Scottish & Southern Electricity Networks

TRANSMISSION

Spittal to Loch Buidhe to Beauly 400 kV OHL Connection Environmental Impact Assessment Volume 5 | Technical Appendix

Appendix 11.1 | Peat Landslide Hazard Risk Assessment

July 2025

VOLUME 5: APPENDIX 11.1 – PEAT LANDSLIDE HAZARD RISK ASSESSMENT

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1. PEAT LANDSLIDE HAZARD RISK ASSESSMENT

1.1 Introduction

Background

1.1.1 Environmental Resources Management Ltd (ERM) were commissioned by Scottish and Southern Electricity Networks (SSEN) to carry out a Peat Landslide Hazard Risk Assessment (PLHRA) for the proposed Spittal to Loch Buidhe to Beauly 400kV OHL Connection (the Proposed Development). The Proposed Development layout is shown in **Figure 1** in **Annex A**.

Scope and Purpose

1.1.2 This PLHRA provides factual information based on the peat survey results across the Proposed Development, relating to proposed infrastructure locations. The desk-based information and site surveys have been utilised to assess any potential risks of peat landslide. The methodology adopted and details on the assessment are outlined in **Section 11.4**. The assessment has been undertaken in accordance with Scottish Government Guidance in assessing the likelihood and consequence of such an event.

1.1.3 The Study Area includes all aspects of the Proposed Development, as described within **Volume 2, Chapter 3: Description of the Proposed Development**. The Study Area encompasses the area over which all desk-based and field data was gathered to inform the assessment presented in this PLHRA. The Study Area is shown on **Figure 1** in **Annex A**.

1.2 Guidance and Methodology

General Guidance on Peat Slide and Failure

1.2.1 The Scottish Government guidance “Peat Landslide Hazard and Risk Assessment – Best Practice Guide for Proposed Electricity Generation Developments”[1] divides peat instability into two categories, ‘peat slides’ and ‘bog bursts’.

1.2.2 Peat slides are defined as failure of the peat at or below the peat to strata interface leading to the translational sliding of surface vegetation with the underlying peat stratum[2]. The guidance states that peat slides have a greater risk of occurrence in areas where:

- Peat in encountered at or near to ground surface level;
- The thicknesses are recorded in the region of 2.0 m (above which, in general terms, peat instability would increase peat thickness); and
- The slope gradients are steep (between 5° and 15°).

[1] The Scottish Government (2017) Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments [Online]. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2017/04/peat-landslide-hazard-risk-assessments-best-practice-guide-proposed-electricity/documents/00517176-pdf/00517176-pdf/govscot%3Adocument/00517176.pdf [Accessed December 2024]

[2] Dykes, A.P and Kirk, K.J., (2001), ‘Initiation of a multiple peat slide on Cuilcagh Mountain, Northern Ireland.’ Earth Surface Processes and Landforms, 26, 395-408

1.2.3 Bog bursts or bog flows are generally associated with wet peat landscapes, defined as the emergence of a fluid form of well humidified, amorphous peat from the surface of a bog, followed by the settling of the residual peat, in-situ[2]. Bog bursts failure will have a higher susceptibility when the following factors are in place:

- Peat depth is greater than 1.5 m;
- Slope gradients are shallow (between 2° and 10°);
- Waterlogged ground which is saturated within the upper 1m below ground level;
- Lower surface tensile strength of the fibrous acrotelm peat and vegetation; and
- Increased humification of catotelm within waterlogged ground.

1.2.4 It should be noted, however, that peat instability events are uncommon but can occur within these limits. Reports of bog bursts are generally restricted to the Republic and Northern Ireland.

1.2.5 The peat to substrate interface is the most common zone of peat failure and is further enhanced by triggering factors such as increased water content or weathering at the interface. It is, therefore, critical that the underlying substrate is distinguished during site visits and peat probing surveys.

1.2.6 Preparatory factors which effect the stability of peat slopes in the short to medium-term include:

- Loss of surface vegetation (deforestation);
- Changes in sub-surface hydrology;
- Increase in the mass of peat through accumulation, increase in water content and growth of tree planting; or
- Reduction in shear strength of peat or substrate due to chemical or physical weathering, progressive creep and tension cracking.

1.2.7 Triggering factors which can have an immediate effect on peat stability and act on susceptible slopes include:

- Intensive rainfall or snow melt causing pressures along existing or potential peat/substrate interfaces;
- Alterations to drainage patterns, both surface and sub-surface;
- Peat extraction at the toe of the slope reducing the support of the upslope material;
- Peat loading (commonly due to stockpiling) causing an increase in shear stress; and
- Earthquakes or rapid ground accelerations such as blasting or mechanical movement.

1.2.8 Consideration of peat stability should be an integral part of the design of the Proposed Development and associated linear infrastructure. While peat does not wholly provide a development constraint, areas of deep peat or peat deposits on significant slopes should either be avoided through design and micro-siting or mitigation measures should be implemented to avoid the potential for instability and movement as a result of the Proposed Development.

1.3 Desk Study

Sources of Information

1.3.1 The following sources of information were used as part of the desk study investigations:

- Ordnance Survey (OS) 1:50,000 and 1:25,000 scale mapping;
- Aerial and Satellite photography via Ordnance Survey and Google Earth;

- NatureScot (formerly Scottish National Heritage (SNH)) SiteLink[3];
- British Geological Survey (BGS) Onshore GeoIndex[4];
- Scotland's Environment Interactive Maps[5];
- James Hutton Institute, The National Soils Map of Scotland (1:250,000)[6];
- NatureScot (formerly Scottish National Heritage (SNH)) 2016 Carbon and Peatland Mapping[7];
- The National Library of Scotland 1:10,000 scale historical maps[8];
- SEPA Rainfall Data[9]; and
- Assessments by other EIA specialists (specifically hydrology and ecology for data on sensitive receptors).

1.3.2 No relevant comments from landowners, land managers, local residents or newspaper articles were found to inform this assessment.

Guidance and Standards

- National Planning Framework 4 (NFP4) (2023) [10]
- The Scottish Government (2017) Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments[1];
- The Scottish Government (2009) The Scottish Soil Framework[11];
- The Scottish Government, NatureScot (formally Scottish Natural Heritage (SNH)), Scottish Environment Protection Agency (SEPA) (2017) Peatland Guidance on Development on Peatland[12];
- The Scottish Office (1996) Planning Advice Note (PAN) 50 – Controlling the Environmental Effects of Surface Mineral Working[13];
- NatureScot (2023) Advising on peatland, carbon-rich soils and priority peatland habitats in development management[14];
- SEPA (2017) Developments on Peat and Off-Site Uses of Waste Peat[15];

3 Nature Scot SiteLink, available at https://sitelink.nature.scot/home [Accessed November 2024]
4 British Geological Survey GeoIndex (onshore), available at https://www.bgs.ac.uk/map-viewers/geoindex-onshore/ [Accessed November 2024]
5 Scotland's Environment (various) Scotland's Environment Web Map, available at: https://www.environment.gov.scot/ [Accessed November 2024]
6 James Hutton Institute, National soil map of Scotland, available at: https://soils.environment.gov.scot/maps/ [Accessed November 2024]
7 NatureScot Carbon and Peatland Map(formerly Scottish Natural Heritage) available at https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/ [Accessed November 2024]
8 National Library of Scotland (2025) Historic Maps Side by Side Viewer. Available at: https://maps.nls.uk/geo/explore/side-by-side/#zoom=5.0&lat=56.00000&lon=-4.00000&layers=1&right=ESRIWorld [Accessed January 2025].
9 SEPA Rainfall Data, available at: https://www2.sepa.org.uk/rainfall [Accessed February 2025]
10 The Scottish Government (2024) National Planning Framework 4 [Online] Available at: National Planning Framework 4 (www.gov.scot) [Accessed November 2024]
11 The Scottish Government (2009) The Scottish Soil Framework [Online]. Available at: http://www.gov.scot/Publications/2009/05/20145602/0 [Accessed December 2024].
12 Scottish Government, Scottish Natural Heritage, SEPA (2017) Guidance on Developments on Peatland, online version only. Available at: Guidance+on+developments+on+peatland+-+peatland+survey+-+2017.pdf (www.gov.scot) [Accessed December 2024].
13 The Scottish Office (1996) Planning Advice Note (PAN) 50 – Controlling the Environmental Effects of Surface Mineral Working [Online]. Available at: https://www.gov.scot/publications/planning-advice-note-pan-50-annex-controlling-environmental-effects-surface/documents/ [Accessed December 2024].
14 NatureScot (2023) Advising on peatland, carbon-rich soils and priority peatland habitats in development management. Available at: https://www.nature.scot/doc/advising-peatland-carbon-rich-soils-and-priority-peatland-habitats-development-management [Accessed December 2024].
15 SEPA (2017) Developments on Peat and Off-Site Uses of Waste Peat Available at: https://www.sepa.org.uk/media/287064/wst-g-052-developments-on-peat-and-off-site-uses-of-waste-peat.pdf [Accessed December 2024].

- Forestry Commission Scotland (FCS) & SNH (2010) Floating Roads on Peat - Report into Good Practice in Design, Construction and Use of Floating Roads[16];
- Forestry Commission (2006) Guidelines for the Risk Management of Peat Slips on the Construction of Low Volume/Low Cost Roads on Peat[17];
- Scottish Renewables, SNH, SEPA, FCS, Historic Environment Scotland, Marine Scotland Science and AEECoW (2019) Good Practice during Windfarm Construction, 4th Edition[18]; and
- Construction Industry Research and Information Association (CIRIA) (2023) C741 Environmental Good Practice on Site.[19]

Proposed Development Desk Study

Section A – Spittal to Brora

1.3.3 This section of the Proposed Development originates at the proposed new Spittal area substation (Banniskirk), following a southerly direction west of Dunbeath, Berriedale and Helmsdale before continuing south-west to north of Brora.

1.3.4 The predominant land uses within Section A of the Proposed Development are open undeveloped moorland and commercial forestry. Section A also crosses agricultural land and several public and private roads/tracks. Section A overlaps with the eastern extents of Halsary Wind Farm from proposed Towers N21 to N23 and there is a railway at Marrel situated between proposed Towers N148 and N149. In addition, there are several residential properties adjacent to Section A of the Proposed Development, predominantly in the northern areas.

1.3.5 Constraints relating to geology, peat and soils between Spittal and Brora include extensive peatlands in the area which form part of The Flow Country (an intact and expansive blanket bog system that stretches across Caithness and Sutherland). The Flow Country[20] was inscribed on the World Heritage List to the United Nations Educational, Scientific and Cultural Organisation (UNESCO) as of July 2024.

1.3.6 The terrain across Section A is generally comprised of flatter expanse and undulating hills with gentle to steep slopes. OS mapping indicates that ground elevations within Section A of the Proposed Development vary between 20m and 380m AOD. The lowest elevations are associated with the banks of watercourses and the highest elevation is associated with the hills near Glen Sletdale.

1.3.7 In areas with significant slopes, there is an increased risk to the superficial geology and the composition and extent of the overlying soils may affect the stability of the slopes. The majority of Section A of the Proposed Development is situated across flat expanses and gentle slopes. Steep slopes are present locally throughout

16 Forestry Commission Scotland & SNH (2010) Floating Roads on Peat - Report into Good Practice in Design, Construction and Use of Floating Roads. Available at: https://www.roadex.org/wp-content/uploads/2014/01/FCE-SNH-Floating-Roads-on-Peat-report.pdf [Accessed December 2024].
17 Forestry Commission (2006) Guidelines for the Risk Management of Peat Slips on the Construction of Low Volume/Low Cost Roads on Peat Available at: https://www.roadex.org/wp-content/uploads/2014/01/Guidelines-for-the-Risk-Management-of-Peat-Slips.pdf [Accessed December 2024].
18 Scottish Renewables, NatureScot (formally Scottish Natural Heritage (SNH)), SEPA, Forestry Commission Scotland, Historic Environment Scotland, Marine Scotland Science and AEECoW (2019) Good Practice during Windfarm Construction, 4th Edition. Available at: https://www.scottishrenewables.com/assets/000/000/453/guidance_-_good_practice_during_wind_farm_construction_original.pdf?1579640559 [Accessed December 2024].
19 CIRIA (2023) Environmental Good Practice on Site Guide (Fifth Edition) [online]. Available at: https://www.ciria.org/ItemDetail?iProductCode=C811D&Category=DOWNLOAD&WebsiteKey=3f18c87a-d62b-4eca-8ef4-9b09309c1c91 [Accessed January 2025]
20 UNESCO World Heritage Site List, The Flow Country, available at: https://whc.unesco.org/en/list/1722/ [Accessed January 2025]

Section A, predominantly associated with undulating hills, steep valleys and watercourses. In the northern area of the Proposed Development, steep slopes are present associated with the western flanks of Ben-a-chielt, the eastern flanks of Beinn nan Coireag and the hill sides adjacent to the Berriedale Water. In the central and southern areas of Section A of the Proposed Development, steep slopes are present adjacent to the Langwell Water, on the flanks of the undulating hills situated to the north and west of Helmsdale, and at Glen Loth.

1.3.8 There are a number of watercourses and several streams and tributaries along Section A including:

- Burn of Latheronwheel
- Burn of Houstry
- Dunbeath Water
- Achorn Burn
- Berriedale Water
- Langwell Water
- Allt Braigh Nam Maur
- River Helmsdale
- Loth Burn
- Stetdale Burn

Section B – Brora to Loch Buidhe

1.3.9 This section of the Proposed Development originates north of Brora, heading generally south-west towards Loch Buidhe Substation and the proposed new Loch Buidhe area substation (Carnaig).

1.3.10 Constraints relating to peat, geology and soils between Brora and Loch Buidhe include the Strath Carnaig and Strath Fleet Moors SPA and SSSI which extends from the west of Gole to Loch Buidhe; the Dornoch Firth and Loch Fleet Ramsar site and SPA to the south of Golspie; Mound Alderwoods SAC and SSSI; and Strathfleet SSSI.

1.3.11 The predominant land uses within Section B of the Proposed Development are open undeveloped moorland and commercial forestry. Section B also crosses agricultural land and several public and private roads/tracks. Section B crosses a railway between proposed Towers N263 and N264, adjacent to the River Fleet, and the existing Loch Buidhe substation is present in the western extents of Section B, located to the north of proposed Towers N296 and N297. In addition, there are several residential properties adjacent to Section B of the Proposed Development.

1.3.12 In areas with significant slopes, there is an increased risk to the superficial geology and the composition and extent of the overlying soils may affect the stability of the slopes. The majority of Section B of the Proposed Development is situated across gentle to moderate slopes with localised flatter expanses and topographic lows. Steep slopes are present locally throughout Section B, predominantly associated with undulating hills, steep valleys and watercourses. In the northern area of Section B of the Proposed Development, there are steep slopes associated with the hills northwest of Brora and adjacent to Loch Brora. Steep slopes are present to the east and south of Loch Horn and across Dunrobin Glen. In the southern areas of Section B, there are steep slopes on the descent to the banks of the River Fleet and there are moderate to sleep slopes present at Strath Carnaig and to the south of Loch Buidhe.

1.3.13 There are a number of watercourses along Section B, in addition to several minor watercourses, tributaries and small lochans including:

- River Brora
- Strath Carnaig
- Clynemilton Burn
- Loch Brora
- Allt Bad a' Chrasgaidh
- River Fleet
- Allt na h-innse Aonair
- Abhainn an t'Stratha Charnaig

Section C – Loch Buidhe to Dounie

1.3.14 This section of the Proposed Development originates at the proposed Loch Buidhe area substation (Carnaig) heading generally south-west towards the west of Bonar Bridge.

1.3.15 The predominant land uses within Section C of the Proposed Development are open moorland and commercial forestry. Section C crosses public roads, such as the A836, private forestry tracks and there is a railway present between proposed Towers S21 and S22. Adjacent to the Kyle of Sutherland, there are residential properties and an area of high quality agricultural land.

1.3.16 Elevations along Section C range from approximately 10 m AOD adjacent to the Kyle of Sutherland to 200 m AOD in the eastern extents of Section C. In areas with significant slopes, there is an increased risk to the superficial geology and the composition and extent of the overlying soils may affect the stability of the slopes. The majority of Section C of the Proposed Development is situated across gentle slopes with localised flatter expanses. There are steep slopes present on the forested land adjacent to the Kyle of Sutherland, predominantly on the western side of the river on the flanks of Creag a Choineachan. In addition, there are steep slopes present towards the southern extents of Section C to the north of Culeave and the River Carron.

1.3.17 In addition, Section C crosses various watercourses and surface water bodies, including the Kyle of Sutherland and Loch Leisgein.

Section D – Dounie to Near Strathpeffer

1.3.18 This section of the Proposed Development originates west of Bonar Bridge following a southerly direction towards the north of Strathpeffer.

1.3.19 The predominant land uses within Section D of the Proposed Development are open undeveloped moorland and commercial forestry. Section D also crosses agricultural land and several public and private roads/tracks. In addition, there are several residential properties adjacent to Section D of the Proposed Development.

1.3.20 OS mapping indicates that ground elevations vary significantly throughout Section D, ranging from 30m AOD in the northern extents adjacent to the River Carron to 440m AOD on the eastern flanks of Carn Beag.

In areas with significant slopes, there is an increased risk to the superficial geology and the composition and extent of the overlying soils may affect the stability of the slopes. The majority of Section D is situated across moderate to sleep slopes with very localised flatter expanses and topographic lows. Steep slopes are common throughout the northern and central areas of Section D, adjacent to Garvary forestry and Strathrusdale. Towards the south of Section D, there are steep slopes present to the southwest of Boath. Flatter expanses are present near Strath Mor to the west of Loch Chaplaich and across the undulating land west of Strathpeffer.

1.3.21 There are several watercourses along Section D, in addition to a number of small lochans including

- River Carron
- Allt Loch Bad a'Bhathaich
- Abhainn Glac an t-Seilich
- River Averon
- Allt a'Ghreaich
- Allt a'Ghlinne
- River Glass
- Allt nan Caorach
- Abhainn Dhubh

Section E – Near Strathpeffer to Beauly

1.3.22 This section of the Proposed Development originates to the north of Strathpeffer following a southerly direction to the proposed new Beauly area substation (Fanellan).

1.3.23 The predominant land uses within Section E of the Proposed Development are open undeveloped moorland, commercial forestry and agricultural land. There is a railway near Strathpeffer situated between proposed Towers S152 and S153, adjacent to the Peffery Burn. Section E also crosses several public and private roads/tracks. In addition, there are residential properties adjacent to Section E of the Proposed Development and a recreation centre is present at Fairburn to the east of proposed Tower S184.

OS mapping indicates that ground elevations within Section E of the Proposed Development vary between 15 m AOD near Tower S175 adjacent to the River Conon in the northern area and 368 m AOD near Tower S210 in the central areas of Section E. Towards the north of Section E, there are steep slopes adjacent to the Peffery Burn north of Strathpeffer.

1.3.24 There are several watercourses along Section E, in addition to a number of small lochans including:

- Peffery Burn
- Allan Dubh
- River Conon
- River Orrin
- Allt Goibhre
- Breakachy Burn
- River Beauly

Aerial Photography Review

A review of the aerial photography across the Proposed Development was undertaken and provided in **Annex A** of this PLHRA.

