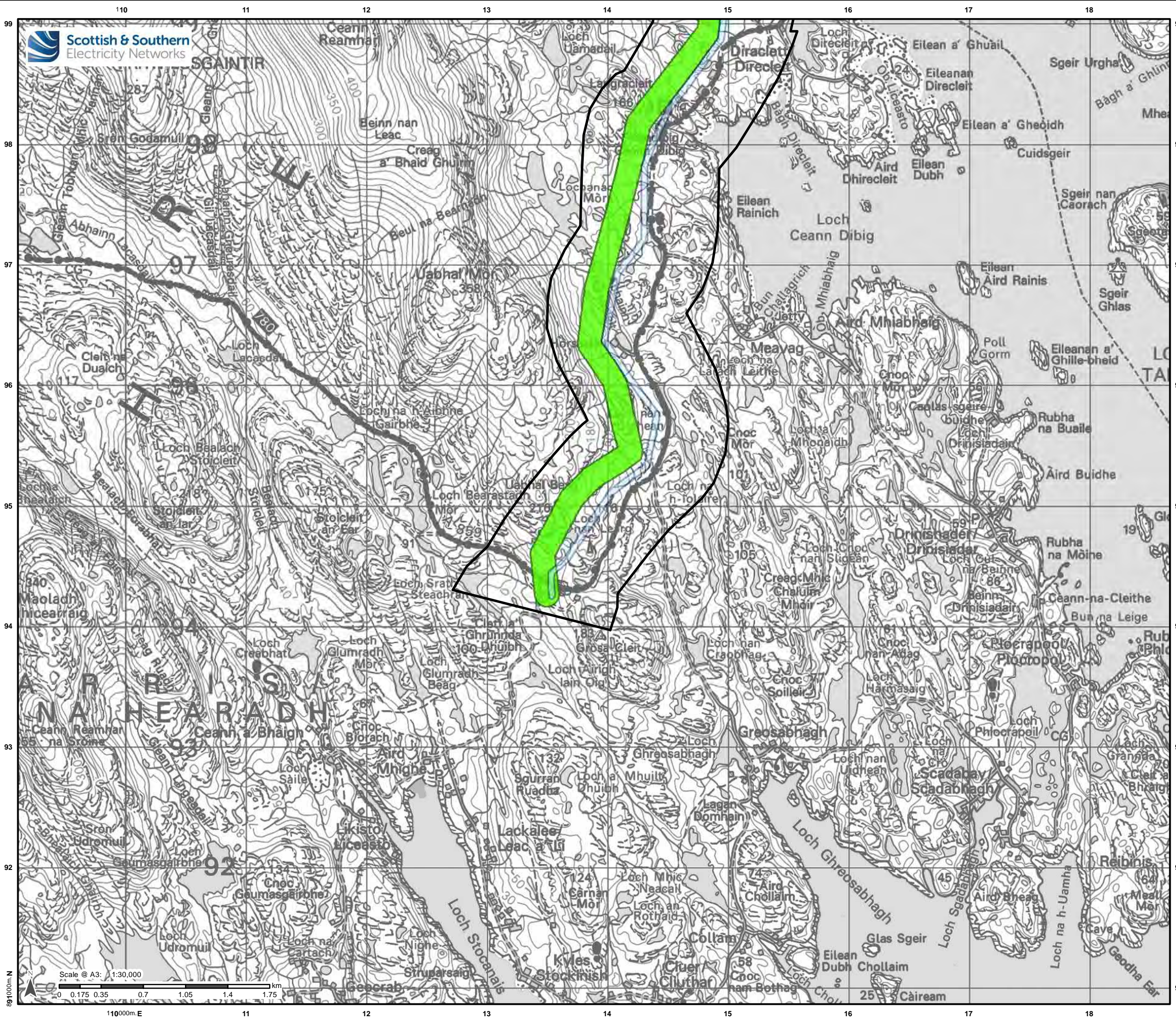
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Project No: LT0245
Project: 1620011469




Title:
Figure 7d: Preferred Route

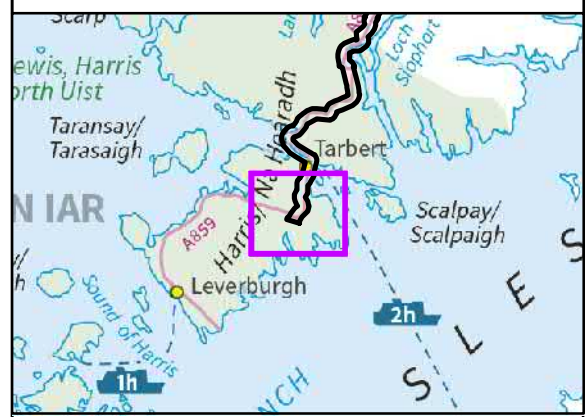
Drawn by: CO Date: 10/08/2021

Drawing: R162_11469_Fig7_PREFERRED Route_C.mxd



Legend

-  Proposed Corridor
-  Existing Network 25 m Buffer
-  Preferred Route



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Project No: LT0245
Project: 1620011469

Title:
Figure 7e: Preferred Route

Drawn by: CO Date: 10/08/2021

Drawing: R162_11469_Fig7_PREFERRED Route_C.mxd



Scottish & Southern
Electricity Networks



Virtual
Event

Harris to Stornoway Overhead Line Virtual Consultation

SSEN Transmission invites you to come and share your views with us.

Scottish and Southern Electricity Networks (SSEN) Transmission are holding two further virtual consultation exhibitions following on from the events held in June 2021. The project team has reviewed the feedback we received from statutory and non-statutory consultees and is now moving into the alignment stage of our proposals 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.

The virtual consultation events have been designed to be almost as interactive as face to face events, allowing for the presentation of key project information and plans, as well as providing an opportunity to ask questions about the project to team members. Visitors will be able to engage directly with the project team, via a live chat function, where they can ask any questions they might have about the project and share their feedback on the current alignment proposals.