Superficial Geology

Section A – Spittal to Brora

1.3.25 The BGS GeoIndex Superficial Geology Mapping[4] indicates that the most common superficial deposits mapped throughout Section A of the Proposed Development are peat and glacial till. **Table 1** details the superficial deposits that are present, listed from north to south, across Section A of the Proposed Development.

Table 1: Superficial Geology in Section A

Superficial Deposit	Description
Peat	Peat is a partially decomposed mass of semi-carbonized vegetation which has grown under waterlogged, anaerobic conditions, usually in bogs or swamps.
Diamicton Till (Devensian)	Comprised of unsorted and unstratified drift deposits clay, sand, gravel and boulders that vary significantly in size and shape.
Alluvium	Comprised of clay, silt, sand and gravel. It is the unconsolidated detrital material deposited by a river, stream or other body of running water as a sorted or semi-sorted sediment in the bed of the stream or on its floodplain or delta, or as a cone or fan at the base of a mountain slope.
Glaciofluvial Deposits	Comprised of sand and gravel with occasional lenses of silt, clay or organic material, that have been deposited by meltwater streams.
Raised Marine Deposits	Predominantly comprised of gravel, sand, silt and clay. Raised Marine Deposits are commonly charged with organic debris (plant and shell) and depositionally, have resulted from gradual tectonic movements and falling sea levels.
River Terrace Deposits (Undifferentiated)	Comprised of sand and gravel with localised lenses of silt, clay or peat.
Glaciofluvial Ice Contact Deposits	Comprised of stratified sand and gravel and interbedded diamicton deposited by meltwater and ice under (subglacial), within (englacial), and at the margins of, glaciers.

1.3.26 Some areas of the Proposed Development are absent from any superficial deposits, indicating potential bedrock at or near surface.

Section B – Brora to Loch Buidhe

1.3.27 The BGS GeoIndex Superficial Geology Mapping[4] indicates that the most common superficial deposits mapped throughout Section B of the Proposed Development are peat and glacial till. **Table 2** details the superficial deposits that are present, listed from north to south, across Section B of the Proposed Development.

Table 2: Superficial Geology in Section B

Superficial Deposit	**Description**
Peat	Peat is a partially decomposed mass of semi-carbonized vegetation which has grown under waterlogged, anaerobic conditions, usually in bogs or swamps.
Diamicton Till (Devensian)	Comprised of unsorted and unstratified drift deposits clay, sand, gravel and boulders that vary significantly in size and shape.
Undifferentiated River Terrace Deposits	Comprised of sand and gravel with localised lenses of silt, clay or peat.
Lacustrine Deltaic Deposits	Comprised of gravel, sand, and silt. Deposited in a prograding delta at the fluvial-lacustrine boundary as fluvial current velocity is dissipated, causing a ‘coarsening upward sequence’ of sediments.
Alluvium	Comprised of clay, silt, sand and gravel. It is the unconsolidated detrital material deposited by a river, stream or other body of running water as a sorted or semi-sorted sediment in the bed of the stream or on its floodplain or delta, or as a cone or fan at the base of a mountain slope.

Superficial Deposit	Description
Alluvial Fan Deposits	Comprised of gravel, sand, silt and clay. Deposits are low, outspread, relatively flat to gently sloping masses of loose rock material in a fan-like shape. Deposited by streams at the mouths of tributary valleys onto a plain or broad valley.

1.3.28 Some areas of the Proposed Development are absent from any superficial deposits, indicating potential bedrock at or near surface.

Section C – – Loch Buidhe to Dounie

1.3.29 The BGS GeoIndex Superficial Geology Mapping[4] indicates that the most common superficial deposits mapped throughout Section C of the Proposed Development are till and morainic deposits and peat. **Table 3** details the superficial deposits that are present, listed from north to south, across Section C of the Proposed Development.

Table 3: Superficial Geology in Section C

Superficial Deposit	Description
Peat	Peat is a partially decomposed mass of semi-carbonized vegetation which has grown under waterlogged, anaerobic conditions, usually in bogs or swamps.
Till and Morainic Deposits (Undifferentiated)	Comprised of diamicton, gravel and sand.
River Terrace Deposits (Undifferentiated)	Comprised of sand and gravel with localised lenses of silt, clay or peat.
Alluvium	Comprised of clay, silt, sand and gravel. It is the unconsolidated detrital material deposited by a river, stream or other body of running water as a sorted or semi-sorted sediment in the bed of the stream or on its floodplain or delta, or as a cone or fan at the base of a mountain slope.
Raised Marine Beach Deposits (Late Devensian)	Comprised of gravel, sand and silt.

1.3.30 Some areas of the Proposed Development are absent from any superficial deposits, indicating potential bedrock at or near surface.

Section D – Dounie to Near Strathpeffer

1.3.31 The BGS GeoIndex Superficial Geology Mapping[4] indicates that the most common superficial deposits mapped throughout Section D of the Proposed Development are till and morainic deposits and peat. **Table 4** details the superficial deposits that are present, listed from north to south, across Section D of the Proposed Development.

Table 4: Superficial Geology in Section D

Superficial Deposit	Description
River Terrace Deposits (Undifferentiated)	Comprised of sand and gravel with localised lenses of silt, clay or peat.
Till and Morainic Deposits (Undifferentiated)	Comprised of Diamicton – clay, sand and gravel.

Superficial Deposit	Description
Alluvium	Comprised of clay, silt, sand and gravel. It is the unconsolidated detrital material deposited by a river, stream or other body of running water as a sorted or semi-sorted sediment in the bed of the stream or on its floodplain or delta, or as a cone or fan at the base of a mountain slope.
Peat	Peat is a partially decomposed mass of semi-carbonized vegetation which has grown under waterlogged, anaerobic conditions, usually in bogs or swamps.
Glaciofluvial Deposits	Comprised of sand and gravel with occasional lenses of silt, clay or organic material, that have been deposited by meltwater streams.

1.3.32 Some areas of the Proposed Development are absent from any superficial deposits, indicating potential bedrock at or near surface.

Section E – Near Strathpeffer to Beauly

1.3.33 The BGS GeoIndex Superficial Geology Mapping[4] indicates that the most common superficial deposits mapped throughout Section E of the Proposed Development are glacial and fluvial derived deposits and peat. **Table 5** details the superficial deposits that are present, listed from north to south, across Section E of the Proposed Development.

Table 5: Superficial Geology in Section E

Superficial Deposit	Description
Hummocky (Moundy) Glacial Deposits	Comprised of rock debris, clayey till, sand and gravel.
River Terrace Deposits	Comprised of sand and gravel with localised lenses of silt, clay or peat.
Alluvium	Comprised of clay, silt, sand and gravel. It is the unconsolidated detrital material deposited by a river, stream or other body of running water as a sorted or semi-sorted sediment in the bed of the stream or on its floodplain or delta, or as a cone or fan at the base of a mountain slope.
Raised Marine Beach Deposits	Comprised of gravel, sand, silt and clay. Raised Marine Deposits are commonly charged with organic debris (plant and shell) and depositionally, have resulted from gradual tectonic movements and falling sea levels.
Diamicton Till (Devensian)	Comprised of unsorted and unstratified drift deposits clay, sand, gravel and boulders that vary significantly in size and shape.
Peat	Peat is a partially decomposed mass of semi-carbonized vegetation which has grown under waterlogged, anaerobic conditions, usually in bogs or swamps.

1.3.34 Some areas of the Proposed Development are absent from any superficial deposits, indicating potential bedrock at or near surface.

Solid Geology

Section A – Spittal to Brora

1.3.35 The BGS GeoIndex Mapping[4] indicates that there are several bedrock formations underlying Section A of the Proposed Development, detailed in **Table 6** from north to south, across Section A of the Proposed Development.

Table 6: Bedrock Geology in Section A

Bedrock Formation	Lithology Type	Description
Spital Flagstone Formation	Sedimentary	Siltstone, mudstone and sandstone
Berriedale Sandstone Formation	Sedimentary	Sandstone, limestone, mudstone, siltstone and trace breccia
Lybster Flagstone Formation	Sedimentary	Siltstone, mudstone and sandstone
Ben Dorrery Conglomerate Member	Sedimentary	Conglomerate and arenite
Kildonan Psammite Formation	Metamorphic	Psammite and semipelite
Helmsdale Granite Phase 1	Igneous	Granite (porphyritic)
Badbea Breccio – Conglomerate Member	Sedimentary	Conglomerate with subsidiary breccia
Braemore Mudstone Formation	Sedimentary	Mudstone, siltstone and sandstone
Ousdale Arkose Formation	Sedimentary	Breccia, conglomerate and sandstone with subsidiary mudstone
Helmsdale Granite Phase 2	Igneous	Granite (porphyritic) and microgranite (aplitic)
Langwell Conglomerate Member	Sedimentary	Conglomerate

Section B – Brora to Loch Buidhe

1.3.36 The BGS GeoIndex Mapping[4] indicates that there are several bedrock formations underlying Section B of the Proposed Development, detailed in **Table 7** from north to south, across Section B of the Proposed Development.

Table 7: Bedrock Geology in Section B

Bedrock Formation	Lithology Type	Description
Kildonan Psammite Formation	Metamorphic	Psammite and semipelite
Badbea Creccio – Conglomerate Member	Sedimentary	Conglomerate with subsidiary breccia
Berriedale Sandstone Formation	Sedimentary	Sandstone with subsidiary limestone, mudstone, siltstone and trace breccia
Ulbster Sandstone Formation – Sandstone	Sedimentary	Sandstone
Ulbster Sandstone Formation – Conglomerate	Sedimentary	Conglomerate
Langwell Conglomerate Member	Sedimentary	Conglomerate

Bedrock Formation	Lithology Type	Description
Altnaharra Psammite Formation – Psammite and Micaceous Psammite	Metamorphic	Siliceous to feldspathic psammite with micaceous psammite and semipelite
Altnaharra Psammite Formation – Psammite (Migmatitic)	Metamorphic	Siliceous to feldspathic psammite with micaceous psammite and semipelite
Lewisian Complex - Orthogneiss	Metamorphic	Orthogneiss

Section C – Loch Buidhe to Dounie

1.3.37 The BGS GeoIndex Mapping[4] indicates that Section C of the Proposed Development is underlain by the Altnaharra Psammite Formation, with minor igneous intrusive formations, further detailed in **Table 8** from north to south, across Section C of the Proposed Development.

Table 8: Bedrock Geology in Section C

Bedrock Formation	Lithology Type	Description
Altnaharra Psammite Formation – Psammite and Micaceous Psammite	Metamorphic	Siliceous to feldspathic psammite with micaceous psammite and semipelite
North Britain Siluro-Devonian Calc-Alkaline Dyke Suite - Minette	Igneous	Minette – a porphyritic alkaline igneous rock, usually occurring in dykes
Neoproterozoic Basic Minor Intrusion Suite - Amphibolite	Metamorphic	Amphibolite are commonly in sheet-like, intrusive sill form

Section D – Dounie to Near Strathpeffer

1.3.38 The BGS GeoIndex Mapping[4] indicates that Section D of the Proposed Development is underlain by the Altnaharra Psammite Formation, with minor igneous intrusive formations, further detailed in **Table 9** from north to south, across Section D of the Proposed Development.

Table 9: Bedrock Geology in Section D

Bedrock Formation	Lithology Type	Description
Altnaharra Psammite Formation Psammite and Micaceous Psammite	Metamorphic	Siliceous to feldspathic psammite with micaceous psammite and semipelite
Crom Psammite Formation	Metamorphic	Interbedded micaceous psammite, semipelite and pelite
Diebidale Pelite Formation	Metamorphic	Interbedded psammite and semipelite
Ben Wyvis Pelite Formation	Metamorphic	Interbedded semipelite and psammite
Tarvie Psammite Formation	Metamorphic	Psammite
Braemore Mudstone Formation	Sedimentary	Mudstone, siltstone and sandstone
Ousdale Arkose Formation	Sedimentary	Breccia, conglomerate and sandstone with subsidiary mudstone

Section E – Near Strathpeffer to Beauly

1.3.39 The BGS GeoIndex Mapping[4] indicates that there are several bedrock formations underlying Section E of the Proposed Development, detailed in **Table 10** from north to south, across Section E of the Proposed Development.

Table 10: Bedrock Geology in Section E

Bedrock Formation	Lithology Type	Description
Braemore Mudstone Formation	Sedimentary	Mudstone, sandstone and limestone
Ousdale Arkose Formation	Sedimentary	Breccia and conglomerate
Tarvie Psammite Formation	Metamorphic	Psammite
Achnaconeran Striped Formation	Metamorphic	Psammite and semipelite
Caledonian Supersuite	Igneous	Pegmatite, lamprophyres and granite

Borehole Records

1.3.40 The BGS GeoIndex Mapping[4] indicates that there are several borehole and trail pit records available within close proximity of the Proposed Development. Details are provided per Section in **Table 11** to **Table 14.**

Section A – Spittal to Brora

Table 11: Borehole Records for Section A

Borehole Reference	Grid Reference	Nearest Tower or track	Approximate distance to nearest tower or track (m)	Depth (m)	Depth from Surface (m)	Description
ND15SE4 *Borehole*	319502, 951059	Tower N22	88	19	5.32	Peat
					5.72	Boulder clay with sand and pebbles
					6.0	Fine grained pale grey sandstone pebbles
					9.22	Silty boulder clay
					9.42	Sandstone boulder, fine grained
					14.69	Boulder clay with silty clay matrix
					15.38	Weathered siltstone and sandstone
					19.33	Weathered silty mudstone
ND01NW141 *Borehole*	303758, 918828	Track to south of Tower N138	158	14.1	0.5	Peat
					1.1	Sand, silt and clay
					2.6	Weathered pink granite
					14.1	Pink granite

Section B – Brora to Loch Buidhe

Table 12: Borehole Records for Section B

Borehole Reference and type	Grid Reference	Nearest Tower	Approximate distance to nearest tower (m)	Depth (m)	Depth from Surface (m)	Description
NC80NE1 *Borehole*	285562, 907084	Tower N220	158	158	1.0	Black earth
					4.5	Sand and gravel
					21.0	Red sandstones
					24.0	Red granite
					27.0	Breccia sandstones
					33.0	Granite and breccia
					45.0	Breccia

Section C – Loch Buidhe to Dounie

Table 13: Borehole Records for Section C

Borehole Reference and type	Grid Reference	Nearest Tower	Approximate distance to nearest tower (m)	Depth (m)	Depth from Surface (m)	Description
NH59NE1 *Trial Pit*	257937, 896322	Tower S21 and S22	250	1.55	0.9	Topsoil
					1.55	Silty gravel

Section D – Dounie to Near Strathpeffer

1.3.41 No records within close proximity to the Proposed Development in Section D.

Section E – Near Strathpeffer to Beauly

Table 14: Borehole Records for Section E

Borehole Reference and type	Grid Reference	Nearest Tower	Approximate distance to nearest tower (m)	Depth (m)	Depth from Surface (m)	Description
NH45NE7282/P108 *Trial Pit*	246454, 855342	Tower S173	146	2.7	1.2	Topsoil
					2.4	Light brown silty sand and gravel
					2.8	Weathered brown fine-grained sandstone and siltstone
NH44SE89 *Borehole*	248283, 842781	Tower S232	225	4.5	0.35	Sandy gravel topsoil
					1.1	Fine silty sands and gravel

Borehole Reference and type	Grid Reference	Nearest Tower	Approximate distance to nearest tower (m)	Depth (m)	Depth from Surface (m)	Description
					3.4	Fine silt to coarse sand and gravel
					4.5	Sandy gravelly silt

Geomorphology

1.3.42 Geomorphological mapping can act as a primary instrument in highlighting geological risk factors when considering peat slides. The Scottish Government guidance provides 5 basic features in which a geomorphological map should convey:

- The position of major slope breaks (e.g. convexities and concavities);
- The position and alignment of major natural drainage features (e.g. peat gullies and streams);
- The location and extent of erosion complexities (e.g. haggs and groughs, large areas of bare peat);
- Outline of past peat landslides (including source areas and deposits), if visible; and
- The location, extent and orientation of cracks, fissures, ridges and other pre-failure indicators.

1.3.43 **Figure 2** in **Annex A** has been prepared to record and map the existing conditions and key geomorphological features that were observed throughout the site visits, review of aerial photography, review of slope data and geomorphological data.

1.3.44 The main geomorphological features identified across the Proposed Development are detailed in the following sections below.

Peat Deposits

1.3.45 Throughout the Proposed Development, peat deposits (>0.5m) are generally situated across flatter expanses, gentle slopes or minor topographic lows. Deep peat deposits (>1m) are generally confined by topography and absent from steep slopes. There are areas of consistent deep peat and blanket bog across flat expanses and gentle slopes within areas of Section A, B, C and D. Extensive deep peat deposits are rare across Section E and the peat is predominantly situated in localised pockets confined to topographic hollows and lows.

Peat Erosional Features

1.3.46 Areas of peat hagging and bare peat were observed across all Sections of the Proposed Development. Peat erosional features were recorded across the southern extents of Section A, northern areas of Section B, and northern and central areas of Section D and central areas of Section E. Peat erosional features are rare throughout Section C, however, there is a small area of water ponding and bare peat south of Tower S13.

1.3.47 Generally, the peat hagging observed across the Proposed Development is associated with surface water drainage erosion. In areas of higher elevations and exposed landscapes, wind erosion was observed causing bare peat to be exposed. However, peat erosional features were not extensive across the Proposed Development and were predominantly localised across areas of deeper peat, exposed landscapes and areas with dense surface water drainage networks.

1.3.48 No areas of instability relating to peat erosional features were observed across the Proposed Development.

Artificial Drainage and Peat Cuttings

1.3.49 Artificial drainage and peat cuttings were frequently observed across all Sections of the Proposed Development, from review of aerial photography and during site visits. In addition, areas of forestry plantations and felled forestry exhibited artificial drains and furrows.

1.3.50 No areas of instability relating to artificial drainage and peat cuttings were observed across the Proposed Development.

Forestry and Felled Forestry

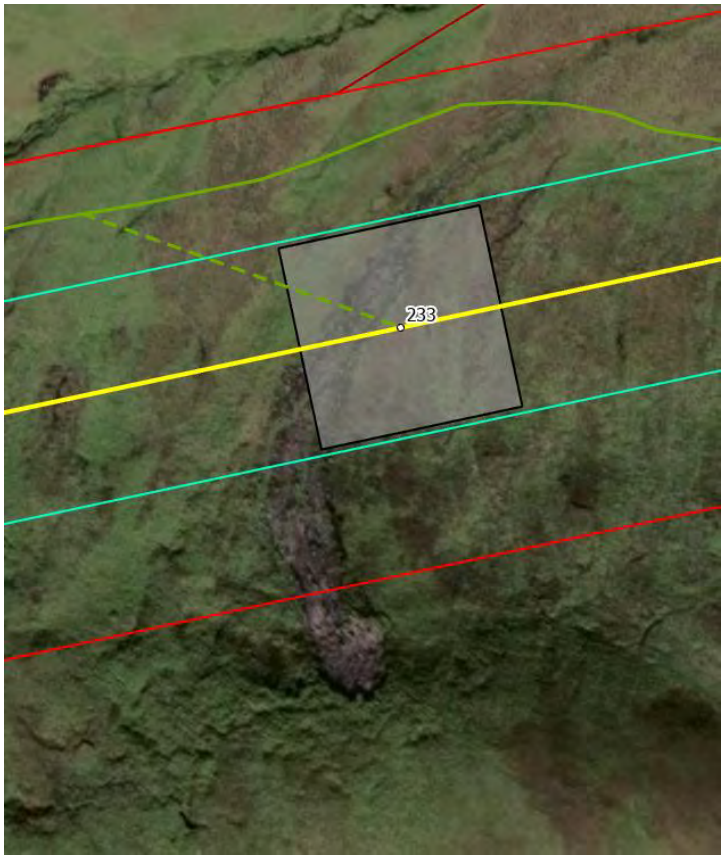
1.3.51 Commercial forestry is extensive across all Sections of the Proposed Development. In addition, there are several areas of felled forestry across the Proposed Development, observed during site walkovers and from aerial photography. There are networks of artificial drainage furrows throughout the areas of commercial forestry and felled forestry across the Proposed Development.