To find out how you can join the interactive virtual consultation visit the project website:

www.ssen-transmission.co.uk/projects/harris-stornoway-132kv-ohl/

If you have any questions, please do not hesitate to contact our Community Liaison Manager:



Lisa Marchi
Community Liaison Manager,
10 Henderson Road, Inverness, IV1 1SN
(Return address)

The virtual consultation events will be taking place on:

15 September 2021
14:00-16:00
&
16 September 2021
18:00-19:30

Tel: 01463 728 072 Mob: +44 (0) 7825 015 507
Email: lisa.marchi@sse.com

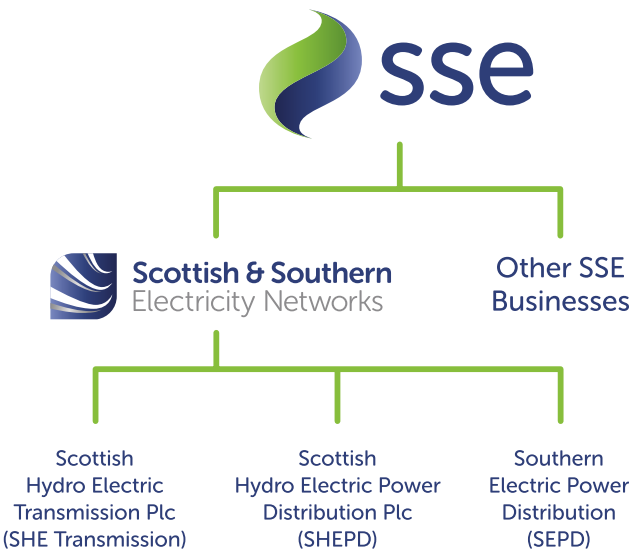


@ssencommunity



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 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.

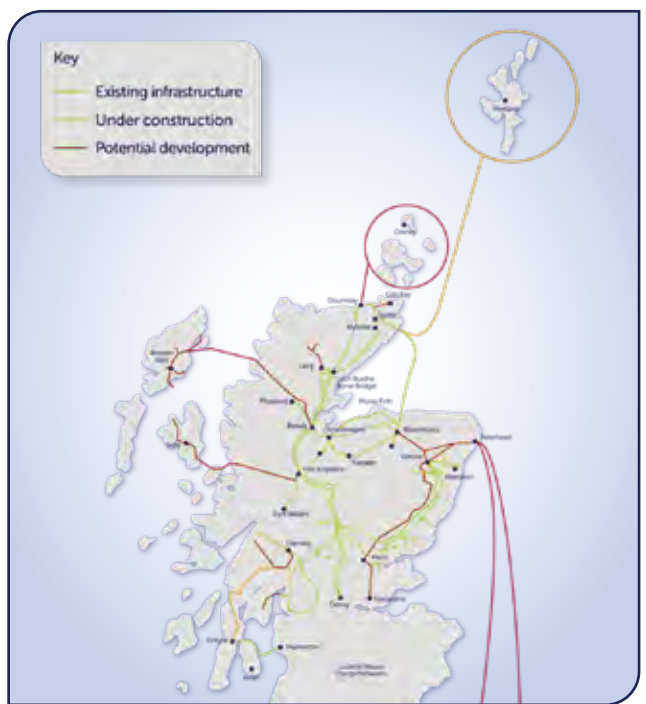
The Electricity Distribution network is connected into the Transmission network but the voltage is lowered by transformers at electricity substations, and the power is then distributed to homes and businesses through overhead lines or underground cables.

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.

Overview of transmission projects



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.



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.

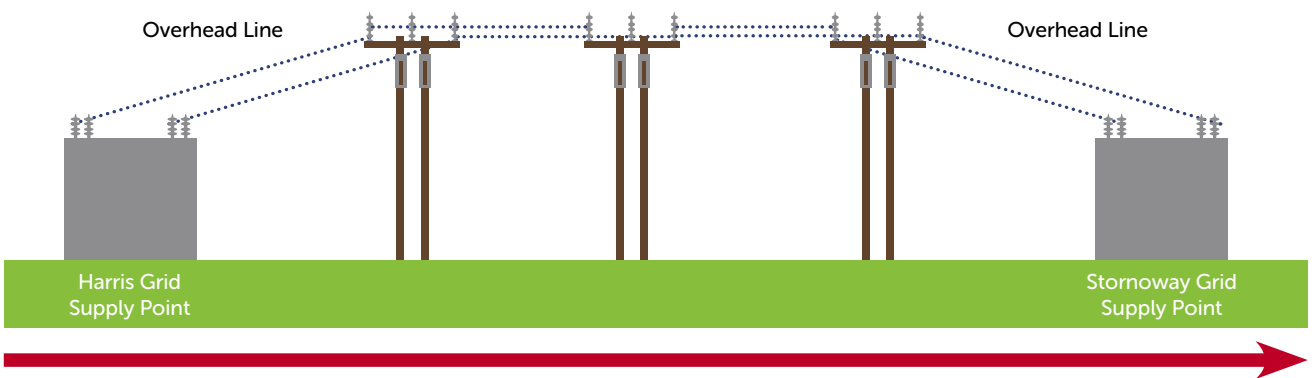
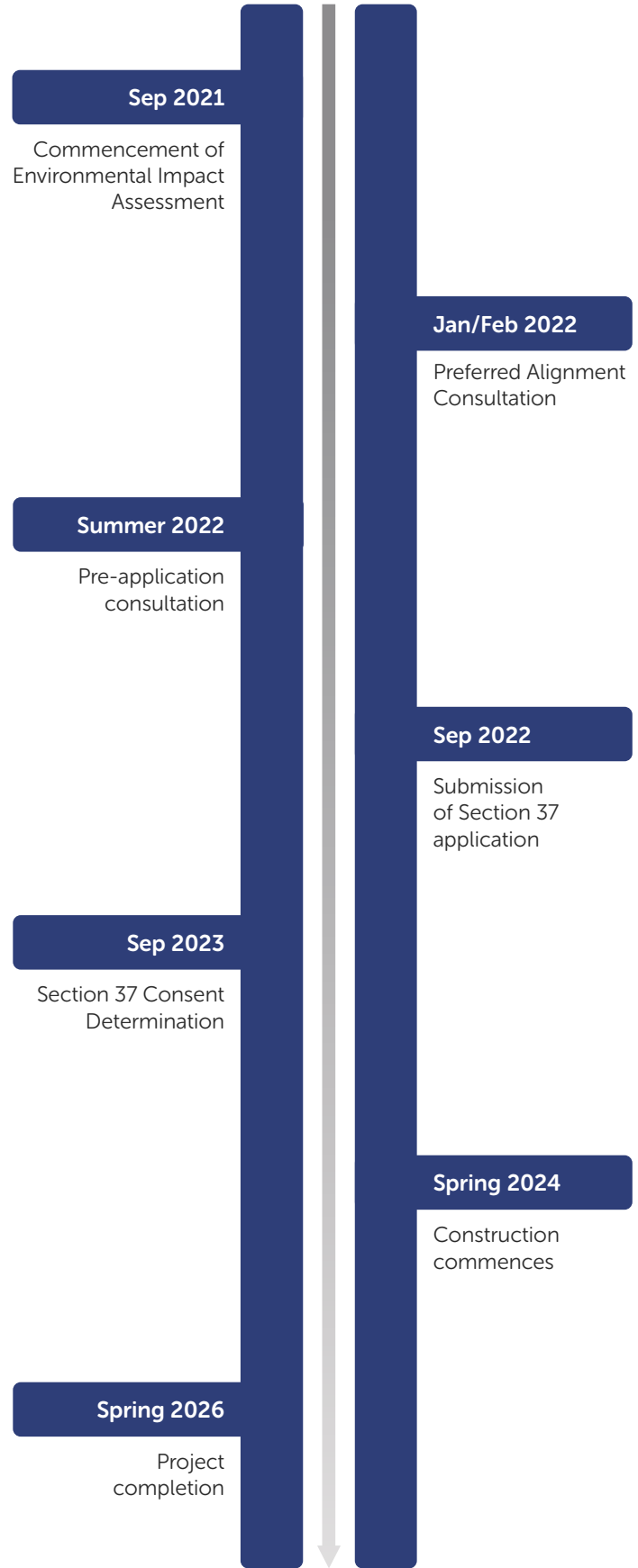
Therefore we are now proposing to upgrade the network in the area, to improve network reliability and main security of supply of electricity by replacing the existing line and constructing a new overhead line.

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
- Dismantling of existing wood pole circuit
- Works on existing Distribution lines in proximity to new line

Project timeline





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 Route

Selection of the Preferred Route

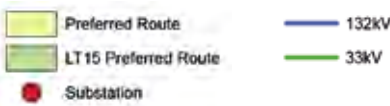
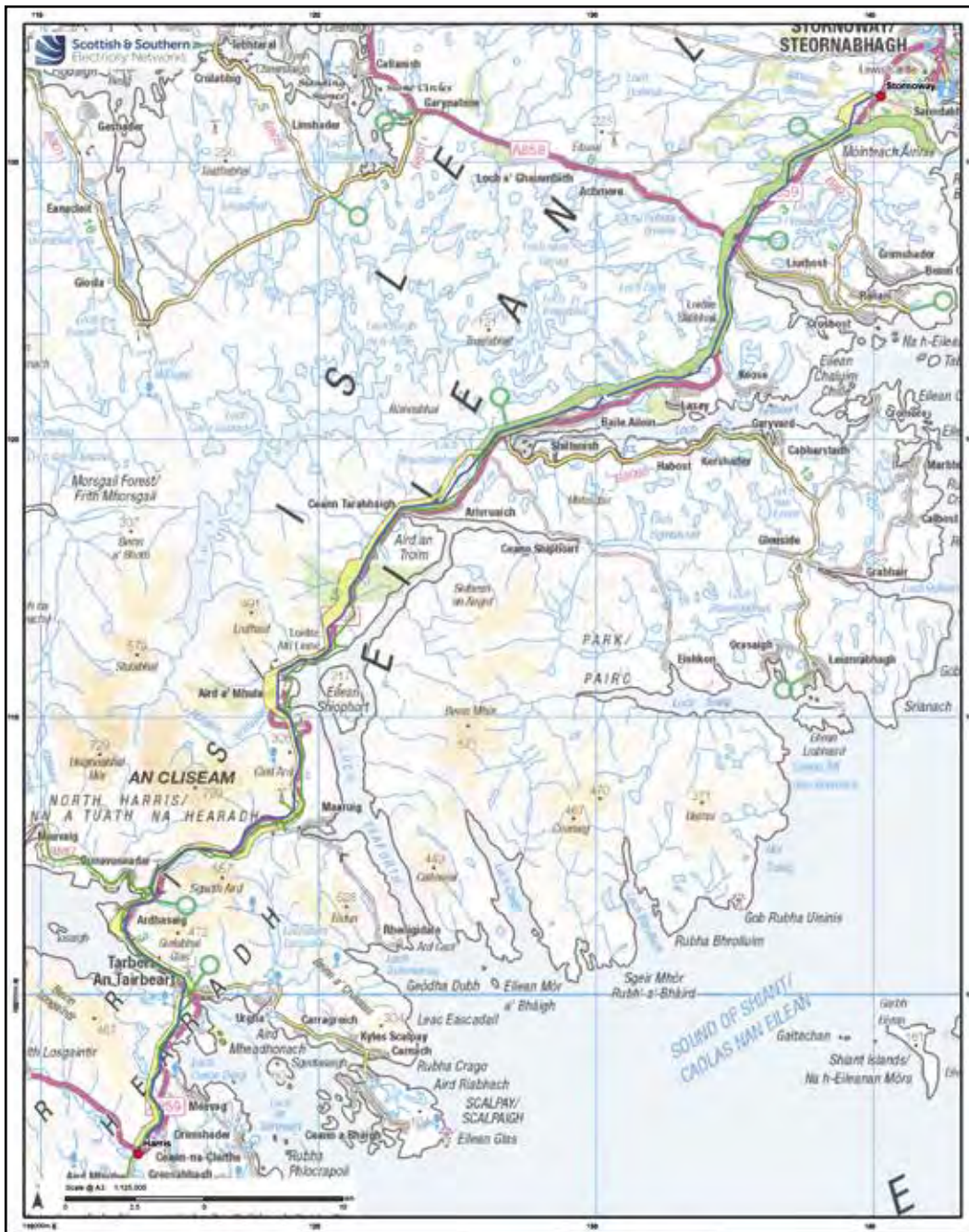
There are two connection points which have been identified as part of this project. The first one is at Harris grid supply substation which is located just south of Tarbert, Harris. The second is at Stornoway substation on Lewis.