1.3.52 No areas of instability relating to forestry or felled forestry were observed across the Proposed Development.

Extension and Compression Features

1.3.53 From review of aerial imagery across the Proposed Development, there is one area of instability that has been identified within Section B. The area of instability is noted across and directly southwest of proposed Tower N233, at approximately National Grid Reference (NGR) NC 81743 05780, shown in **Plate 1**.

Plate 1: Area of Instability at NGR NC 81743 05780



1.3.54 From review of OS mapping in this area and the slope plan (**Figure 5** in **Annex A**), the instability is situated across a steep slope (approximately 30 degrees) and spans for approximately 250m from the south towards the northeast. The aerial photography indicates that the slide originated from the southern extents near the top of the slope. Peat data adjacent to the slide suggest that the southern extents (top of the slide) exhibit peat depths of approximately 0.5m, therefore, defined as thin peat. In addition, from review of aerial photography, the exposed ground across the slide is peat with areas of exposed underlying granular glacial till substrate. Due to the presence of thin peat deposits across this area and the nature of the underlying substrate, this area of instability has been classified as a peat slide (as opposed to a bog slide or burst) in which the failure of peat at or below the peat / substratum interface has led to the translational slide of the surface vegetation together with the whole underlying peat stratum[2]. It is likely that this event was triggered by natural causes such as periods of intense rainfall or snow.

1.3.55 Throughout the remainder of the Proposed Development, there was no evidence of any natural or infrastructure induced peat instability identified during the site walkover surveys. No extension or compression features were observed across areas of peatland within the Proposed Development and across areas with existing infrastructure (e.g. existing OHL) or natural and/ or anthropogenic drainage, indicating that the current Proposed Development conditions are not currently influencing peat stability. There is no evidence of any significant historic peat failures or slides across the remainder of the Proposed Development from the aerial photographs or from review of local news sources and historic mapping.

Hydrology and Hydrogeology

1.3.56 Scotland's Environment WebMap[5] provides information on aquifers across Scotland**. Tables 15** to **19** below detail the aquifer classification within each section of the Proposed Development.

Section A – Spittal to Brora

Table 15: Aquifer Classification in Section A

Rock Unit	Class	Description
Middle Old Red Sandstone	2B	A moderately productive aquifer where flow is virtually all through fractures and discontinuities. Bedrock Geology comprised of sandstones, mudstones and conglomerates with interbedded lavas which locally yield small amounts of groundwater.
Lower Old Red Sandstone	2B	A moderately productive aquifer where flow is virtually all through fractures and discontinuities. Defined as a locally important multi-layer aquifer.
Moine Supergroup	2C	A low productivity aquifer where flow is virtually all through fractures and discontinuities. Defined as having small amounts of groundwater in near surface weathers zone and secondary fractures.
Unnamed Igneous Instruction	2C	A low productivity aquifer where flow is virtually all through fractures and discontinuities. Defined as having small amounts of groundwater in near surface weathers zone and secondary fractures, springs are rare.

Section B – Brora to Loch Buidhe

Table 16: Aquifer Classification in Section B

Rock Unit	Class	Description
Middle Old Red Sandstone (Undifferentiated)	2B	A moderately productive aquifer where flow is virtually all through fractures and discontinuities. Bedrock Geology comprised of sandstones, mudstones

Rock Unit	Class	Description
		and conglomerates with interbedded lavas which locally yield small amounts of groundwater.
Lower Old Red Sandstone	2B	A moderately productive aquifer where flow is virtually all through fractures and discontinuities. Defined as a locally important multi-layer aquifer.
Morar Group	2C	A low productivity aquifer where flow is virtually all through fractures and discontinuities. Defined as having small amounts of groundwater in near surface weathers zone and secondary fractures.
Lewisian Complex	2C	A low productivity bedrock aquifer where groundwater is only present in near surface weathered zone and secondary fractures. Flow is predominantly through fractures and other discontinuities.

Section C – Loch Buidhe to Dounie

Table 17: Aquifer Classification in Section C

Rock Unit	Class	Description
Morar Group	2C	A low productivity aquifer where flow is virtually all through fractures and discontinuities. Defined as having small amounts of groundwater in near surface weathers zone and secondary fractures.

Section D – Dounie to Near Strathpeffer

Table 18: Aquifer Classification in Section D

Rock Unit	Class	Description
Morar Group	2C	A low productivity aquifer where flow is virtually all through fractures and discontinuities. Defined as having small amounts of groundwater in near surface weathers zone and secondary fractures.
Loch Eil Group	2C	A low productivity aquifer where flow is virtually all through fractures and discontinuities. Defined as having small amounts of groundwater in near surface weathers zone and secondary fractures.
Lower Old Red Sandstone	2B	A moderately productive aquifer where flow is virtually all through fractures and discontinuities. Defined as a locally important multi-layer aquifer.

Section E – Near Strathpeffer to Beauly

Table 19: Aquifer Classification in Section E

Rock Unit	Class	Description
Lower Old Red Sandstone	2B	A moderately productive aquifer where flow is virtually all through fractures and discontinuities. Defined as a locally important multi-layer aquifer.
Middle Old Red Sandstone	2B	A moderately productive aquifer where flow is virtually all through fractures and discontinuities. Bedrock Geology comprised of sandstones, mudstones and conglomerates with interbedded lavas which locally yield small amounts of groundwater.
Glenfinnan Group	2C	A low productivity bedrock aquifer which yields small amounts of groundwater in near surface weathered zone and secondary fractures. Flow is virtually all through fractures and other discontinuities.

Rock Unit	Class	Description
Loch Eil Group	2C	A low productivity aquifer where flow is virtually all through fractures and discontinuities. Defined as having small amounts of groundwater in near surface weathers zone and secondary fractures.

Meteorological Data

1.3.57 Periods of heavy rainfall are often seen as triggers for instability events. Therefore, it is important to review this data in context of the Proposed Development. There are no SEPA weather stations located within the Proposed Development, therefore, rainfall data[9] has been reviewed from the closest weather stations to the Proposed Development to give an indication of the anticipated rainfall expected in the area.

1.3.58 Rainfall data has been reviewed from the following weather stations:

- Halkirk weather station (located approximately 4 km from Tower N1 in Section A)
- Kilphedir weather station (located approximately 900m from Tower N148 in Section A)
- Milton of Evelix weather station (located approximately 5km from Tower N276 in Section B)
- Dingwall weather station (located approximately 3km from Tower S139 in Section D).

1.3.59 This rainfall data was collected between February 2024 and January 2025, displayed in **Table 20.** The highest monthly rainfall was recorded in January 2025 at Kilphedir weather station.

Table 20: Monthly Rainfall Totals

Rainfall Station	Monthly Rainfall Data (mm)											
	Feb	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Jan**
Halkirk	67.6	52.2	70.4	50.8	73.8	54	53.8	77.4	54.2	76.6	169.8	69
Kilphedir	94.4	70.6	94	34.6	47	56	63.4	67.4	82	69.6	109.8	175.4
Milton of Evelix	82.2	57.4	68.6	52.8	31.6	56.4	45	48.4	50.2	14.8	170	43.2
Dingwall	91.4	67.8	69.8	17.2	52	64.2	52	56.4	71.8	51.8	174.6	50.2

1.4 Assessment Approach

This PLHRA has been carried out in accordance with the Scottish Government guidance: Peat Landslide Hazard and Risk Assessments[1,] detailed in **Section 1.2**.

In 2023, the new National Planning Framework 4 (NPF4)[10] for Scotland was published. In relation to peat and the assessment of effects on resource, NPF4 has a policy specifically relating to soils, aimed "*to protect carbon-rich soils, restore peatlands and minimise disturbance to soils from development*". These policy, framework and guidance documents are therefore considered within this PLHRA. The PLHRA undertaken is based on:

- Desk based assessment;
- Site walkover observations;
- Several peat depth survey site visits; and
- A hazard and risk ranking assessment.

1.4.1 Prior to completion of site walkovers and peat depth surveys, a Peat Probing Technical Note was issued to SEPA which included an initial desk study and ground truthing exercise which was undertaken to determine any high sensitivity areas and the presence of peat. The ground truthing aimed to determine whether certain areas required probing based on the presence or absence of peat. Areas of agricultural land and areas that do not exhibit peat forming vegetation were excluded from the peat probing survey, whilst any areas with noticeable peat or peat forming vegetation were targeted for surveying (in addition to the areas identified as requiring probing in the initial desk study).

1.4.2 Therefore, the areas of the Proposed Development subject to this PLHRA assessment were determined through initial findings from desk studies, the ground truthing exercise and peat data, in addition to other physical and environmental constraints.

Peat Probing Methodology

1.4.3 The early stages of the PLHRA included a desk study of existing data, in addition to peat probing site visits to further assess the major constraints and inform the Proposed Development alignment route. Following identification of peat depths within the Proposed Development, the assessment was carried out to determine the potential effects of construction activities on, including:

- Construction of temporary and permanent access tracks;
- Construction of double circuit OHL on steel lattice towers;
- Construction of site compounds;
- Temporary storage of peat.

1.4.4 The proposed peat probing methodology detailed within the Peat Probing Technical Note[21] was approved by SEPA and undertaken as follows:

- Areas of peat, identified during the desk study and ground truthing exercise were probed at 100 m intervals, with typical offsets at 100 m on either side of the alignment (where practical) to satisfy Phase 1 probing requirements and to cover the Limit of Deviation (LoD).
- At proposed transmission Tower locations, peat data was collected over a crosshair of 100 m x 100 m from the centre point of the proposed Tower with probes at 10 m centres to provide peat depth information at proposed Tower bases with allowance for potential micro-siting.
- Proposed tracks were probed at 50 m intervals with offsets at 25 m on either side of the proposed track. A further probe at a 50 m offset from the proposed track centreline was undertaken to inform access track site selection and to identify any areas of shallower peat. This includes proposed tracks in cut or fill, tracks to be floated and upgrades to existing tracks; although centreline probes will not be undertaken along existing tracks.
- All other Site infrastructure, including construction compounds, was probed using a 10 m x 10 m grid.

1.4.5 Based on an initial alignment design and the ground truthing exercise, targeted peat probing was undertaken between March 2024 and February 2025. The relevant sections of the Proposed Development were probed at 100 m intervals, with typical offsets at 100 m either side of the alignment (where practical in relation to local ground conditions and surface water) to satisfy Phase 1 probing requirements and to cover the LoD. In addition,

[21] ERM (December 2023) Spittal – Loch Buidhe – Beauly OHL Peat Probing Consultation Note.

probing was undertaken at 50 m intervals along the centre line of the tracks with probes at 10 - 25 m on either side of the tracks to provide a corridor for micro-siting. At proposed Tower locations, a crosshair of 100 m x 100 m probing (50 m in each direction from the centre point) with probes at 10 m centres was deemed sufficient to provide peat depth information at proposed Tower bases with allowance for potential micro-siting. Development of Hazard Ranking

1.4.6 An assessment of the peat probing data was undertaken to calculate a hazard ranking system zonally across the Proposed Development, to determine the risk of peat instability/constraint to construction using factors such as peat depths, slopes and key receptors.

1.4.7 Where practical, the Development layout was designed to avoid areas of a risk score above 'low'. Where this has not been achieved, areas affected have been discussed in both this EIA as having significant effect, which relative mitigation measures proposed to reduce this, and recorded on a risk register which sets out specific mitigation measures which are considered necessary to reduce the risk of inducing instability.

1.5 Proposed Development Surveys

Introduction

1.5.1 The peat depths across the Proposed Development have been determined through a phased survey approach. The survey was initiated to inform this EIA and Proposed Development design, alongside informing the PLHRA. Details regarding the Proposed Development survey methodology can be found in **Section 11.4**.

Peat Depth Results

1.5.2 A total of 17,371 peat probes were recorded during the peat probing survey, with depths ranging from 0.0 m to 7.5 m. Peat depths were generally shallow throughout the Proposed Development, with 57.79% of probes recording between 0.0 m and 0.5 m, and 19.92% of probes recording depths between 0.5 m and 1.0 m.

Figure 3 in **Annex A** illustrates the peat depths across the Proposed Development, while **Figure 4** in **Annex A** displays the interpolated peat depths. A summary of recorded peat depths across the whole site is shown in **Table 21**, while peat probing summaries for each section are shown in **Table 21** to **Table 26** below.

Table 21: Peat Probing Results – All Sections

Peat Depth Range (m)	No of Peat Probes	Percentage of Total (%)
0.0 – 0.5	10039	57.79
>0.5 – 1.0	3461	19.92
>1.0 – 1.5	1305	7.51
>1.5 – 2.0	830	4.78
>2.0	1736	9.99
Total	**17371**	**100**

Section A – Spittal to Brora

1.5.3 Across Section A of the Proposed Development, a total of 8253 peat probes were recorded during the peat probing surveys, with depths ranging from 0.0 m to 7.5 m. Peat depths were generally shallow throughout

Section A, with 54.77% of probes recording depths between 0.0 m and 0.5 m, and 21.45% of probes recording depths between 0.5 m and 1.0 m.

1.5.4 A relatively small proportion of probes (23.79%) recorded peat depths greater than 1.0 m. Deep peat in Section A was found to be both continuous (>1 km) and in isolated pockets confined by topography along the Proposed Development. The most notable areas of deep peat were between proposed Towers N13 - N35 and N129 - N139. Isolated pockets of deep peat were identified along 6 of the 23 proposed permanent access tracks that were probed within Section A.

1.5.5 The average peat depth across the whole of Section A was 0.8 m.

1.5.6 A summary of recorded peat depths in Section A is shown in **Table 22** below:

Table 22: Section A Peat Probing Results

Peat Depth Range (m)	Nº of Peat Probes	Percentage of Total (%)
0.0 – 0.5	4520	54.77
>0.5 – 1.0	1770	21.45
>1.0 – 1.5	612	7.42
>1.5 – 2.0	385	4.66
>2.0	966	11.70
Total	**8253**	**100**

Section B – Brora to Loch Buidhe

1.5.7 Across Section B of the Proposed Development, a total of 4279 peat probes were recorded during the peat probing surveys, with depths ranging from 0.0 m to 7.5 m. Peat depths were generally shallow throughout Section B, with 60.08% of probes recording depths between 0.0 m and 0.5 m, and 21.31% of probes recording depths between 0.5 m and 1.0 m.

1.5.8 A small proportion of probes (18.60%) recorded peat depths greater than 1.0 m. Deep peat in Section B was found to be both continuous (>1 km) and in isolated pockets defined by topography along the Proposed Development. The most notable areas of deep peat were between proposed Towers N228 - N251. Isolated pockets of deep peat were identified along 1 of the 9 proposed permanent access tracks that were probed within Section B.

1.5.9 The average peat depth across the whole of Section B was 0.59 m.

1.5.10 A summary of recorded peat depths in Section B is shown in **Table 23** below:

Table 23: Section B Peat Probing Results

Peat Depth Range (m)	Nº of Peat Probes	Percentage of Total (%)
0.0 – 0.5	2571	60.08
>0.5 – 1.0	912	21.31
>1.0 – 1.5	324	7.57
>1.5 – 2.0	165	3.86

Peat Depth Range (m)	Nº of Peat Probes	Percentage of Total (%)
>2.0	307	7.17
Total	**4279**	**100**

Section C – Loch Buidhe to Dounie

1.5.11 Across Section C of the Proposed Development, a total of 1749 peat probes were recorded during the peat probing surveys, with depths ranging from 0.0 m to 6 m BGL. Peat depths were generally shallow throughout Section C with 62.81% of probes recording depths between 0.0 m and 0.5 m, and 16.4% of probes recording depths between 0.5 m and 1.0 m.

1.5.12 A relatively small proportion of probes (21.79%) recorded peat depths greater than 1.0 m. Deep peat in Section C was encountered in isolated pockets defined by topography throughout the Proposed Development. The most significant deep peat was recorded within a 55 m radius of proposed Towers S3, S4, S9, S16, S17 and S33. The deepest peat directly at proposed Tower centres was recorded at proposed Towers S3 and S4 where a maximum peat depth of 3.8 m was encountered. The maximum peat depth recorded within the LoD across Section C was 6.0 m, located approximately 118 m to the south-east of Tower S17. In addition, Isolated pockets of deep peat were identified along 2 of the 4 proposed permanent access tracks in Section C.

1.5.13 The average peat depth across the entirety of Section C was 0.66 m.

1.5.14 A summary of recorded peat depths in Section C is shown in **Table 24** below:

Table 24: Section C Peat Probing Results

Peat Depth Range (m)	Nº of Peat Probes	Percentage of Total (%)
0.0 – 0.5	1081	62.81
>0.5 – 1.0	287	16.41
>1.0 – 1.5	125	7.15
>1.5 – 2.0	96	5.49
>2.0	160	9.15
Total	**1749**	**100**

Section D – Dounie to Near Strathpeffer

1.5.15 Across Section D of the Proposed Development, a total of 1774 peat probes were recorded during the peat probing surveys, with depths ranging from 0.0 m to 5.0 m. Peat depths were generally shallow throughout Section D with 51.13% of probes recording depths between 0.0 m and 0.5 m, and 17.7% of probes recording depths between 0.5 m and 1.0 m.

1.5.16 However, a moderate proportion of probes (31.47%) recorded depths greater than 1.0 m. Deep peat in Section D was encountered in isolated pockets along the Proposed Development. The most significant deep peat was recorded within a 55 m radius from proposed Tower centres S46 to S71. Isolated pockets of deep peat were identified along the single proposed permanent access track in Section D.

1.5.17 The average peat depth across the whole of Section D was 0.87 m.

1.5.18 A summary of recorded peat depths in Section D is shown in **Table 25** below:

Table 25: Section D Peat Probing Results

Peat Depth Range (m)	Nº of Peat Probes	Percentage of Total (%)
0.0 – 0.5	907	51.13
>0.5 – 1.0	314	17.70
>1.0 – 1.5	167	9.41
>1.5 – 2.0	147	8.29
>2.0	239	13.47
Total	**1774**	**100**

Section E – Near Strathpeffer to Beauly

1.5.19 Across Section E of the Proposed Development, a total of 1316 peat probes were recorded during the peat probing survey, with depths ranging from 0.0 m to 6.4 m. Peat depths were generally shallow throughout Section E with 72.95% of probes recording between 0.0 m and 0.5 m, and 13.53% of probes recording between 0.5 m and 1.0 m.