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.

One viable route has been identified for the whole connection based on the corridor previously consulted on. Alignment will then be undertaken within this route. The route 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.

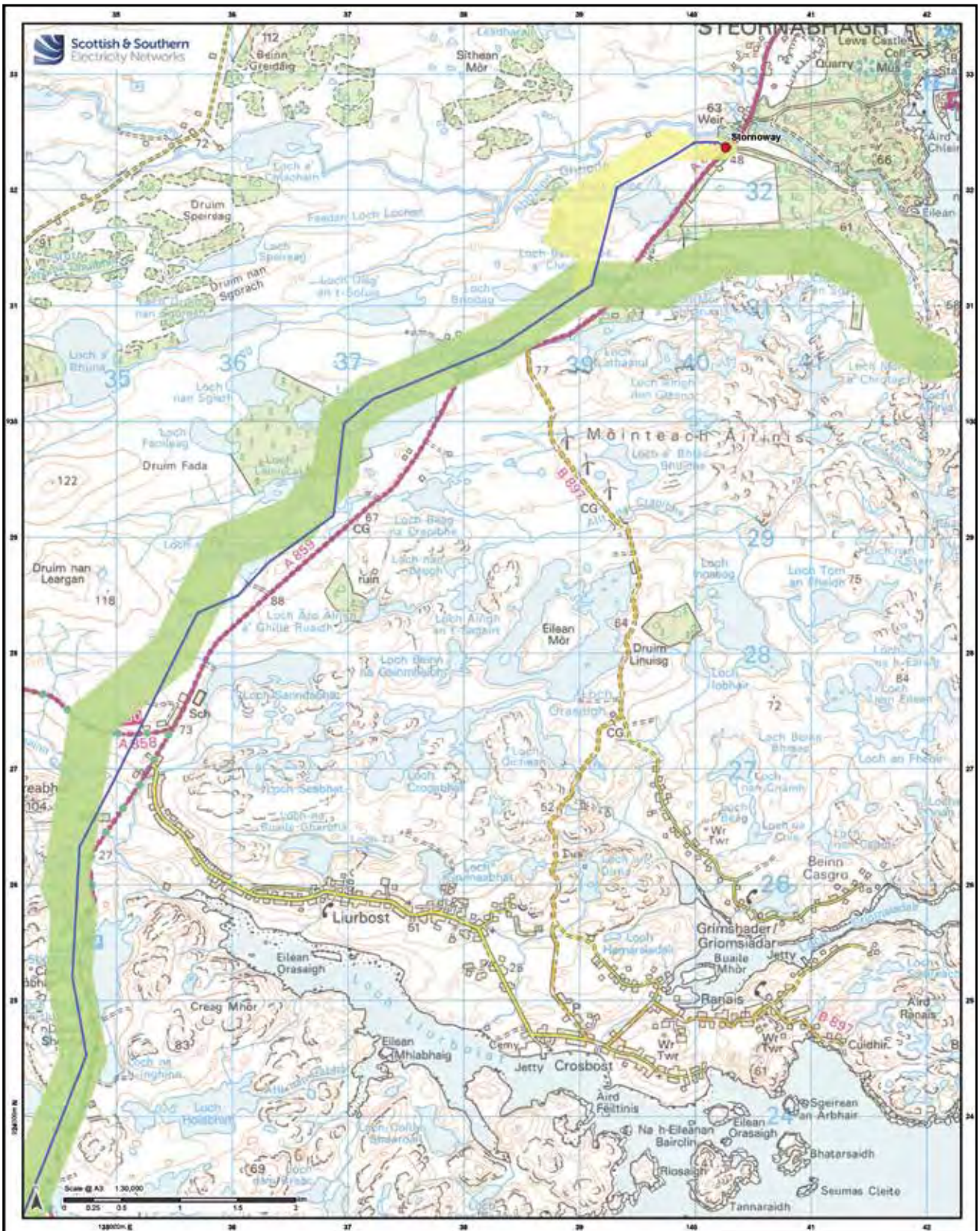
All consultation documentation is available from our project website:
www.ssen-transmission.co.uk/projects/harris-stornoway-132kv-ohl