1.5.20 However, a small concentration of probes (13.53%) recorded depths greater than 1.0 m. Deep peat in Section E was found to be both continuous (>1 km) and in isolated pockets along the Proposed Development and permanent access tracks. The most notable areas of deep peat being within a 55 m radius of Towers S207 to S213. Isolated pockets of deep peat were identified along 5 of the proposed permanent access tracks in Section E.

1.5.21 The average peat depth across the whole of Section E was 0.48 m.

1.5.22 A summary of recorded peat depths in Section E is shown in **Table 26** below:

Table 26: Section E Peat Probing Results

Peat Depth Range (m)	Nº-of Peat Probes	Percentage of Total (%)
0.0 – 0.5	960	72.95
>0.5 – 1.0	178	13.53
>1.0 – 1.5	77	5.85
>1.5 – 2.0	37	2.81
>2.0	64	4.86
Total	**1316**	**100**

Substrate

1.5.23 During the peat probing surveys across the Proposed Development, an assessment of the underlying substrate was undertaken and recorded at each of the points. The underlying geology and soils may contribute to peat stability on the Proposed Development, with clay or previous slip material being at higher risk for peat slides than gravel or rock material. In addition, if peat deposits are directly overlying an area of bedrock which is smooth with finer grain sizes, there is higher potential for peat slides to occur.

1.5.24 During peat probing surveys, when the peat probe meets refusal at the base of the peat deposit, the 'feel' of the refusal can provide insights into the nature of the underlying substrate. An assessment of the substrate was made and recorded at each probing point. The following criteria were used to assess the substrate material:

- solid and abrupt refusal – rock;
- solid refusal with grinding or crunching sound – sand or gravel or weathered bedrock;
- gradual refusal – dense peat or clay.

1.5.25 The most common superficial substrates underlying the Proposed Development were gravel and rock. In some cases across the Proposed Development, if deeper peat depths were recorded, the underlying substrate could not be determined or proved.

1.5.26 In addition, there are areas across the Proposed Development where 0 m depths were recorded. The absence of overlying soils or peat in these areas could indicate a presence of exposed bedrock, gravel or substrate material at surface level.

1.5.27 As stated previously in **Section 1.3**, an area of instability was identified within Section B of the Proposed Development. From review of aerial imagery, the peat slide originated from near the top of the slope to the southwest of proposed Tower N233. Therefore, within the hazard ranking assessment detailed in **section 1.6**, the closest probing points to this source of instability and points towards the west along the sloping hillside (to the south of proposed Towers N234, N235 and N236) have been identified as areas of elevated risk and have been assigned the highest possible substrate coefficient (5 – slip material) to account for this known area of instability. This is further detailed below in **section 1.6** and substrate coefficients are outlined in **Table 27**.

1.5.28 A summary of the most common substrates recorded across each Section of the Proposed Development are detailed below:

- Section A – Gravel (46.19%), Rock (26.17%), Clay (15.8%) and not proven (11.82%);
- Section B – Gravel (44%), Rock (27.53%), Clay (5.45%), Slip Material (0.26%) and not proven (22.76%);
- Section C – Rock (68.87%), Gravel (30,89%) and not proven (0.22%);
- Section D – Rock (56.68%), Gravel (34.17%) and not proven (9.13%); and
- Section E – Gravel (58.35%), Rock (26.21%), Clay (4.71%) and not proven (10.71%)

Limitations

1.5.29 The desk-based assessments are based on large scale mapping which does not necessarily consider the localised environment. Due to this, field surveys were completed to inform the occurrence of soil and geology on the Proposed Development.

1.5.30 Where peat depth probes have been surveyed at up to 10 m spacings for tower bases, and 50 m spacing for tracks, there may be a possibility for more localised depths between each probing point.

1.5.31 In addition, localised areas throughout the Proposed Development have not been assessed. During the ground truthing exercise[21], specific areas were discounted from targeted probing due to information collected during the desk study that informed areas with no peat, lack of peatland vegetation, farmland, steep slopes where peat cannot typically form and exposed bedrock. In addition, throughout the survey visits, there were issues such as landowner access restrictions.

1.5.32 A summary of the areas that were excluded from the probing survey are provided per Section below:

- Section A – Towers N54, N69, N108 – N111, N146;
- Section B –Towers N203, N220, N221, N264 to N266;
- Section C – Towers S23 to S27;
- Section D – Towers S74- S80, S88- S106, S111- S141 and S143 – S149; and
- Section E – Towers S150- S199.

1.6 Hazard and Exposure Assessment

Background

1.6.1 A 'Hazard Ranking' system has been applied across the Proposed Development based on the analysis of risk of peat landslide as outlined in the Scottish Government guidance. This is applied on the principle:

Hazard Ranking = Hazard x Exposure

1.6.2 Where 'Hazard' represents the likelihood or risk of any peat slide event occurring and 'Exposure' being the impact or consequences that a peat slide may have on sensitive receptors that exist on and around the study area.

Methodology

1.6.3 The determination of Hazard and Exposure values is based on a number of variables which impact the likelihood of a peat slide (the Hazard), and the relative importance of these variables specific to the Proposed Development.

1.6.4 Similarly, the consequences or exposure to the receptors is dependent on variables including the particular scale of the peat slide, the distance it will travel and the sensitivity of the receptor.

In the absence of a predefined system, the approach to determining and categorising Hazard and Exposure is determined on a Site to Site basis. The particular system adopted for the Development PLHRA assessment is outlined in the following sub-sections.

Hazard Assessment

1.6.5 The potential for a peat slide to occur during the construction of the Proposed Development depends on several factors. The factors requiring consideration typically include:

- Peat depth;
- Slope gradient;
- Substrate material;
- Hydrology;
- Distance between the closest receptor and the point being evaluated;
- Evidence of instability or potential instability; and
- Vegetation cover.

1.6.6 Of these, peat depth and slope gradient are considered to be the principal factors. Without a sufficient peat depth and a prevailing slope, peat slide hazard would be negligible. For the Development, the substate material is also considered a relevant factor in relation to slide.

1.6.7 Vegetation plays a key role on both peatland quality and in reducing the risk of instability. Vegetation provides structure to the upper soil horizons and acts as an important regulator of water content in peat above the water table. The presence of bare or eroded peat can be an indicator of instability risk due to the lack of vegetation providing stability. No bare peat and only limited areas of eroded peat have been recorded out with areas of historic peat cutting as indicated on the geomorphology map. The presence of forestry and requirements for felling can also present a risk of instability due to the removal of established root systems and resulting lack of vegetation. There are several areas of established commercial forestry throughout the Proposed Development, which may pose an increased risk of a peat slide due to vegetation clearance. Further details of vegetation and habitats present at the Proposed Development are discussed in **Volume 2, Chapter 8: Ecology and Nature Conservation** and the associated Technical Appendices.

1.6.8 Slope data across the Proposed Development is derived from the Ordnance Survey 5 m Digital Terrain Model (OS 5 m DTM). The slope gradients for the Proposed Development are illustrated per Section in **Figure 5** in **Annex A.**

1.6.9 Hazard rankings at each probe point were determined by assigning coefficients based on the principle factors outlined above: peat depths, slope gradient and substrate material.

1.6.10 The other factors have not been assigned coefficients but have nonetheless been built into and considered within the assessment. In regard to hydrology, watercourses are assigned different coefficients to reflect the sensitivity of the receptor with the distance of each probe from a watercourse affecting its hazard ranking.

1.6.11 As detailed in **Section 1.3**, one area of peat instability was recorded in Section B of the Proposed Development, with the source of the instability located directly southwest of proposed Tower N233 and spanning across the tower footprint in a north/northeasterly direction. As detailed in **Section 1.5**, this area of instability has been considered and encompassed within the hazard ranking assessment and the highest substrate coefficient (5 – slip material, as detailed in **Table 29**) has been assigned to reflect the highest potential level of hazard across the probing points adjacent to the source of the peat slide and the adjacent upgradient points within this area. Therefore, due to this application of a higher substrate coefficient across these points, the points adjacent to the upgradient area of the peat slide have been assigned a moderate to high risk rating, in line with other contributing factors (e.g. peat depth, slope). Existing peat instability was not recorded or observed throughout the remainder of the Proposed Development.

1.6.12 Due to the nature of the assessment and number of data points used the establish hazard ranking, gathering hydrological data at each probe point using groundwater boreholes and a subsequent monitoring period is considered impractical. Therefore, an assumption on groundwater levels has been adopted for the assessment that 90% of peat at each probe location is below the water table. As such, it is assumed that the water table across the Proposed Development, where peat is present, is relatively high.

Hazard Rating

1.6.13 When several factors may impact on the Hazard potential, a relative ranking process is applied attributing different weighting to each factor as shown below in **Tables 27, 28** and **29**.

Table 27: Coefficient for Slope Gradients

Slope Angle (degrees)	Slope Angle Coefficients
Slope < 2°	1
2° ≤ Slope < 4°	2
4° ≤ Slope < 8°	4
8° ≤ Slope < 15°	6
Slope > 15°	8

Table 28: Coefficients for Peat Thickness and Ground Conditions

Peat Thickness	Ground Conditions Coefficients
Peaty or organic soil (<0.5 m)	1
Thin Peat (0.5 – 1.0 m)	2
Deep peat (>1.0 m)	3*
Deep peat (>3.0 m)	8

* - Note that thicker peat generally occurs in areas of shallow gradient and records indicate that thick peat does not generally occur on the steeper gradients.

Table 29: Coefficients for Substrate

Substrate Material	Substrate Coefficients
Sand/gravel	1
Rock	1.5
Clay	2
Not proven	2
Slip material (Existing materials)	5

1.6.14 The Hazard Ranking Coefficient for a particular location is calculated using the following equation:

Hazard Rating Coefficient = Slope Gradient x Peat Thickness x Substrate

1.6.15 From the Hazard Rating Coefficient, the risk to stability can be ranked as set out in **Table 30**.

Table 30: Hazard Rating

Hazard Rating Co-efficient	Potential Stability Risk (Pre-Mitigation)
< 5 Negligible	1
5 to 15 Low	2
16 to 30 Medium	3

Hazard Rating Co-efficient	Potential Stability Risk (Pre-Mitigation)
31 to 50 High	4
>51 Very high	5

1.6.16 This risk of peat slide will be mitigated by micro-siting point with high risk of failure to shallower peat, areas that are not covered by sensitive habitat, or areas with shallower slopes, or flatter topography. Mitigation measured will also be implemented such as visual inspections and monitoring during construction in areas with the potential for peat slide risk. Best practice measures relating to drainage of the peat will also be implemented prior to and during construction in order to mitigate the risk of failure.

Peat Stability Assessment

1.6.17 The likelihood of a particular slope or hillside failing can be expressed as a Factor of Safety (FoS). For any potential failure surface, there is a balance between the weight of the potential landslide (driving force or shear force) and the inherent strength of the soil or rock within the hillside (shear resistance).

1.6.18 The stability of a slope can be assessed by calculating the factor of safety F, which is the ratio of the sum of resisting forces (shear strength) and the sum of the destabilising forces (shear stress):

$$F = \frac{c' + (\gamma - m\gamma_w) z \cos^2 \beta \tan \phi'}{\gamma z \sin \beta \cos \beta}$$

1.6.19 Where c' is the effective coefficient, γ is the bulk unit weight of saturated peat, γw is the unit weight of water, m is the height of the water table as a fraction of the peat depth, z is the peat depth in the direction of normal stress, β is the angle of the slope to the horizontal and ϕ ′ is the effective angle of internal friction. Values of F < 1 indicate a slope would have undergone failure under the conditions modelled; values of F > 1 suggest conditions of stability.

1.6.20 Peat failures occur due to a combination of pre-existing factors including the morphological, geomorphological, hydrological and geological trigger factors. Trigger factors could include heavy rainfall events, the loading of peat and the excavation of peat. Peat slides occur when a mass of peat moved as an intact body down a slope. Slide generally occur on a shear plane, usually located close to the base of the peat. The dominant failure method in peat failures identified by Boylan et al (2008)[22] in Ireland was planar failure as opposed to bog bursts.

Geotechnical Parameters

1.6.21 Peat possesses significant shear strength considering that it can consist of moisture contents of more than 900%. This can be attributed to the small amounts of solid plant matter present within the peat. Water within peat is held in three states, free water within cavities in the soil matrix, capillary water within plant matter and absorbed water bound to soil particles. Most of the water is held in the soil cavities and can therefore be removed by drainage or consolidation. The hydrological properties of peat play a significant role in the failure of peat[22].

22 Boylan et al (2008) Peat slope failure in Ireland [Online]. Available at: https://www.researchgate.net/publication/245379146_Peat_slope_failure_in_Ireland (Accessed 29 January 2025)

1.6.22 In the absence of any historical hydrological monitoring, an assumption on groundwater levels has been adopted for the assessment, that 90% of the peat column at each probe location is below the water table, an overall conservative approach. While the assessment considers the recorded data at each of the peat probes to establish hazard ranking for the purposes of the peat stability analysis, groundwater depth is conservatively assumed to be within close proximity of the surface, based on the understanding of peat and its hydrological properties that it can consist of up to 90% water by volume.

1.6.23 Assumed geotechnical parameters have been sought from various literature values and for the purposes of the assessment in this report have the following average values have been utilised in the formula to inform the stability assessment:

- C' – effective cohesion (kPa), typically ranging from 2.5 to 8.5 therefore 5.0 has been adopted for the purposes of the assessment.
- ϕ – effective angle of friction (°), typically ranging from 21.6 to 43.5 therefore 23 has been adopted for the purposes of the assessment.
- Y' – unit weight (kN/m2), typically ranging from 9.61 to 10, therefore 10 has been adopted for the purposes of the assessment.

1.6.24 In accordance with the best practice method, F values of <1.0 indicate slopes that would experience failure under the modelled conditions and as such are considered areas of high risk. However, Boylan et al (2008) indicate that a relatively high value of F=1.4 should be used to identify slopes with the potential for instability. Adopting a similar and more onerous approach, high risk areas are indicated where F is <1.0, moderate risk areas are indicated between 1.0 to 1.5, low risk negligible values > 1.5.

1.6.25 According to Boylan et al[22], it is unlikely that undrained conditions would exist for many in situ tests due to the higher permeability of peat as compared to clay soils. They found that the application of both drained and undrained analysis in peat failure analysis are questionable. Furthermore, they found that the mode of failure for peat is likely partially drained. Due to this the effective stress strength method (assuming steady seepage of groundwater parallel to ground level) was used with the abovementioned mitigation measure of increasing the F value where slip occurs.

1.6.26 Using digital terrain modelling and GPS co-ordinates of each peat probe, a factor of Safety, F has been calculated for each probe location which has been created through ArcGIS Spatial Analyst tools.

1.6.27 The Factor of Safety (FoS) analysis undertaken indicates that of the 17,371 points to date, 58 present a moderate risk and 2 present a high risk of failure. The two high risk points were identified within Section A, approximately 32 m from the central proposed location for Tower N132, and 20 m from the central proposed location for Tower N140. Both high risk points are situated on deep peat (>2 m) and steep slopes (>15 °). A summary of the moderate and high risk of failure points identified by the FoS analysis is displayed in Table **31** below.

Table 31: Number of Moderate and High Risk of Failure points per Section

Section	Number of Probe Point Locations	Number of Moderate Risk of failure points	Number of High Risk of Failure points
A	8253	37	2
B	4279	14	0
C	1749	1	0

Section	Number of Probe Point Locations	Number of Moderate Risk of failure points	Number of High Risk of Failure points
D	1774	5	0
E	1316	1	0
Total	17,371	58	2

1.6.28 The Factor of Safety Plan is presented in **Figure 6** in **Annex A**.

Exposure Assessment

1.6.29 The main exposure receptors identified along the Proposed Development and surrounding areas which could be affected in the event of a peat slide were existing infrastructure, sensitive habitats (blanket bog), dwellings, existing tracks and major and minor watercourses or waterbodies.

1.6.30 The impact of a peat slide on receptors can be assessed on a relative scale based on the potential for loss of habitat, a historical feature or disruption/danger to the public. To effectively assess the impact, the assessment of Exposure effect must also consider the distance between the hazard and the receptor, and then the relative elevation between the two.

1.6.31 Similar to the Hazard Rating, the Exposure Ratings were determined using relative ranking process by attributing the different weighting systems to each factor as shown below in Table **32, 33 and 34**.

Table 32: Coefficients for Receptor Type

Receptor	Receptor Coefficients
Road, path or track	3
Site infrastructure	3
Minor watercourse or waterbody	6
Dwelling	6
Major watercourse of waterbody	8
Sensitive Habitat	8

Table 33: Coefficients for Distance from Receptor

Distance from Receptor	Distance Coefficients
> 1 km	1
100 m ≤ 1 km	2
10 m ≤ 100 m	3
< 10 m	4

Table 34: Coefficients for Receptor Elevation

Receptor Elevation	Elevation Coefficients
< 10 m	1
10 m ≤ 50 m	2
50 m ≤ 100 m	3
> 100 m	4

1.6.32 The Exposure Hazard Ranking Coefficient for a particular location is calculated using the following equation:

Exposure Rating Coefficient = Receptor x Distance x Elevation

1.6.33 From the Hazard Rating Coefficient, the risk to stability can be ranked as set out in **Table 35**.

Table 35: Exposure Rating

Exposure Rating Coefficient	Potential Stability Risk (Pre-Mitigation)
<10	Very Low
11 to 20	Low
21 to 30	Moderate
31 to 50	High
> 51	Extremely High

Rating Normalisation

1.6.34 In order to achieve an overall Hazard Ranking in accordance with the Scottish Government Guidance, the Hazard (Risk) and Exposure (Impact) Rating Coefficient derived from the coefficient tables are normalised as shown in **Table 36.**

Table 36: Rating Normalisation

Hazard Rating		Exposure Rating	
Current Scale	**Normalised Scale**	**Current Scale**	**Normalised Scale**
< 5 Negligible	1	<10 Very Low	1
5 to 15 Low	2	11 to 20 Low	2
16 to 30 Medium	3	21 to 30 Moderate	3
31 to 50 High	4	31 to 50 High	4
> 51 Very High	5	> 51 Extremely High	5

1.6.35 The record of the Hazard Rank Assessment is included in **Figure 7** in **Annex A**.

1.7 Hazard Ranking

1.7.1 Having identified the rating coefficients as defined in **Section 11.6** of this report, it is possible to categorise areas of the Proposed Development with a Hazard Ranking by multiplying the Hazard and Exposure Rating. Hazard Ranking and associated suggested actions matrix are shown in **Table 37** and **Table 38** below:

Table 37: Hazard Ranking and Suggested Actions

Hazard Rating		Action Suggested in the Scottish Executive Guidance
17 – 25	High	Avoid apter development in these locations.
11 -16	Moderate	Project should not proceed unless hazard can be avoided or mitigated at these locations, without significant environmental impact, in order to reduce hazard rankings to low or less.
5 – 10	Low	Project may proceed pending further investigation to refine assessment. Mitigation of hazards may be required through micro-siting of re-design at these locations.
1 - 4	Negligible	Project should proceed with monitoring and mitigation of peat landslide hazards at these locations as appropriate.

Table 38: Hazard Ranking Matrix

Hazard Rating	5	Low	Low	Moderate	High	High
	4	Negligible	Low	Moderate	Moderate	High
	3	Negligible	Low	Low	Moderate	Moderate
	2	Negligible	Negligible	Low	Low	Low
	1	Negligible	Negligible	Negligible	Negligible	Low
		1	2	3	4	5
		Exposure Rating				

1.7.2 Receptor exposure was assessed for each of the hazard zones using the approach in **Section 11.6**. A summary of the Hazard Ranking result for each identified area across each OHL section is summarised in **Tables 39 – 43** and is presented in **Figure 7** in **Annex A.**

1.8 Slide Risk and Mitigation

General

This section of the PLHRA details the areas of potential slide risk across all Sections of the Proposed Development and the associated mitigation measures that should be adopted to prevent triggering ground instability. The embedded mitigation and best practice measures set out as part of this PLHRA are not exclusive and other forms of mitigation may be required during the construction of the Proposed Development. Embedded mitigation is detailed from paragraph 11.8.47**. Tables 39 – 43** provides details of the hazard zones and outlines the specific mitigation actions for each area.

<u>Section A – Spittal to Brora</u>

1.8.1 The Hazard Ranking Plan has shown the majority of Section A to be of Negligible to Low Risk of peat slide. There are localised areas with a moderate risk ranking and one point of high risk. The moderate to high risk points are generally located on areas of deep peat, steep slopes or a combination of the two.

1.8.2 The Hazard Ranking Plan for the development is shown in **Figure 7** in **Annex A**. The Hazard Ranking Plan does not take mitigation measures outlined in **Table 39** into account.

1.8.3 The moderate risk points are located throughout the northern portion of Section A, with occurrences close to the Proposed Development infrastructure. The Proposed Development infrastructure situated close to the moderate risk points include proposed Towers N21, N22, N25, N31, N33 - N35, N133, N135, N137 - N139, N153, N161, N162, N164, N165, N172 - N175, and N190 – N193, in addition to areas of access tracks to the east of Tower N133, west of Towers N172 and N173, and N176. These moderate risk points are located near the proposed infrastructure but are considered isolated occurrences and therefore, with the appropriate mitigation measures and monitoring, the risks associated with the points can be mitigated to low. All other moderate risk points identified are not located close to the Proposed Development infrastructure.

1.8.4 The high-risk point is located approximately 95 m to the northeast of Tower N103. The substrate at this point was not proven but slopes measure 5.6° and sensitive habitat receptors were identified. Deep peat was also recorded present at this point, measuring 3.45 m in depth.

1.8.5 Further to the hazard areas identified, a FoS assessment has been undertaken, which provides a sense check of the ranking based system as outlined in **Section 11.6** of this PLHRA. The 'Factor of Safety Plan' is shown in **Figure 6** in **Annex A** and demonstrates that the entirety of Section A is located in areas with low risk of peat failure.

1.8.6 Of the 8253 survey points along Section A of the Proposed Development, 37 points displayed a moderate risk with a FoS between 1 and 1.5. The moderate risk points within Section A are located across moderate to steep slopes (between 8 to 30°) and/or with deep peat (between 0.9 to 2.6 m). In addition, 2 points along Section A have a FoS lower than 1, with both points situated on steep slopes (>15°) and with deep peat (>2 m). The remaining 8214 points across Section A have all been allocated a FoS of more than 1.5, which suggests conditions across Section A are stable and there is a low likelihood of slope or hillside failure.

1.8.7 Where the hazard ranking has been lowered through mitigation measures, the original ranking will remain in the overall hazard zoning plan and it should be acknowledged that the hazard zonation plan is based on the pre-mitigation status.

1.8.8 While the specific recommended mitigation is proposed, other mitigation is embedded in the design at EIA stage. It is also necessary for detailed design and construction of the Development infrastructure to be undertaken in a competent and controlled manner.

1.8.9 The embedded mitigation and best practice measures are set out in paragraph 11.8.47 of this PLHRA. It should be noted that the mitigation measures defined are not exclusive and other forms of mitigation may be required and should be implemented during construction of the Proposed Development. **Table 39** provides details of the hazard areas across Section A and outlines specific mitigation actions for each area.

Table 39: Hazard Ranking for Section A

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
1	Tower N3 to N20 and access tracks (Refer to **Figure 7**)	Negligible	Location: This zone covers the areas around Towers N3 to N20. The majority of	No actions required.	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
			risk points in this zone are negligible. Hydrology: There are several minor watercourses within this zone. Peat Depths: Maximum peat depth in this zone is 2.3 m. Topography: In this zone elevations range from approximately 80 m AOD to 160 m AOD and encompasses a hilltop around Tower N5. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor watercourses.		
2	Tower N21 to N35 and access tracks (Refer to **Figure 7**)	Low	Location: This zone covers the areas around Towers N21 to N35. The majority of risk points in this zone are low. Hydrology: There are several minor watercourses within this zone. Peat Depths: Maximum peat depth in this zone is 5.9 m. Topography: In this zone elevations range from approximately 80 m AOD to 100 m AOD and decreases in elevation gradually to the south. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Negligible
3	Tower N36 to N40 and access tracks (Refer to **Figure 7**)	Negligible	Location: This zone covers the areas around Towers N36 to N40. The majority of risk points in this zone are low.	No actions required.	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	Infrastructure Affected	Ranking	Key Aspects	Specific Actions	Ranking
			Hydrology: There are several minor watercourses within this zone. Peat Depths: Maximum peat depth in this zone is 0.8 m. Topography: In this zone elevations range from approximately 100 m AOD to 140 m AOD and decreases in elevation gradually to the north. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses.		
4	Tower N41 to N74 and access tracks (Refer to **Figure 7**)	Low	Location: This zone covers the areas around Towers N41 to N74. The majority of risk points in this zone are low. Hydrology: There are several minor watercourses within this zone. Peat Depths: Maximum peat depth in this zone is 3.8 m. Topography: In this zone elevations range from approximately 160 m AOD to 180 m AOD and roughly follows the contours around Ben -a- Chielt and then along the head of a valley to a hilltop at Towers N72 to N74. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Negligible
5	Tower N75 to N109 and access tracks (Refer to **Figure 7**)	Low	Location: This zone covers the areas around Towers N75 to N109. The majority of risk points in this zone are low. Hydrology: There is one major water course, Dunbeath Water, and	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
			several minor watercourses within this zone. Peat Depths: Maximum peat depth in this zone is 2.7 m. Topography: In this zone elevations range from approximately 40 m AOD to 260 m AOD. Elevations decrease from Tower N75 to N84 near Dunbeath Water and gradually begin to rise before reaching a high point around Towers N103 and N104. From there elevations begin to decrease towards Tower N109. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses.	management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	
6	Tower N111 to N129 and access tracks (Refer to **Figure 7**)	Low	Location: This zone covers the areas around Towers N111 to N129. The majority of risk points in this zone are low. Hydrology: There is one major water course, Langwell Water, and several minor watercourses within this zone. Peat Depths: Maximum peat depth in this zone is 3.6 m. Topography: In this zone elevations range from approximately 40 m AOD to 220 m AOD. Elevations decrease from Tower N111 to Langwell Water and then begin to increase to a high point at Tower N120. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Negligible
7	Tower N130 to N139 and access tracks (Refer to **Figure 7**)	Moderate	Location: This zone covers the areas around Towers	Best practice measures in	Low

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
			N130 to N139. The majority of risk points in this zone are moderate. Hydrology: There are several minor watercourses within this zone. Peat Depths: Maximum peat depth in this zone is 2.9 m. Topography: In this zone elevations range from approximately 200 m AOD to 360 m AOD. Elevations rise from Tower N130 to a high point at Towers N134 and N135 before gradually decreasing. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses.	relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	
8	Tower N140 to N146 and access tracks (Refer to **Figure 7**)	Low	Location: This zone covers the areas around Towers N140 to N146. The majority of risk points in this zone are low. Hydrology: There are several minor watercourses within this zone. Peat Depths: Maximum peat depth in this zone is 1.95 m. Topography: In this zone elevations range from approximately 140 m AOD to 260 m AOD. Elevations decrease towards the east. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
				LoD where practicable.	
9	Tower N149 to N160 and access tracks (Refer to **Figure 7**)	Low	Location: This zone covers the areas around Towers N149 to N160. The majority of risk points in this zone are low. Hydrology: There are several minor watercourses within this zone. Peat Depths: Maximum peat depth in this zone is 1.2 m. Topography: In this zone elevations range from approximately 60 m AOD to 360 m AOD. Elevations rise to the east to a high point at Tower N160. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Negligible
10	Tower N161 to N165 and access tracks (Refer to **Figure 7**)	Moderate	Location: This zone covers the areas around Towers N161 to N165. The majority of risk points in this zone are moderate. Hydrology: There are several minor watercourses within this zone. Peat Depths: Maximum peat depth in this zone is 4.1 m. Topography: In this zone elevations range from approximately 260 m AOD to 360 m AOD. Elevations decrease towards the west to Tower N163 and then follow the contour of the slope to Tower N165. Receptors: Sensitive Habitats, Site Infrastructure,	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place.	Low

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
			Roads and Tracks and Minor Watercourses.	Micro-siting into areas of shallower peat within the LoD where practicable.	
11	Tower N166 to N171 and access tracks (Refer to **Figure 7**)	Low	Location: This zone covers the areas around Towers N166 to N171. The majority of risk points in this zone are low. Hydrology: There are several minor watercourses within this zone. Peat Depths: Maximum peat depth in this zone is 1.6 m. Topography: In this zone elevations range from approximately 200 m AOD to 300 m AOD. Elevations increase gradually to the west. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Negligible
12	Tower N172 to N176 and access tracks (Refer to **Figure 7**)	Moderate	Location: This zone covers the areas around Towers N172 to N176. The majority of risk points in this zone are low. Hydrology: There are several minor watercourses within this zone. Peat Depths: Maximum peat depth in this zone is 2.9 m. Topography: In this zone elevations range from approximately 280 m AOD to 340 m AOD. Elevations decrease gradually to the west, with Towers N172 to N174 being located on a high point.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential	Low

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
			Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses.	for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	
13	Tower N177 to N202 and access tracks (Refer to **Figure 7**)	Low	Location: This zone covers the areas around Towers N177 to N202. The majority of risk points in this zone are low. Hydrology: There are several minor watercourses within this zone. Peat Depths: Maximum peat depth in this zone is 3.1 m. Topography: In this zone elevations range from approximately 140 m AOD to 360 m AOD. Elevations decrease from Tower N177 to N183, before following a flat valley to Tower N189 where elevations increase steeply to a high point at Tower N193. Elevations then decrease into a valley and increase at Tower N197. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Negligible
14	Access Track to the east of Tower N202.	Negligible	Location: This zone covers the access track on the eastern side of Tower N202. The majority of risk points in this zone are negligible. Hydrology: There are several minor watercourses within this zone. Peat Depths: Maximum peat depth in this zone is 0.5 m. Topography: In this zone elevations range from approximately 20 m AOD to 80 m AOD. Elevations increase along a valley from	No action required.	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	Infrastructure Affected	Ranking	Key Aspects	Specific Actions	Ranking
			the A9 towards the Proposed Development. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses.		

Section B – Brora to Loch Buidhe

1.8.10 The Hazard Ranking Plan has shown the majority of Section B to be of Negligible to Low Risk in relation to potential instability, with four localised areas of moderate risk and two high risk areas. The moderate to high risk points are generally located on areas of deep peat and/or steep slopes or within an area of identified instability.

1.8.11 The Hazard Ranking Plan for the development is shown in **Figure 7** in **Annex A**. The Hazard Ranking Plan does not take mitigation measures outlined in **Table 40** into account.

1.8.12 The moderate risk points are located throughout the northern and central areas of Section B, with occurrences close to the Proposed Development infrastructure. Some of the Proposed Development infrastructure situated close to the moderate risk points include proposed Towers N207 to N212, the access track to the north of Tower N207, the access track to the south of N211, the access track between Towers N212 and N215, Towers N229 to N232, Towers N237 to N238, and Towers N246 to N249. The majority of these moderate risk points are located near the proposed infrastructure but are generally considered isolated occurrences. The Hazard Ranking Plan identified four moderate risk zones within Section B, however, with the implementation of appropriate mitigation measures and monitoring, the risks associated with the points can be mitigated to low. All other moderate risk points identified across Section B are not located close to the Proposed Development infrastructure or are not considered to be of elevated risk in relation to Proposed Development infrastructure.

1.8.13 The most significant area of high risk within Section B was identified around and adjacent to proposed Towers N233 to N236. This is due to the area of peat instability that was identified to the southwest of proposed Tower N233 and as a result, the upgradient points located on the hillside adjacent to this area of instability have been assigned a maximum substrate coefficient. This has resulted in high risk points across this area of instability and similar upgradient locations on the hillside to the south of these towers.

1.8.14 The other area of high risk across Section B is associated with a singular isolated high risk point located on the outer limit of an access track, approximately 300 m to the southeast of Tower N213. The substrate at this point was not proven but slopes measure 6.2° and sensitive habitat receptors were identified. Deep peat was also recorded at this point, measuring 3.55 m in depth. Since this high risk point is an isolated, very localised occurrence, this point of high risk has been included within a moderate hazard zone area.

1.8.15 Further to the hazard areas, a FoS assessment has been undertaken, which provides a sense check of the ranking based system as outlined in **Section 11.6** of this PLHRA. The 'Factor of Safety Plan' is shown in **Figure 6** in **Annex A** and demonstrates that the majority of Section B is located in areas with low risk of failure.

1.8.16 Of the 4279 survey points along Section B of the Proposed Development, 14 points displayed a moderate risk with a FoS between 1 and 1.5. The moderate risk points within Section B are situated across moderate to steep slopes (11 to 28°) and/or with deep peat (0.9 to 2.7 m). The remaining 4265 points along the Proposed

Development all have a FoS greater than 1.5, which suggests conditions across Section B are stable and there is a low likelihood of instability across slopes in these areas.

1.8.17 Where the hazard ranking has been lowered through mitigation measures, the original ranking will remain in the overall hazard zoning plan and it should be acknowledged that the hazard zonation plan is based on the pre-mitigation status.

1.8.18 While the specific recommended mitigation is proposed, other mitigation is embedded in the design at EIA stage. It is also necessary for detailed design and construction of the Development infrastructure to be undertaken in a competent and controlled manner.

1.8.19 The embedded mitigation and best practice measures are set out in paragraph 11.8.47 of this PLHRA. Note that the mitigation measures defined are not exclusive and other mitigation forms may be required and should be implemented during construction of the Proposed Development. **Table 40** provides details of the hazard areas and outlines specific mitigation actions for each area.

Table 40: Hazard Rank for Section B

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
1	Tower N202 to N207 and access tracks (Refer to **Figure 7**)	Low	Location: This zone covers the areas around Towers N202 to N207. The majority of risk points in this zone are low. Hydrology: There are several minor watercourses within this zone. Peat Depths: Maximum peat depth in this zone is 1 m. Topography: In this zone elevations range from approximately 190 m AOD to 290 m AOD and encompasses a valley Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor watercourses.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Negligible
2	Towers N208 to N212 and access tracks (Refer to **Figure 7**)	Moderate	Location: This zone covers the areas around Towers N208 to N212. The majority of risk points in this zone are low to moderate.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as	Low

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
			Hydrology: There are several minor watercourses within this zone. Peat Depths: Maximum peat depth in this zone is 4.5 m. Topography: In this zone elevations range from approximately 290 m AOD to 320 m AOD and slopes to the west. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses	outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	
3	Tower N213 to N216 and access tracks (Refer to **Figure 7**)	Low	Location: This zone covers the areas around Towers N213 to N216. The majority of risk points in this zone are low. Hydrology: There is one minor watercourse within this zone. Peat Depths: Maximum peat depth in this zone is 2.3 m. Topography: In this zone elevations range from approximately 150 m AOD to 280 m AOD and slopes to the west. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Negligible
4	Tower N217 to N219 and access tracks (Refer to **Figure 7**)	Negligible	Location: This zone covers the areas around Towers N217 to N219. The majority of risk points in this zone are negligible. Hydrology: There are several minor watercourses within this zone.	No actions required.	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
			Peat Depths: Maximum peat depth in this zone is 2 m. Topography: In this zone elevations range from approximately 20 m AOD to 170 m AOD and slopes to the west. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses		
5	Tower N222 to N225 and access tracks (Refer to **Figure 7**)	Negligible	Location: This zone covers the areas around Towers N222 to N225. The majority of risk points in this zone are negligible. Hydrology: There are several minor watercourses within this zone. Peat Depths: Maximum peat depths in this zone are 1 m. Topography: In this zone elevations range from approximately 40 m AOD to 150 m AOD and slopes to the east. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses	No actions required.	Negligible
6	Tower N226 to N228 and access tracks (Refer to **Figure 7**)	Low	Location: This zone covers the areas around Towers N226 to N228. The majority of risk points in this zone are low. Hydrology: There are no watercourses within this zone. Peat Depths: Maximum peat depths in this zone are 5 m.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**.	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
			Topography: In this zone elevations range from approximately 40 m AOD to 150 m AOD and slopes to the east. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks	During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place.	
7	Tower N229 to N232 and access tracks (Refer to **Figure 7**)	Moderate	Location: This zone covers the areas around Towers N229 to N232. Hydrology: There are no mapped watercourses this zone. Peat Depths: Maximum peat depths in this zone are 3.1 m. Topography: In this zone elevations range from approximately 220 m AOD to 310 m AOD and generally slopes to the northeast/east. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Low
8	Tower N233 to Tower N236 and access tracks (Refer to **Figure 7**)	High	Location: This zone covers the areas around Towers N233 to N236. The majority of risk points in this zone are moderate with localised high risk points located in the upgradient southern area of this zone. Hydrology: There is a minor watercourse mapped to the north of this zone. Peat Depths: Maximum peat depths in this zone are 1.9 m. Topography: In this zone elevations range from approximately 310 m AOD	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP.** During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place.	Moderate