Preferred Route

Preferred Route 1 of 6



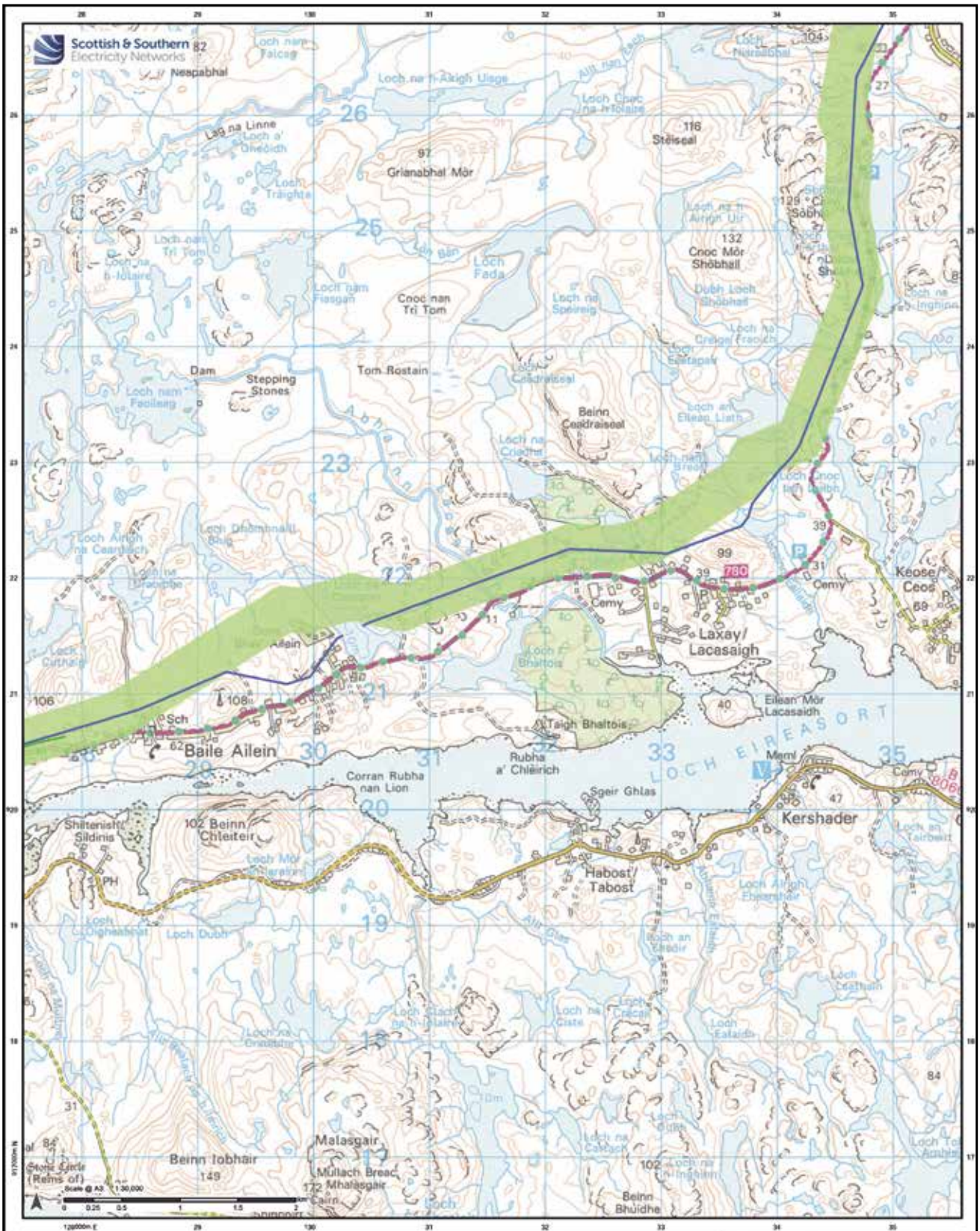
- Preferred Route
- LT15 Preferred Route
- Substation
- 132kV
- 33kV