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
			to 400 m AOD and generally slopes to the northeast/north. Instability: There is an area of peat instability located to the southwest of Tower N233, therefore, the maximum substrate coefficients have been applied to points adjacent to the slide source and the adjacent upgradient hillsides. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor watercourses.	Micro-siting into areas of shallower peat within the LoD where practicable.	
9	Tower N237 to N238 and access tracks (Refer to **Figure 7**)	Moderate	Location: This zone covers the areas around Towers N237 to N238. The majority of risk points in this zone are moderate. Hydrology: There is a minor watercourse mapped to the north of this zone. Peat Depths: Maximum peat depths in this zone are 1.9 m. Topography: In this zone elevations range from approximately 300 m AOD to 400 m AOD and generally slopes to the southwest. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor watercourses.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2:Outline PMP.** During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Low
10	Tower N239 to N240 and access tracks (Refer to **Figure 7**)	Low	Location: This zone covers the area around from Tower N239 - N240. The majority of risk points in this zone are low.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	Infrastructure Affected	Ranking	Key Aspects	Specific Actions	Ranking
			Hydrology: There is one minor watercourse in this zone. Peat Depths: Maximum peat depths in this zone are 0.8 m. Topography: In this zone elevations range from approximately 230 m AOD to 340 m AOD and slopes to the southwest. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses	management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	
11	Tower N241 to N245 and access tracks (Refer to **Figure 7**)	Negligible	Location: This zone covers the area around Towers N241 and N245. The majority of risk points in this zone are negligible. Hydrology: There are minor watercourses in this zone. Peat Depths: Maximum peat depths in this zone are 3.5 m. Topography: In this zone elevations range from approximately 140 m AOD to 260 m AOD and encompasses a gradual sloping valley. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses	No actions required.	Negligible
12	Track between Towers N244 and N245 (Refer to **Figure 7**)	Low	Location: This zone covers the access track that joins the OHL route between Towers N244 and N245. The majority of risk points in this zone are low.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5,**	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
			Hydrology: There are minor watercourses and streams in this zone. Peat Depths: Maximum peat depths in this zone are 4.1 m. Topography: In this zone elevations range from approximately 190 m AOD to 210 m AOD. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses	**Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	
13	Tower N246 to N249 and access tracks (Refer to **Figure 7**)	Moderate	Location: This zone covers the areas between Towers N246 to N249 and access tracks. The majority of risk points in this zone are low to moderate. Hydrology: There is one minor watercourse in this zone. Peat Depths: Maximum peat depths in this zone are 4.1 m. Topography: In this zone elevations range from approximately 250 m AOD to 320 m AOD and slopes to the east. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Low
14	Tower N250 to N254 and access tracks (Refer to **Figure 7**)	Low	Location: This zone covers the areas between Towers N250 to N254 and access tracks. The majority of risk points in this zone are low.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5,**	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
			Hydrology: There are several minor watercourses in this zone. Peat Depths: Maximum peat depths in this zone are 3.9 m. Topography: In this zone elevations range from approximately 220 m AOD to 330 m AOD and slopes to the west. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Minor Watercourses.	**Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	
15	Tower N255 to N263 and access tracks (Refer to **Figure 7**)	Negligible	Location: This zone covers the areas between Towers N255 to N263 and access tracks. The majority of risk points in this zone are negligible. Hydrology: There are several minor watercourses in this zone. Peat Depths: Maximum peat depths in this zone are 1.5 m. Topography: In this zone elevations range from approximately 10 m AOD to 170 m AOD with steep elevations around Tower N263. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Watercourses.	No actions required.	Negligible
16	Tower N267 to N270 and access tracks (Refer to **Figure 7**)	Negligible	Location: This zone covers the areas between Towers N267 to N270 and access tracks. There are two moderate risk points located within this zone however the majority of risk	No actions required.	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	Infrastructure Affected	Ranking	Key Aspects	Specific Actions	Ranking
			points in this zone are negligible. Hydrology: There is one major watercourse situated in proximity to this zone (the River Fleet) and two minor watercourses. Peat Depths: Maximum peat depths in this zone are 1.8 m. Topography: In this zone elevations range from approximately 50 m AOD to 210 m AOD with steep elevations at and adjacent to Tower N267 and N268, sloping northeast. Towers N269 and N270 are situated on ground generally sloping southwest and south. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks, Dwellings, and Watercourses.		
17	Tower N271 to Gantry and access tracks (Refer to **Figure 7**)	Low	Location: This zone covers the most southerly area of Section B between Towers N271 to the Gantry. There are a few isolated moderate risk points within this zone, however, the majority of risk points in this zone are low. Hydrology: There is one major watercourse (Strath Carnaig) and several minor watercourses in this zone. Peat Depths: Maximum peat depths in this zone are 2.6 m. Topography: In this zone elevations range from approximately 90 m AOD to 250 m AOD. The zone	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	Infrastructure Affected	Ranking	Key Aspects	Specific Actions	Ranking
			crosses through undulating terrain. Towers N271 to N275 are situated across ground generally sloping southeast and Towers N276 to the Gantry are situated on ground sloping towards the north. Receptors: Sensitive Habitats, Site Infrastructure, Roads and Tracks and Watercourses.		

Section C – Loch Buidhe to Dounie

1.8.20 The Hazard Ranking Plan has shown the majority of Section C to be of a Negligible to Low Risk with isolated points that are of moderate risk of a potential peat slide. The moderate points are generally situated across areas of deep peat, steep slopes or a combination of the two.

1.8.21 The Hazard Ranking Plan for the development is shown in **Figure 7** in **Annex A**. The Hazard Ranking Plan does not take mitigation measures outlined in **Table 41** into account.

1.8.22 The moderate risk points are located throughout the northern portion of Section C, with isolated occurrences of moderate risk points close to the Proposed Development infrastructure. Moderate risk points identified are within close proximity of the following Proposed Infrastructure, Towers S1 to S4 and along the access track to the north of Towers S15 and S16. These moderate risk points are located near the proposed infrastructure but are considered isolated occurrences and therefore, with the appropriate mitigation measures and monitoring, the risks associated with the points can be mitigated to low. All other moderate risk points identified are not located close to the Proposed Development infrastructure.

1.8.23 No high risk points were found along Section C during the hazard ranking assessment.

1.8.24 Further to the hazard areas, a FoS assessment has been undertaken, which provides a sense check of the ranking based system as outlined in section 11.6 of this PLHRA. The ‘Factor of Safety Plan’ is shown in **Figure 6** in **Annex A** and demonstrates that the majority of Section C is at low risk of failure.

1.8.25 Of the 1749 survey points along Section C of the Proposed Development, 1 point displayed a moderate risk with a FoS between 1 and 1.5. The moderate risk point within Section C is located on a steep slope (6°) with deep peat (3.8 m). The remaining 1748 points along the Proposed Development all have a FoS greater than 1.5, which suggests conditions across Section C are stable and there is a low likelihood of instability across slopes in these areas.

1.8.26 Where the hazard ranking has been lowered through mitigation measures, the original ranking will remain in the overall hazard zoning plan and it should be acknowledged that the hazard zonation plan is based on the pre-mitigation status.

1.8.27 While the specific recommended mitigation is proposed, other mitigation is embedded in the design at EIA stage. It is also necessary for detailed design and construction of the Development infrastructure to be undertaken in a competent and controlled manner.

1.8.28 Embedded mitigation and best practice measures are set out in paragraph 11.8.47 of this PLHRA. It should be noted that the mitigation measures defined are not exclusive and other forms of mitigation may well be required and should be implemented during construction of the Proposed Development. **Table 41** provides details of the hazard areas and outlines specific mitigation actions for each area.

Table 41: Hazard Rank for Section C

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	Infrastructure Affected	Ranking	Key Aspects	Specific Actions	Ranking
1	Towers S1 to S13 (Refer to **Figure 7**)	Low	Location: This zone covers the most northerly portion of Section C between Towers S1 to S13. Within this section there are 3 moderate risk points. The majority of risk points in this zone are low. Hydrology: There are several minor watercourses in this zone. Peat Depths: Maximum peat depths in this zone are 3.8 m. Topography: In this zone elevations range from 180 m AOD to 200 m AOD. The whole zone runs from an area of shallow gradient around Towers S1 to S3 and then along the contour of a southward facing slope. Receptors: Sensitive Habitats, Site Infrastructure and Minor Watercourses.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Negligible
2	Access track on the northern side of Towers S15 and S16 (Refer to **Figure 7**)	Low	Location: This zone covers the access track between Towers S15 and S16 in the northern portion of Section C. Within this section there is 1 moderate risk points. The majority of risk points in this zone are low and negligible. Hydrology: There are several minor watercourses in this zone.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	Infrastructure Affected	Ranking	Key Aspects	Specific Actions	Ranking
			Peat Depths: Maximum peat depth in this zone is 3.20 m. Topography: In this zone elevations range from 150 m AOD to 195 m AOD. The whole zone slops to the west. Receptors: Sensitive Habitats, Site Infrastructure and Minor Watercourses	for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	
3	Towers S14 – S22 (Refer to **Figure 7**)	Negligible	Location: This zone covers the OHL from Towers S14 to S22. The majority of risk points within this zone are negligible with a few isolated low points around Tower S28, S29 and S32. Hydrology: There are several minor watercourses in this zone. Peat Depths: Maximum peat depth in this zone is 3.6 m. Topography: In this zone elevations range from 20 m AOD to 190 m AOD and slopes gradually towards the southwest. Receptors: Sensitive habitats, Site infrastructure and minor watercourses, roads and tracks.	No action required.	Negligible
4	Towers S28 – S37 (Refer to **Figure 7**)	Negligible	Location: This zone covers the OHL from Towers S28 to S37. The majority of risk points within this zone are negligible with a few isolated low points around Tower S28, S29 and S32. Hydrology: There are several minor watercourses in this zone. Peat Depths: Maximum peat depth in this zone is 2.8 m.	No action required.	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	Infrastructure Affected	Ranking	Key Aspects	Specific Actions	Ranking
			Topography: In this zone elevations range from 80 m AOD to 160 m AOD and encompasses a ridgeline with Tower S33 located at the highest point with slopes on the northern and southern sides. Receptors: Sensitive Habitats, Site Infrastructure and Minor Watercourses		

Section D – Dounie to Near Strathpeffer

1.8.29 The Hazard Ranking Plan has shown the majority of Section D to be of Negligible to Low Risk with isolated points that are of moderate risk of a peat slide. The moderate points are generally located on areas of deep peat, steep slopes or a combination of the two.

1.8.30 The Hazard Ranking Plan for the development is shown in **Figure 7** in **Annex A**. The Hazard Ranking Plan does not take mitigation measures outlined in **Table 42** into account.

1.8.31 The moderate risk points are located throughout the northern portion of Section D, with occurrences close to the Proposed Development infrastructure. Some of the Proposed Development infrastructure situated close to the moderate risk points include proposed Towers S43, S44, S51 to S53, S56, S67 to S70, S82, S83, S107 and S108. These moderate risk points are located near the proposed infrastructure but are considered isolated occurrences and therefore, with the appropriate mitigation measures and monitoring, the risks associated with the points can be mitigated to low. All other moderate risk points identified are not located close to the Proposed Development infrastructure.

1.8.32 No high risk points were found along Section D during the hazard ranking.

1.8.33 Further to the hazard areas, a FoS assessment has been undertaken, which provides a sense check of the ranking based system as outlined in **section 11.6** of this PLHRA. The 'Factor of Safety Plan' is shown **in Figure 6** in **Annex A** and demonstrates that the whole of Section D is located in areas with low risk of failure.

1.8.34 Of the 1774 survey points along Section D of the Proposed Development, 5 points displayed a medium risk with a FoS between 1 and 1.5. The medium risk points within Section D are located on steep slopes ranging between 10 to 22° and/or with deep peat ranging from 1.4 to 2.5 m. In addition, 1 point along Section D had a FoS lower than 1, this point is located on steep slope (16°) with deep peat measuring 2.7 m. The remaining 1768 points along the Proposed Development all have a FoS of more than 1.5, which suggests conditions across Section D are stable and there is a low likelihood of instability across slopes in these areas.

1.8.35 Where the hazard ranking has been lowered through mitigation measures, the original ranking will remain in the overall hazard zoning plan and it should be acknowledged that the hazard zonation plan is based on the pre-mitigation status.

1.8.36 Whilst the specific recommended mitigation is proposed, other mitigation is embedded in the design at EIA stage. It is also necessary for detailed design and construction of the Development infrastructure to be undertaken in a competent and controlled manner.

1.8.37 Embedded mitigation and best practice measures are set out in paragraph 11.8.47 of this PLHRA. It should be noted that the mitigation measures defined are not exclusive and other forms of mitigation may well be required and should be implemented during construction of the Proposed Development. **Table 42** provides details of the hazard areas and outlines specific mitigation actions for each area.

Table 42: Hazard Rank in Section D

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
1	Towers S40 to S49 (Refer to **Figure 7**)	Low	Location: This zone covers the OHL from Towers S40 to S49. The majority of risk points within this zone are low with isolated moderate points between Tower S43 and S44 and between S45 and S46. Hydrology: There is one major water course in this zone and several minor watercourses. Peat Depths: Maximum peat depth in this zone is 2.6 m. Topography: In this zone elevations range from 60 m AOD to 300 m AOD and slopes steeply to the north. Receptors: Sensitive habitats, Site infrastructure and minor watercourses.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP.** During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Negligible
2	Towers S50 to S53 (Refer to **Figure 7**)	Moderate	Location: This zone covers the OHL from Towers S50 to S53. The majority of risk points within this zone are moderate. Hydrology: There are several minor watercourses in this zone.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**.	Low

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
			Peat Depths: Maximum peat depth in this zone is 2.4 m. Topography: In this zone elevations range from 340 m AOD to 380 m AOD and slopes steeply to the east. Receptors: Sensitive habitats, Site infrastructure and minor watercourses.	During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	
3	Towers S54 to S66 (Refer to **Figure 7**)	Low	Location: This zone covers the OHL from Towers S54 to S66. The majority of risk points within this zone are low with isolated moderate points near Towers S56, S57, S58, S62 to S66. Hydrology: There are several minor watercourses in this zone. Peat Depths: Maximum peat depth in this zone is 3.6 m. Topography: In this zone elevations range from 260 m AOD to 340 m AOD and slopes gradually to the north. Receptors: Sensitive habitats, Site infrastructure and minor watercourses.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP.** During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Negligible
4	Towers S67 to S70 (Refer to **Figure 7**)	Moderate	Location: This zone covers the OHL from Towers S67 to S70. The majority of risk points within this zone are moderate. Hydrology: There are several minor watercourses in this zone.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP.**	Low

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
			Peat Depths: Maximum peat depth in this zone is 5 m. Topography: The elevation in this zone is relatively flat and lies at 240 m AOD. Receptors: Sensitive habitats, Site infrastructure.	During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	
5	Towers S71 to S73 (Refer to **Figure 7**)	Low	Location: This zone covers the OHL from Towers S71 to S73. The majority of risk points within this zone are negligible to low with a one isolated moderate points between Tower S71 and S72. Hydrology: There are several minor watercourses in this zone. Peat Depths: Maximum peat depth in this zone is 5 m. Topography: In this zone elevations range from 280 m AOD to 320 m AOD and slopes gradually to the south. Receptors: Sensitive habitats, Site infrastructure and minor watercourses.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP.** During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Negligible
6	Towers S81 to S87 and access track (Refer to **Figure 7**)	Low	Location: This zone covers the OHL from Towers S81 to S87. The majority of risk points within this zone are low with a few isolated moderate points around Towers S83 and between Towers S85 and S86. Hydrology: There are several minor	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP.**	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
			watercourses in this zone. Peat Depths: Maximum peat depth in this zone is 5 m. Topography: In this zone elevations range from 300 m AOD to 400 m AOD with Tower S83 at a high point and slopes to the north and south. Receptors: Sensitive habitats, Site infrastructure and minor watercourses.	During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	
7	Tower S107 to S110 (Refer to **Figure 7**)	Low	Location: This zone covers the OHL from Towers S107 to S110. The majority of risk points within this zone are low with a few isolated moderate points around Tower S107. Hydrology: There are several minor watercourses in this zone. Peat Depths: Maximum peat depth in this zone is 3.6 m. Topography: In this zone elevations range from 260 m AOD to 300 m AOD and slopes gradually to the south. Receptors: Sensitive habitats, Site infrastructure and minor watercourses.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Negligible
8	Tower S142 (Refer to **Figure 7**)	Low	Location: This zone covers the OHL around Tower S142. The majority of risk points within this zone are low with one moderate point	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
			to the south of the Tower. Hydrology: Bhainn Sgitheach and its associated tributaries are present within this zone. Peat Depths: Maximum peat depth in this zone is 1.0 m. Topography: The elevation of this zone is 280 m AOD. Receptors:	of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	

Section E – Near Strathpeffer to Beauly

1.8.38 The Hazard Ranking Plan has shown the majority of Section E to be of a Negligible to Low Risk with isolated points that are of moderate risk of a peat slide. The moderate points are generally located on areas of deep peat, steep slopes or a combination of the two.

1.8.39 The Hazard Ranking Plan for the development is shown in **Figure 7** in **Annex A**. The Hazard Ranking Plan does not take mitigation measures outlined in **Table 43** into account.

1.8.40 The moderate risk points are located throughout the northern portion of Section E, with isolated occurrences close to the Proposed Development infrastructure. Some of the Proposed Development infrastructure situated close to the moderate risk points include proposed Towers S207, S209, S210, S216, S219, S220 and S221 as well as along the access tracks on the southern side of proposed Tower S209, the northern side of Towers S217 and S218 and on the southern side of Tower S222. These moderate risk points are located near the proposed infrastructure but are considered isolated occurrences. The Hazard Ranking plan identified one moderate risk zone, with the appropriate mitigation measures and monitoring, the risks associated with the points can be mitigated to low. All other moderate risk points identified are not located close to the Proposed Development infrastructure.

1.8.41 No high-risk points were found along Section E during the hazard ranking.

1.8.42 Further to the hazard areas, a FoS assessment has been undertaken, which provides a sense check of the ranking based system as outlined in **Section 11.6** of this PLHRA. The ‘Factor of Safety Plan’ is shown in **Figure 6** in **Annex A** and demonstrates that the majority of Section E is located in areas with low risk of failure.

1.8.43 Of the 1316 survey points along Section E of the Proposed Development, 1 point displayed a moderate risk with a FoS between 1 and 1.5. The moderate risk point within Section E is located on steep slope 18° and with deep peat measuring 1.7 m. The remaining 1315 points along the Proposed Development all have a FoS of greater than 1.5, which suggests conditions across Section E are stable and there is a low likelihood of instability across slopes in these areas.

1.8.44 Where the hazard ranking has been lowered through mitigation measures, the original ranking will remain in the overall hazard zoning plan, and it should be acknowledged that the hazard zonation plan is based on the pre-mitigation status.

1.8.45 While the specific recommended mitigation is proposed, other mitigation is embedded in the design at EIA stage. It is also necessary for detailed design and construction of the Development infrastructure to be undertaken in a competent and controlled manner.

1.8.46 Embedded mitigation and best practice measures are set out in paragraph 11.8.47 of this PLHRA. It should be noted that the mitigation measures defined are not exclusive and other forms of mitigation may well be required and should be implemented during construction of the Proposed Development. **Table 43** provides details of the hazard areas and outlines specific mitigation actions for each area.