Preferred Route

Preferred Route 2 of 6



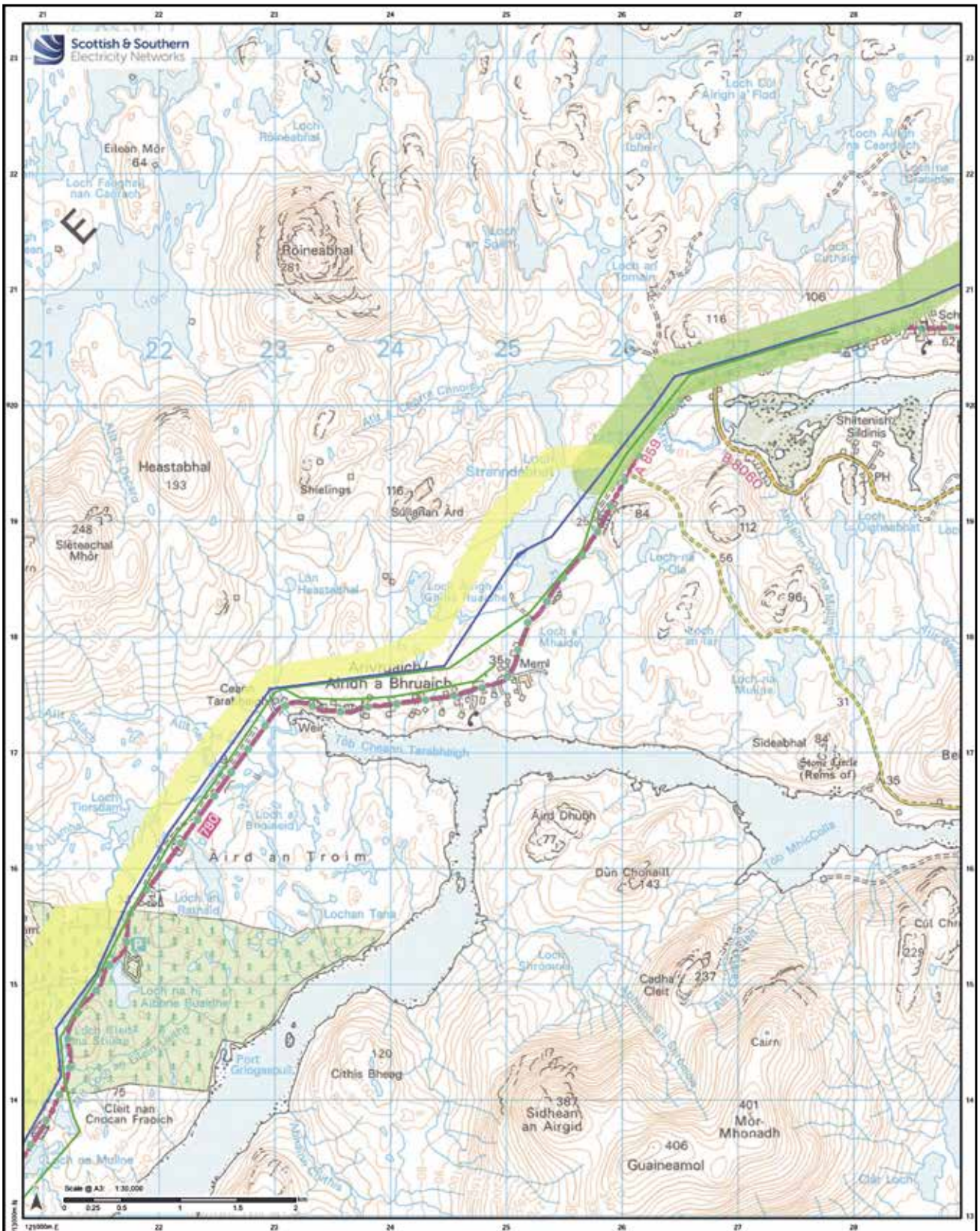
- LT15 Preferred Route
- 132kV
- 33kV





Preferred Route

Preferred Route 3 of 6



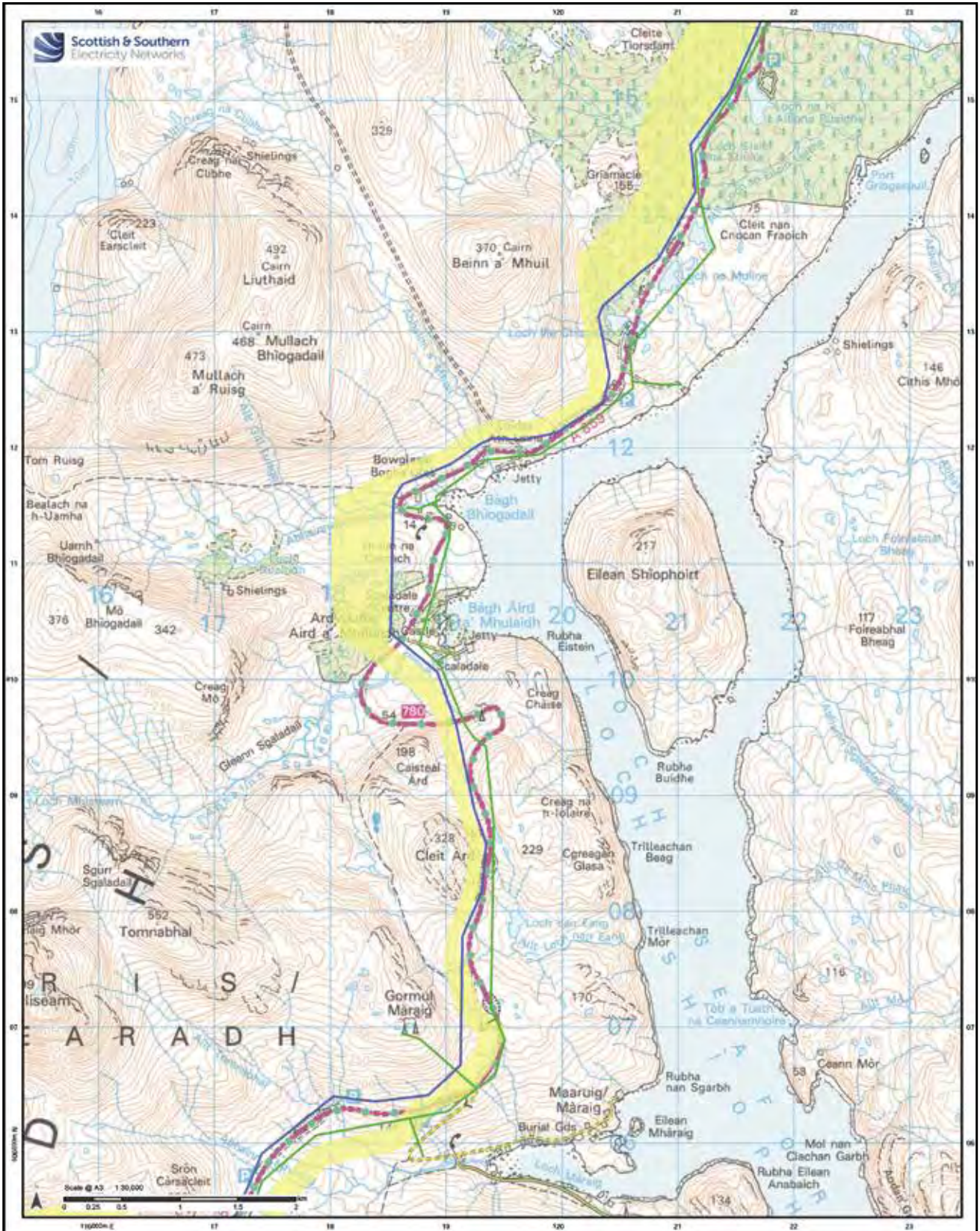
- Preferred Route
- LT15 Preferred Route
- 132kV
- 33kV





Preferred Route

Preferred Route 4 of 6



- Preferred Route
- 132kV
- 33kV



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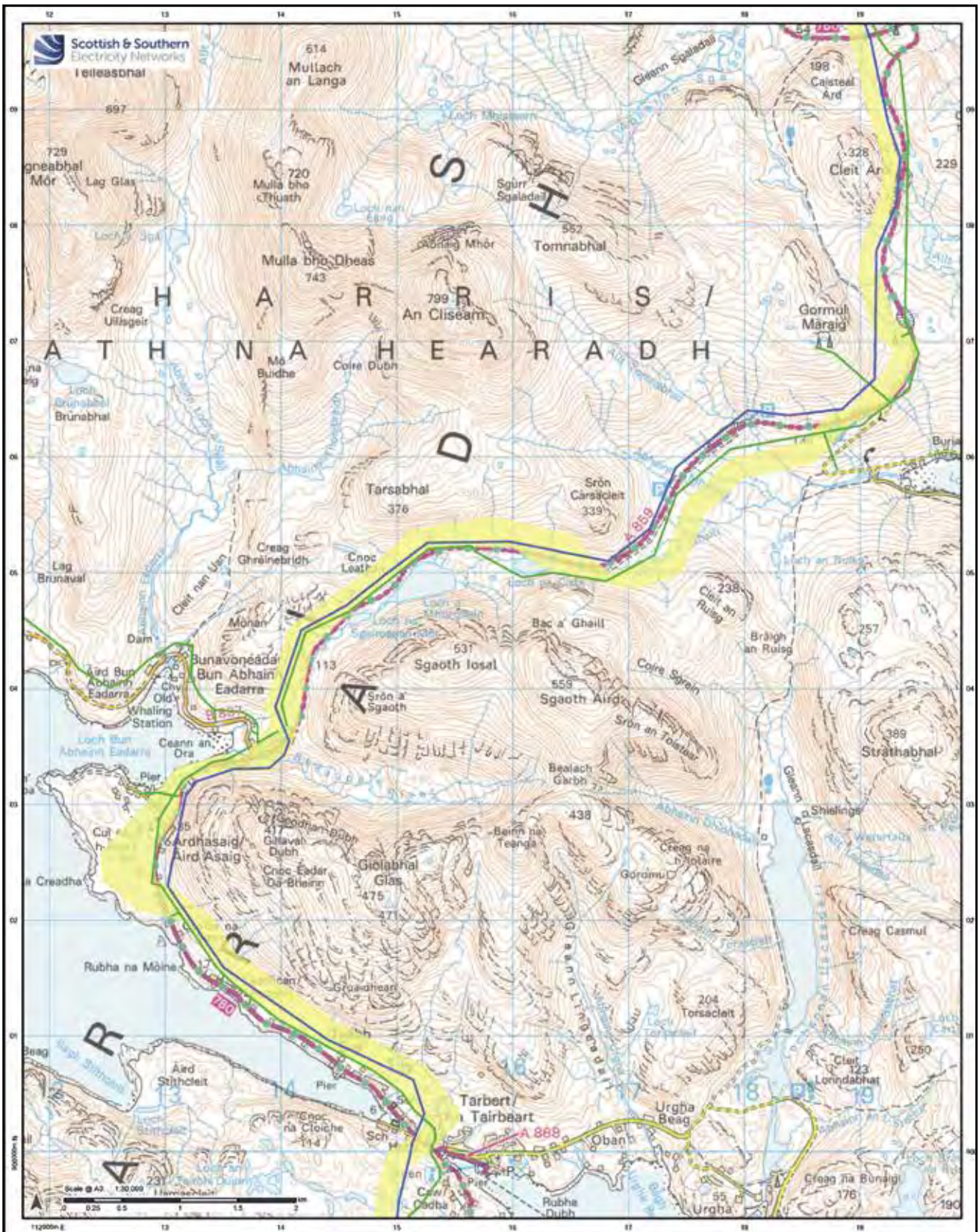
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Preferred Route