Table 43: Hazard Rank for Section E

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
1	Towers S200 to S203 and access track (Refer to **Figure 7**)	Negligible	Location: This zone covers the OHL from Towers S200 to S203 The majority of risk points within this zone are negligible. Hydrology: There are no watercourses in this zone. Peat Depths: Maximum peat depth in this zone is 1.8 m. Topography: In this zone elevations range from 260 m AOD to 320 m AOD encompasses a ridgeline with Tower S201 located at the highest point with slopes on the northern and southern sides. Receptors: Sensitive habitats, Site infrastructure and roads and tracks.	No action required.	Negligible
2	Towers S204 to S215 and access tracks (Refer to **Figure 7**)	Low	Location: This zone covers the OHL from Towers S204 to S215 and access tracks. The majority of risk points within this zone are low.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
			Hydrology: There are several minor watercourses in this zone. Peat Depths: Maximum peat depth in this zone is 6.3 m. Topography: In this zone elevations range from 250 m AOD to 370 m AOD. Receptors: Sensitive habitats, Site infrastructure, minor watercourses, and roads and tracks.	management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	
3	Access track west of Towers S217 and S218 (Refer to **Figure 7**)	Moderate	Location: This zone covers a section of the access track west of Towers S217 and S218. The majority of risk points within this zone are moderate. Hydrology: There is one minor watercourses in this zone. Peat Depths: Maximum peat depth in this zone is 6 m. Topography: In this zone elevations range from 170 m AOD to 350 m AOD. Receptors: Sensitive habitats.	Best practice measures in relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	Low
4	Towers S216 to S221 and access	Low	Location: This zone covers a section of the	Best practice measures in	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
	tracks (Refer to **Figure 7**)		access track west of Towers S216 and S221. The majority of risk points within this zone are low. Hydrology: There are several minor watercourses in this zone. Peat Depths: Maximum peat depth in this zone is 2.9 m. Topography: In this zone elevations range from 180 m AOD to 260 m AOD. Receptors: Sensitive habitats, Site infrastructure minor watercourses and roads and tracks.	relation to drainage prior to and during construction will be implemented as well as the management of peat and peaty soils as outlined in **Volume 5, Appendix 11.2 Outline PMP**. During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place. Micro-siting into areas of shallower peat within the LoD where practicable.	
5	Towers S222 to S226 and access tracks (Refer to **Figure 7**)	Negligible	Location: This zone covers a section of the access track west of Towers S222 and S226. The majority of risk points within this zone are negligible. Hydrology: There are several minor watercourses in this zone. Peat Depths: Maximum peat depth in this zone is 0.8 m. Topography: In this zone elevations range from 180 m AOD to 250 m AOD. Receptors: Sensitive habitats, Site infrastructure minor watercourses and roads and tracks	No action required.	Negligible

Embedded Mitigation

1.8.47 Embedded mitigation includes measures taken during the design of the Proposed Development as actively informed by the peat probing survey work to reduce the potential risk of a peat slide. In summary, the principal measures that have been considered include:

- The use of floating tracks where peat depths are > 1.0 m, where practicable (the location of floating tracks can be viewed in **Figure 8** in **Annex A**);
- Locating infrastructure on shallow slopes where practicable; and
- Locating infrastructure on areas of shallow peat (or no peat) where practicable.

Peat Slide Mitigation Recommendations

The following mitigation measures should be adopted post consent stage to validate the PLHRA and influence the detailed design of the Proposed Development:

- Ground investigations prior to detailed design;
- The implementation of best practice methods as outlined in the Construction Environment Management Plan (CEMP);
- Visual inspections to be completed in areas of moderate risk, as identified by this PLHRA, during construction and for a period after and during heavy rainfall events to identify risk to slope stability;
- Ensuring construction site staff are aware of peat stability by incorporating the issue in the site induction to be undertaken (e.g. peat instability indicators and good construction practice);
- Development of a geotechnical risk register;
- Employment of a geotechnical specialist to oversee and monitor the construction of the Proposed Development;
- Production of an Emergency Peat Plan used to provide instructions to site staff in the event of a peat slide or discovery of potential peat instability indicators;
- Identification of areas sensitive to changes in drainage regime prior to detailed design;
- Update the PLHRA as necessary following detailed ground investigations;
- Minimisation of ‘undercutting’ peat slopes and if this is necessary, a more detailed assessment (including geotechnical assessment) of the targeted area would be required;
- Development of a drainage strategy that will not create areas of concentrated flow and will not affect the current peatland hydrology, particularly in areas where a moderate or high peat slide risk has been identified;
- Developing methodologies to prevent degradation and erosion of exposed peat deposits to minimise effects on peat morphology and associated hydrology. This includes limiting vehicle movements on untracked ground to reduce the impact on areas of peat, reducing surface cover loss, soil compaction and impacts on areas of peat or areas with softer drift deposits / soils and steeper slopes;
- Design of a Proposed Development drainage system for tracks and hardstandings that will require minimal ongoing maintenance during the operation of the OHL;
- Inspection and maintenance of the drainage system during construction and operation;
- Identification of suitable areas for stockpiling material during construction prior to commencement of works; and,
- Consideration of specific construction methods appropriate for infrastructure in peatland (i.e. geogrids) as part of the design development.

1.9 Conclusions

1.9.1 This PLHRA has been undertaken for the Proposed Development in accordance with Scottish Government guidance, as outlined in **Section 11.2** of this PLHRA. The early stages of the assessment included a desk study, historical review, and several phases of detailed peat probing to target the finalised Proposed Development layout design. The information gathered during these assessments was used to develop the Hazard Ranking across all Sections of the Proposed Development.

Section A – Spittal to Brora

1.9.2 Peat depth assessments across Section A concluded that there are both continuous (>1 km) and isolated areas of deep peat (>1m) within this Section, however, the majority (76.22%) of this Section of the Proposed Development is underlain by thin soils and peat less than 1 m in depth. There is a risk of peat slide throughout Section A and proposed infrastructure should be micro-sited out of moderate risk areas where possible. Any remaining risks can be mitigated through construction monitoring and proper drainage where required. According to the hazard risk assessment, Section A is at low to negligible risk after mitigation measures have been implemented.

Section B – Brora to Loch Buidhe

1.9.3 Peat depth assessments across Section B concluded that there are both continuous (>1 km) and isolated areas of deep peat within this Section, however, the majority (81.39%) of this Section of the Proposed Development is underlain by thin soils and peat less than 1 m in depth. There is a risk of peat slide throughout Section B and proposed infrastructure should be micro-sited out of high and moderate risk areas where possible. Any remaining risks can be mitigated through construction monitoring and proper drainage where required. According to the hazard risk assessment, Section B is at a moderate to negligible risk after mitigation measures have been implemented.

Section C – Loch Buidhe to Dounie

1.9.4 Peat depth assessments across Section C concluded that there are isolated areas of deep peat within this Section, however, the majority (79.22%) of this Section of the Proposed Development is underlain by thin soils and peat less than 1 m in depth. There is a risk of peat slide throughout Section C and proposed infrastructure should be micro-sited out of moderate risk areas where possible. Any remaining risks can be mitigated through construction monitoring and proper drainage where required. According to the hazard risk assessment, Section C is at a negligible risk after mitigation measures have been implemented.

Section D – Dounie to Near Strathpeffer

1.9.5 Peat depth assessments across Section D concluded that there are isolated areas of deep peat within this Section of deep peat, however, the majority (68.83%) of the Proposed Development is underlain by thin soils and peat less than 1 m in depth. There is a risk of peat slide throughout Section D and proposed infrastructure should be micro-sited out of moderate risk areas where possible. Any remaining risks can be mitigated through construction monitoring and proper drainage where required. According to the hazard risk assessment, Section D is at a low to negligible risk after mitigation measures have been implemented.

Section E – Near Strathpeffer to Beauly

1.9.6 Peat depth assessments across Section E concluded that there are both continuous (>1 km) and isolated areas of deep peat within this Section, however, the majority (86.48%) of this Section of the Proposed Development is underlain by thin soils and peat less than 1 m in depth. There is a risk of peat slide throughout Section E and proposed infrastructure should be micro-sited out of moderate risk areas where possible. Any remaining risks

can be mitigated through construction monitoring and proper drainage where required. According to the hazard risk assessment, Section E is at a low to negligible risk after mitigation measures have been implemented.

1.9.7 Based on the scope of the study, the PLHRA has indicated that the Proposed Development is generally of a low to negligible hazard ranking, with limited areas of moderate hazard ranking. It is considered that following the implementation of the mitigation measures outlined in **Tables 39 – 43** and paragraph 11.8.44 of this PLHRA, the maximum residual hazard posed to the Proposed Development will be low.

1.9.8 Notwithstanding this, infrastructure locations and existing conditions at the Proposed Development should be monitored at the time of construction and micro-siting adopted in order to maintain the design objective of avoiding any potential slide risk.

ANNEX A FIGURES

Tower Location
Alignment Section A
Special Arrangement
Limit of Deviation
Temporary Tower Compound Area
Equipotential Zone (EPZ) (Pulling Position)
Temporary Access Track - Cut/Fill
Temporary Access Track - EPZ
Permanent Access Track - Cut/Fill
Permanent Access Tracks - Floating
Alignment Section Break

Gantry
N1
N5
N10
N15

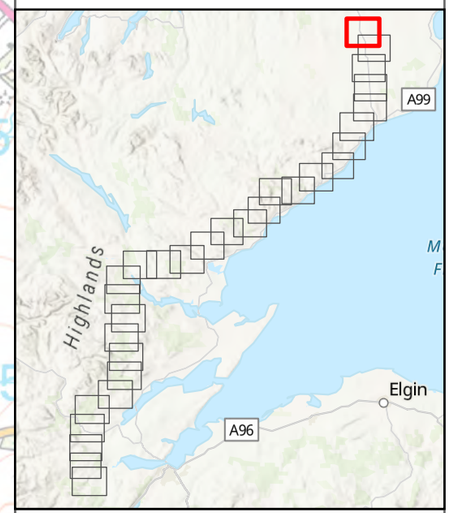


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Figure 1 - 1
Spittal - Loch Buidhe - Beauly 400 kV OHL Connection
Peat Landslide Hazard and Risk Assessment
Site Layout

ERM
Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

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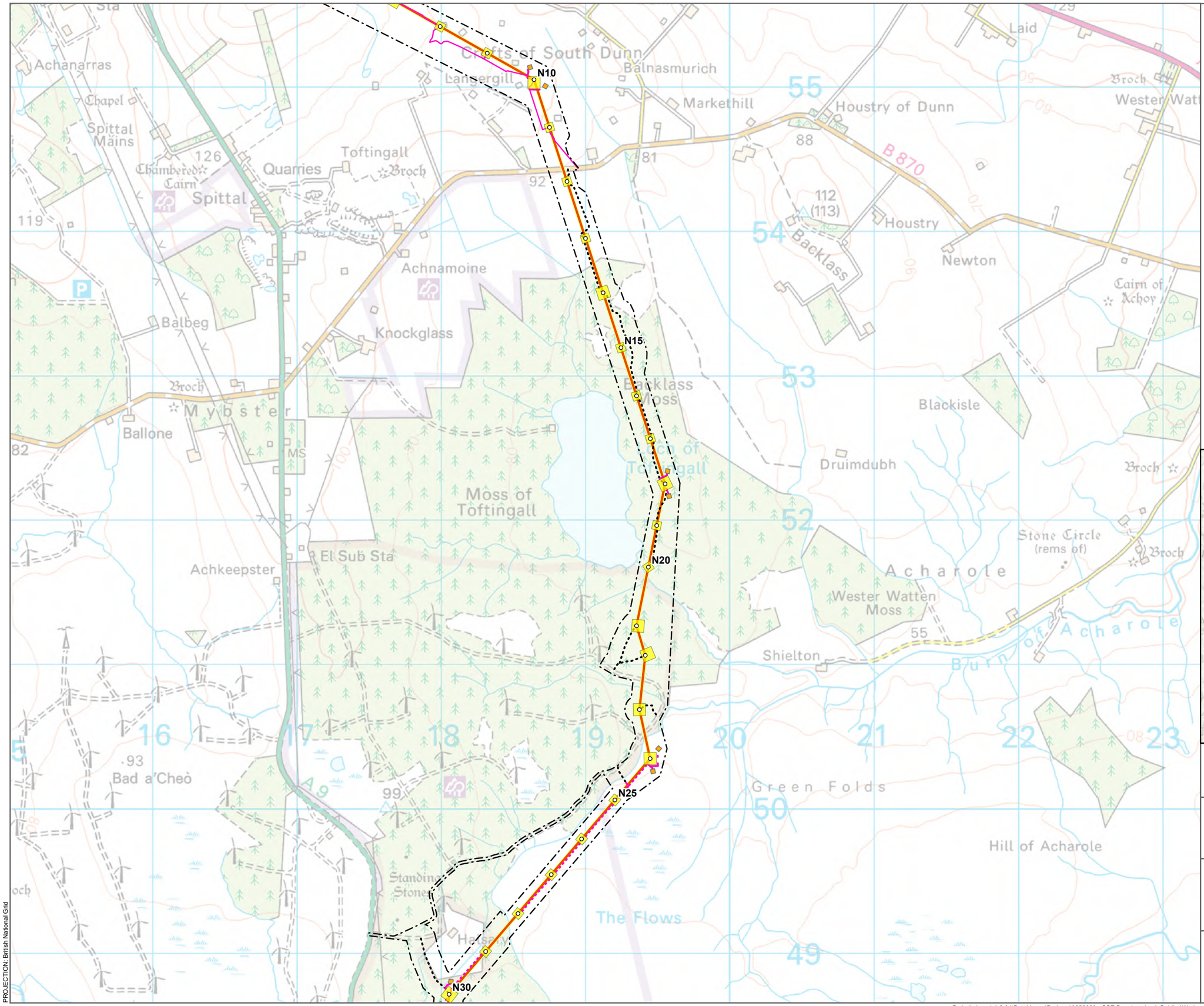

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Figure 1 - 2
Spittal - Loch Buidhe - Beauly 400 kV OHL Connection
Peat Landslide Hazard and Risk Assessment
Site Layout

ERM

Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

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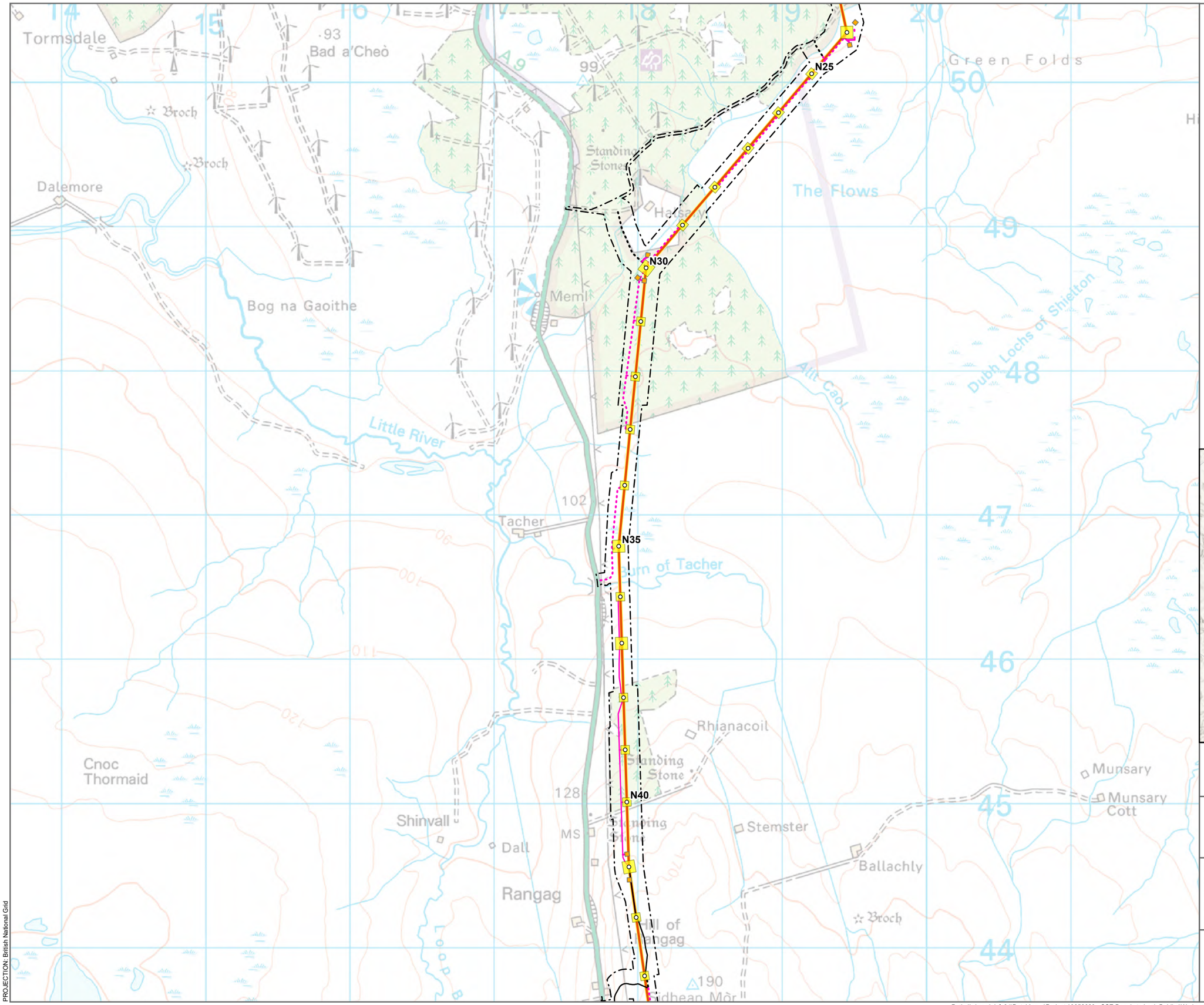

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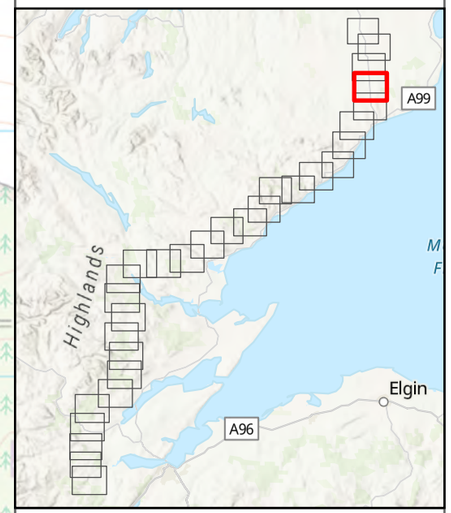
DATE: 06/08/2025	APPROVED: KG

Figure 1 - 3
Spittal - Loch Buidhe - Beauly 400 kV OHL Connection
Peat Landslide Hazard and Risk Assessment
Site Layout

PROJECTION: British National Grid

Path: \\uksprdgisfs01\Data\Arcus\Projects\0652629 - SSE Beauly to Loch Buidhe\Workspace\Engineering\SLBB Engineering v1.aprx - 0652659 - Figure 11.1.1 - Site Layout - A01

- Tower Location
- Alignment Section A
- Special Arrangement
- Limit of Deviation
- Temporary Tower Compound Area
- Equipotential Zone (EPZ) (Pulling Position)
- Temporary Access Track - Cut/Fill
- Temporary Access Track - Floating
- Temporary Access Track - EPZ
- Permanent Access Track - Cut/Fill
- Permanent Access Tracks - Floating
- Alignment Section Break



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Metres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: BW
PROJECT: 0720281	CHECKED: CM
DATE: 06/08/2025	APPROVED: KG

Figure 1 - 4
Spittal - Loch Buidhe - Beauly 400 kV OHL Connection
Peat Landslide Hazard and Risk Assessment
Site Layout