Preferred Route 5 of 6



- Preferred Route
- 132kV
- 33kV





Preferred Route

Preferred Route 6 of 6

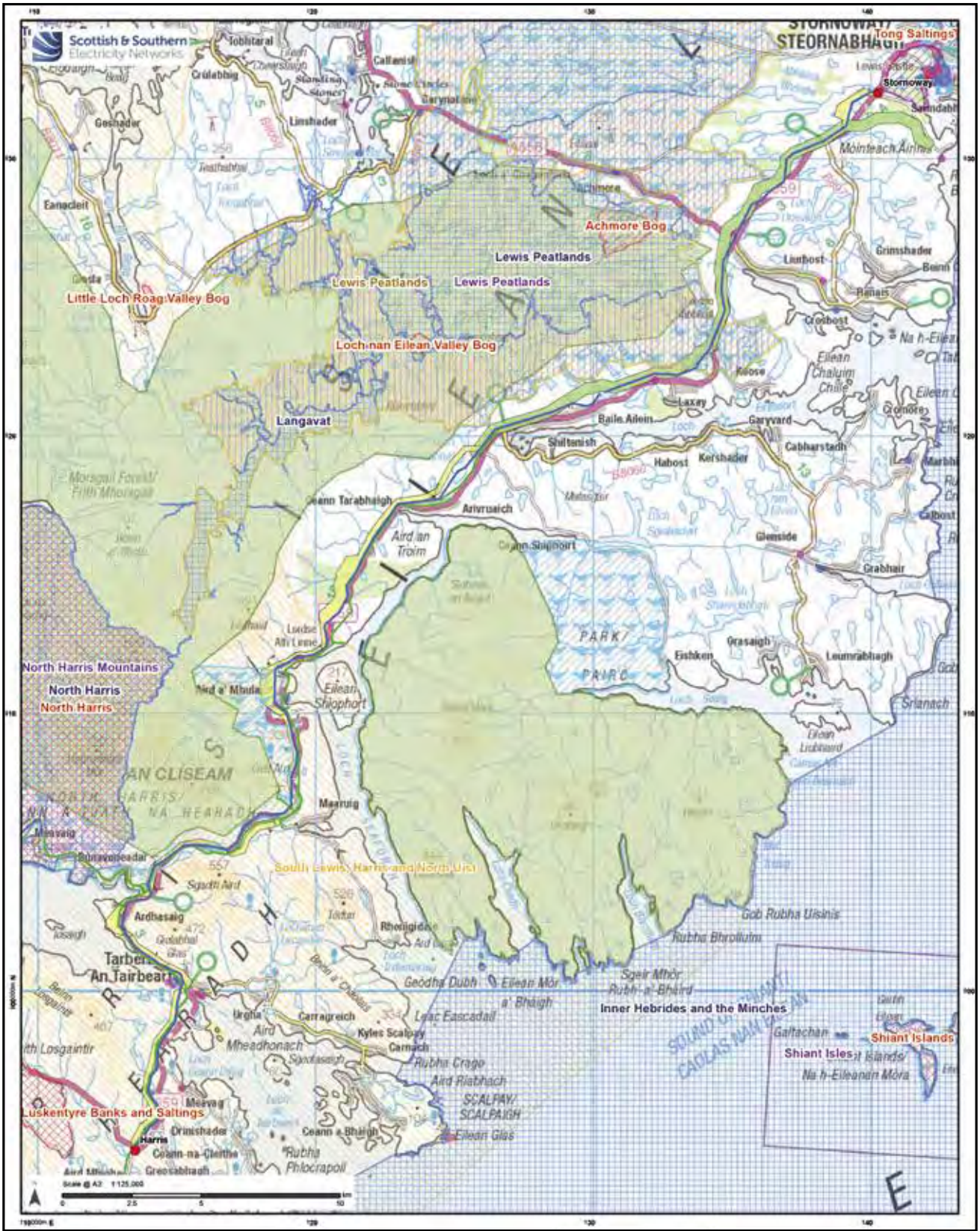


- Preferred Route
- Substation
- 132kV
- 33kV
- 33kV





Constraints



- | | | |
|--|--------------------------------------|---------------------------------|
| Preferred Route | SPA | Conservation Areas |
| LT15 Preferred Route | Sites of Special Scientific Interest | Gardens and Designed Landscapes |
| Substation | Core Areas of Wild Land Character | Scheduled Monuments |
| 132kV | Listed Buildings - A | National Scenic Area (NSA) |
| 33kV | Listed Buildings - B | Important Bird Area |
| Wetlands of International Importance (Ramsar) | Listed Buildings - C | |
| Designated Special Areas of Conservation (SAC) | Properties in care | |

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Environment

Environmental assessments and site surveys will be undertaken as we move through the stages of routing to final alignment and consenting. This includes assessing the landscape and visual amenity, ecology/habitats, ornithology, geology/hydrogeology, hydrology, and cultural heritage of the preferred route. A full Environmental Impact Assessment will likely be required as part of the Section 37 consent application.

Ecology/Habitats/Ornithology

The selected route is likely to have the potential to encounter protected species and sensitive habitats within the project area. It has however been selected to avoid many of the environmental designations on Lewis and Harris.

The project will assess the risk to species and habitats as it moves through the alignment stage, aiming to develop an alignment with the least risk to the environment overall.

The OHL replacement requires over one years' worth of bird surveys; these began in March 2021 and will continue into Spring 2022. This data set will be invaluable for informing the final alignment and any mitigation required in consultation with Nature Scot.



Landscape and Visual Amenity

The project is to construct and operate a new 132kV Trident woodpole overhead line, whilst removing the existing.

The overhead line routing process will seek to position the new overhead line in a location that minimises the effect on landscape and visual amenity. The proposed corridor currently follows the existing 132kV line.



Cultural Heritage

Scheduled and non-scheduled cultural heritage features will be mapped and risk assessed through the stages of routing.

The project works will be designed and constructed to ensure these features are avoided, where possible.

Where this is not possible further site assessments will be conducted in consultation with the planning authority.

Geology/Hydrogeology

Peatland habitats have been identified throughout the area and careful selection of the overhead line alignment and access points will be undertaken to minimise effects as far as possible.

A peat management plan will be developed and implemented during construction.



What happens now and how do I have my say?

We understand and recognise the value of the feedback provided by members of the public during all engagements and consultations. Without this valuable feedback, the project development team would be unable to progress projects and reach a balanced proposal.

We are keen to receive your views and comments in regards to the following questions:

- Have we adequately explained the methodology undertaken to assess the preferred route?
- Do you feel SSEN Transmission have given enough consideration to potential impacts on the environment that this project may have?
- Are there any additional factors, issues or concerns which you wish to bring to the attention of the Project Team regarding our proposal?
- Following your review of the information displayed today, how would you rate your information of the Harris – Stornoway 132kV overhead line replacement works?
- Is there anything else you would like to highlight to the team about the project?

Comments

Your views and comments can be provided to the project team by completing the feedback form or by writing to our Community Liaison Manager. All feedback received will be assessed and the proposed options adapted where necessary.

Feedback

We will be seeking feedback from members of the public on this exhibition until Friday 15th October 2021.

Feedback is welcomed throughout the development of the project. To provide comments on the proposal or to gain further information on the project, visit our virtual event or contact our Community Liaison Manager.

**Community Liaison Manager,
Lisa Marchi**



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Additional information

Information will also be made available via the project webpage and social media channels:

Project Website:

www.ssen-transmission.co.uk/projects/harris-stornoway-132kv-ohl

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Follow us on Facebook:

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