ERM

Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

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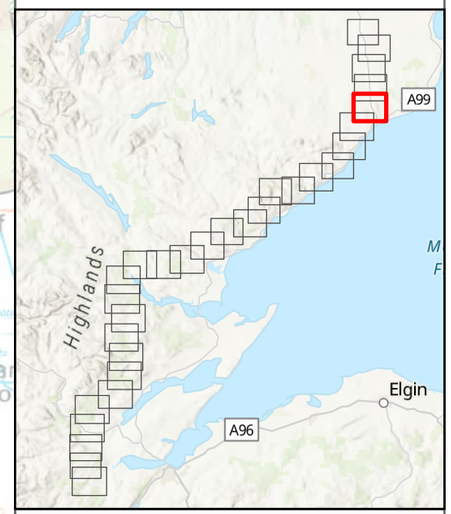
- Tower Location
- Alignment Section A
- Special Arrangement
- Limit of Deviation
- Temporary Tower Compound Area
- Equipotential Zone (EPZ) (Pulling Position)
- Temporary Access Track - Cut/Fill
- Temporary Access Track - Floating
- Temporary Access Track - EPZ
- Permanent Access Track - Cut/Fill
- Permanent Access Tracks - Floating
- Alignment Section Break



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Metres

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SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: BW
PROJECT: 0720281	CHECKED: CM
DATE: 06/08/2025	APPROVED: KG

Figure 1 - 5
Spittal - Loch Buidhe - Beauly 400 kV OHL Connection
Peat Landslide Hazard and Risk Assessment
Site Layout

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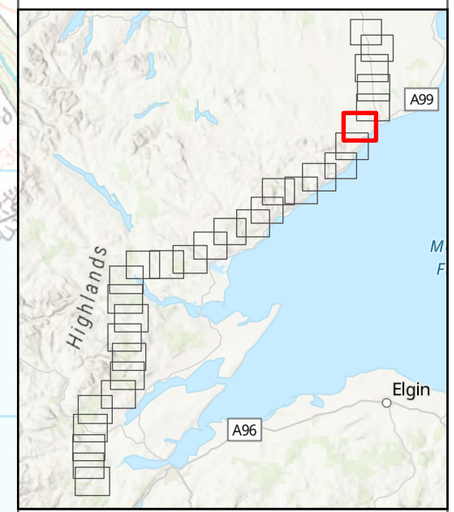
Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

Path: \\uksprdgisfs01\Data\Arcus\Projects\0652629 - SSE Beauly to Loch Buidhe\Workspace\Engineering\SLBB Engineering v1.aprx - 0652659 - Figure 11.1.1 - Site Layout - A01

- Tower Location
- Alignment Section A
- Special Arrangement
- Limit of Deviation
- Temporary Tower Compound Area
- Equipotential Zone (EPZ) (Pulling Position)
- Temporary Access Track - Cut/Fill
- Temporary Access Track - Floating
- Temporary Access Track - EPZ
- Permanent Access Track - Cut/Fill
- Permanent Access Tracks - Floating
- Alignment Section Break



0 200 400 600 800 1,000
Metres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: BW
PROJECT: 0720281	CHECKED: CM
DATE: 06/08/2025	APPROVED: KG

Figure 1 - 6
Spittal - Loch Buidhe - Beauly 400 kV OHL Connection
Peat Landslide Hazard and Risk Assessment
Site Layout

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Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

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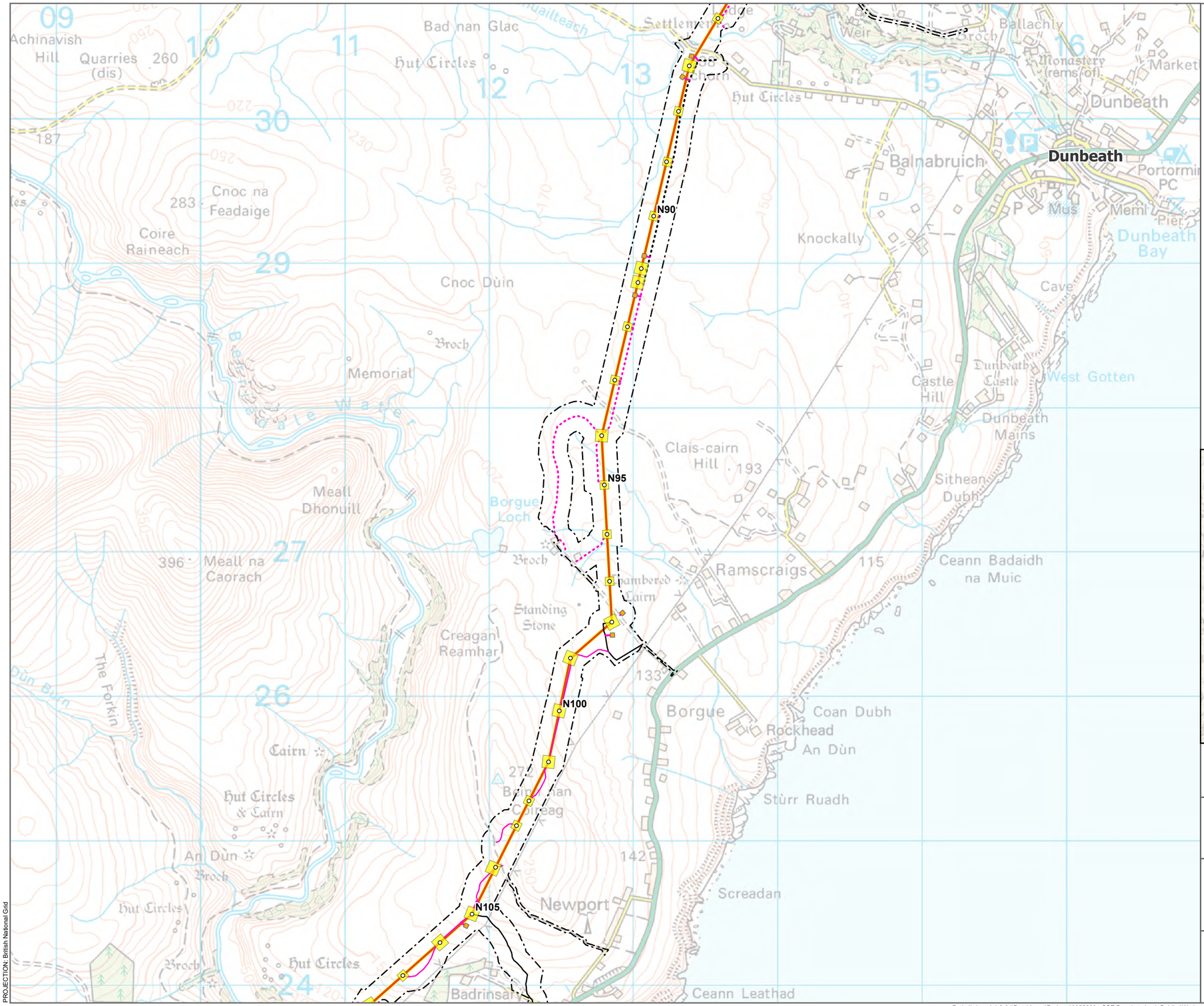

- Tower Location
- Alignment Section A
- Special Arrangement
- Limit of Deviation
- Temporary Tower Compound Area
- Equipotential Zone (EPZ) (Pulling Position)
- Temporary Access Track - Cut/Fill
- Temporary Access Track - Floating
- Temporary Access Track - EPZ
- Permanent Access Track - Cut/Fill
- Permanent Access Tracks - Floating
- Alignment Section Break

0 200 400 600 800 1,000
Metres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: BW
PROJECT: 0720281	CHECKED: CM
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Figure 1 - 7
Spittal - Loch Buidhe - Beauly 400 kV OHL Connection
Peat Landslide Hazard and Risk Assessment
Site Layout

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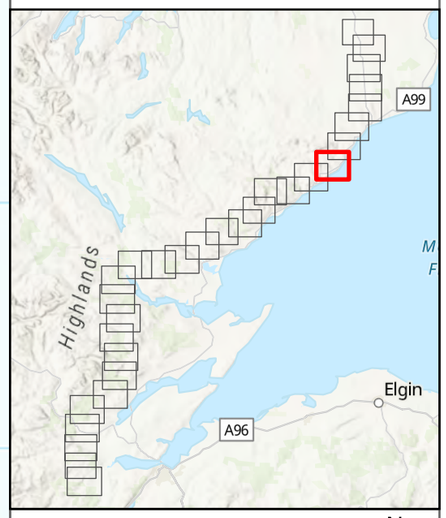
Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

Path: \\uksprdgisfs01\Data\Arcus\Projects\0652629 - SSE Beauly to Loch Buidhe\Workspace\Engineering\SLBB Engineering v1.aprx - 0652659 - Figure 11.1.1 - Site Layout - A01

- Tower Location
- Alignment Section A
- Special Arrangement
- Limit of Deviation
- Temporary Tower Compound Area
- Equipotential Zone (EPZ) (Pulling Position)
- Temporary Access Track - Cut/Fill
- Temporary Access Track - EPZ
- Permanent Access Track - Cut/Fill
- Alignment Section Break



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Metres

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SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: BW
PROJECT: 0720281	CHECKED: CM
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Figure 1 - 8
Spittal - Loch Buidhe - Beauly 400 kV OHL Connection
Peat Landslide Hazard and Risk Assessment
Site Layout

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Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

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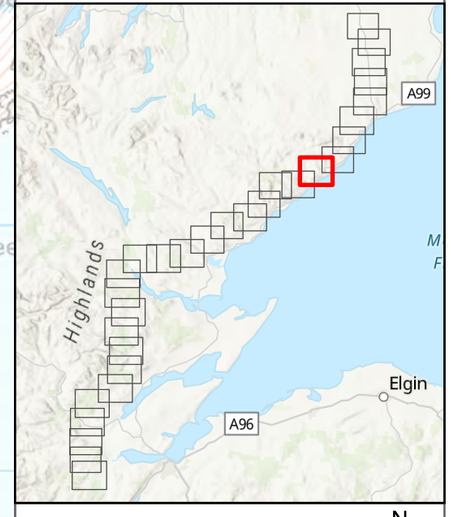
- Tower Location
- Alignment Section A
- Special Arrangement
- Limit of Deviation
- Temporary Tower Compound Area
- Equipotential Zone (EPZ) (Pulling Position)
- Temporary Access Track - Cut/Fill
- Temporary Access Track - EPZ
- Permanent Access Track - Cut/Fill
- Alignment Section Break



0 200 400 600 800 1,000
Metres

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SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: BW
PROJECT: 0720281	CHECKED: CM
DATE: 06/08/2025	APPROVED: KG

Figure 1 - 9
Spittal - Loch Buidhe - Beauly 400 kV OHL Connection
Peat Landslide Hazard and Risk Assessment
Site Layout

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Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

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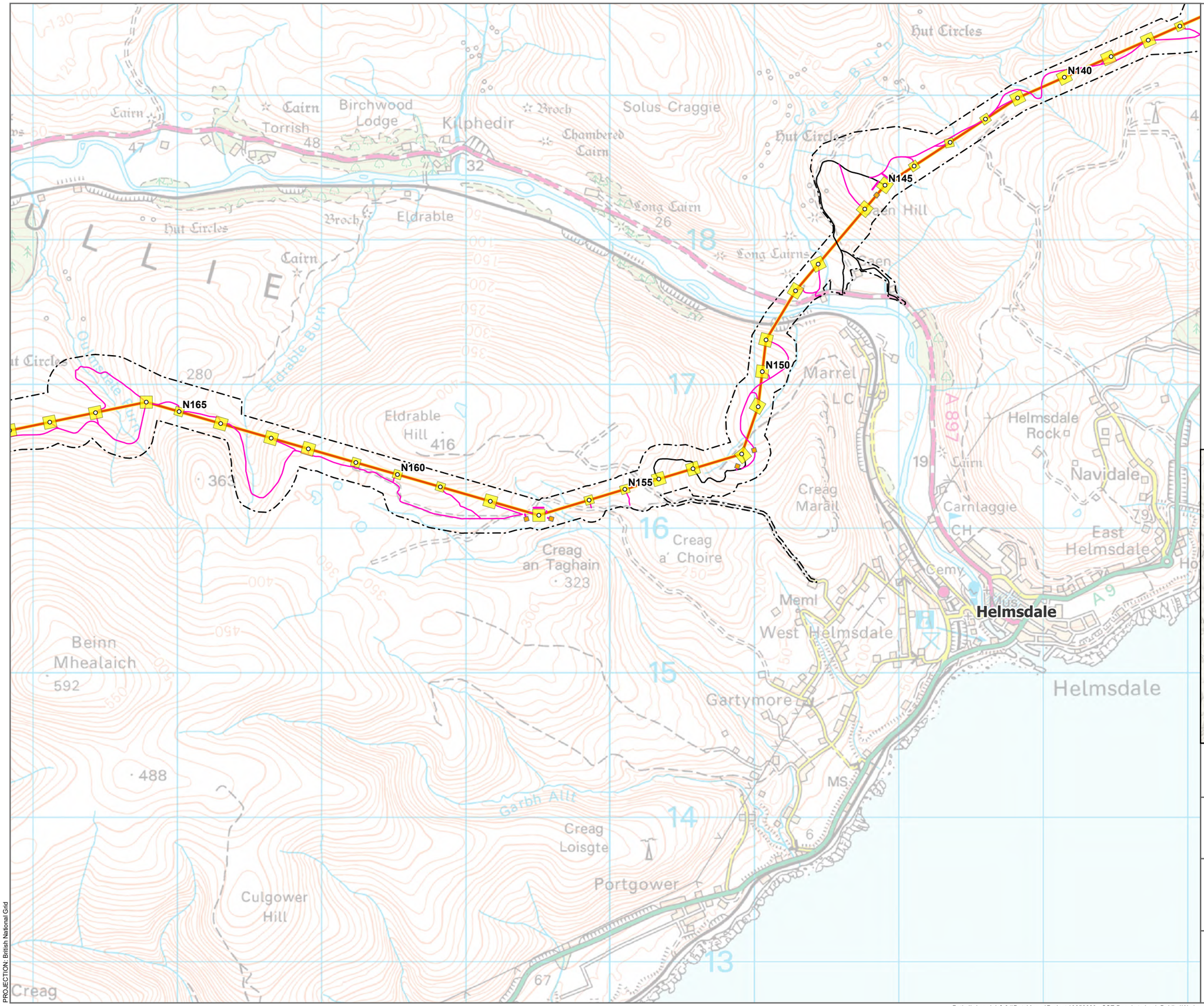

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: BW
PROJECT: 0720281	CHECKED: CM
DATE: 06/08/2025	APPROVED: KG

Figure 1 - 10
Spittal - Loch Buidhe - Beauly 400 kV OHL Connection
Peat Landslide Hazard and Risk Assessment
Site Layout

PROJECTION: British National Grid

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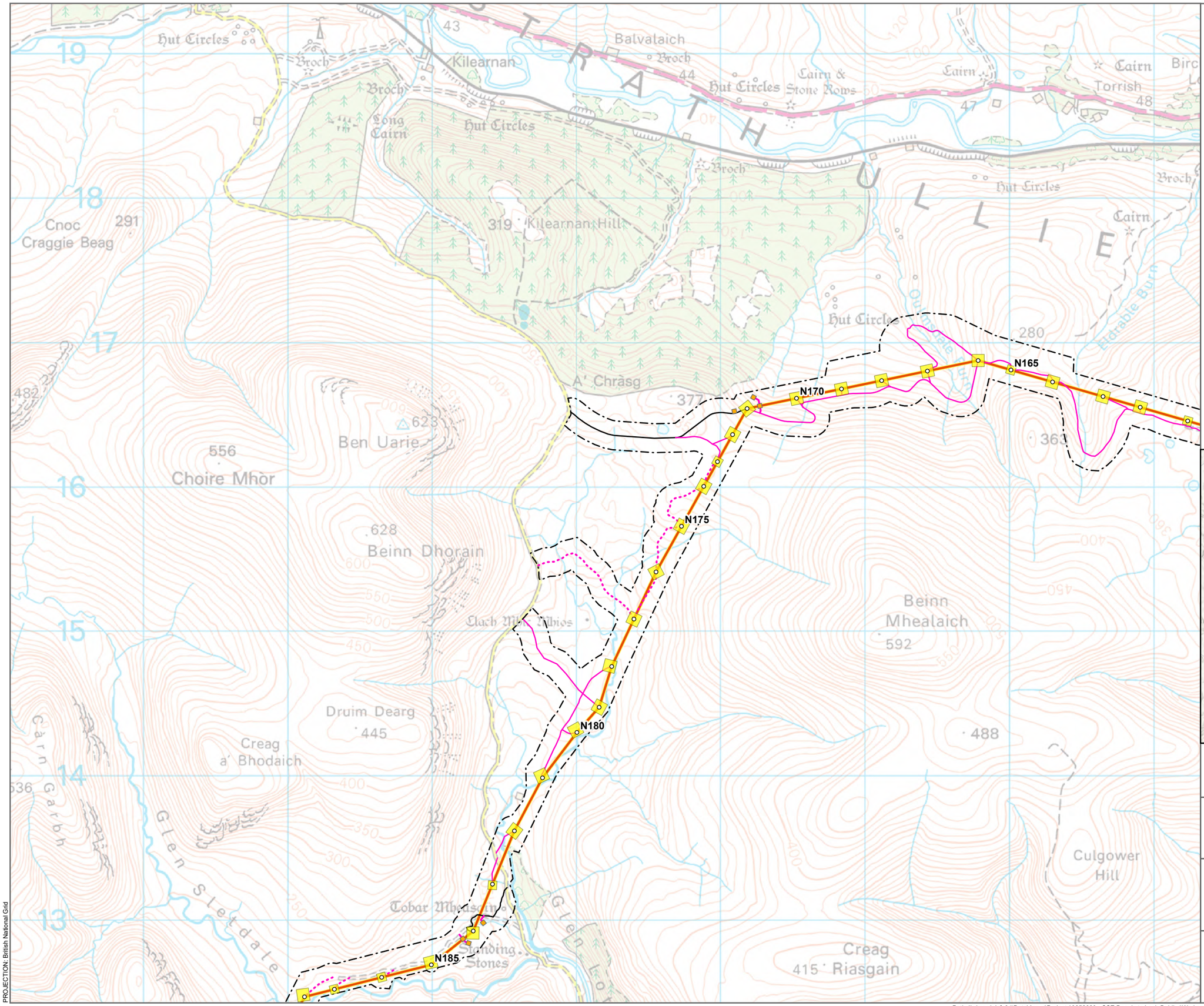

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: BW
PROJECT: 0720281	CHECKED: CM
DATE: 06/08/2025	APPROVED: KG

Figure 1 - 11
Spittal - Loch Buidhe - Beauly 400 kV OHL Connection
Peat Landslide Hazard and Risk Assessment
Site Layout

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Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

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Tower Location
Alignment Section A
Alignment Section B
Special Arrangement
Limit of Deviation
Temporary Tower Compound Area
Equipotential Zone (EPZ) (Pulling Position)
Temporary Access Track - Cut/Fill
Temporary Access Track - Floating
Temporary Access Track - EPZ
Permanent Access Track - Cut/Fill
Alignment Section Break

N180
N185
N190
N195
N200
N205
N210
Section A-B

Druim Dearg
Creag a' Bhodaich
Carn Garbh
Glen Sletdale
Meallan Liath Mòr
Tobar Mhaodain
Standing Stones
Glen Loth
Cairn Bran
Broch
Creag a' Chrionaich
Creag Riabhach
Col-bheinn
Cnoc na h-Iolaire
Chambered Cairn
Lothbeg
Loch an Tubairmaich
Creagan Mòr
Ballinreach
MS
Broch
An Dubh-lochan
Ascaig Gréine

A99
Highlands
Elgin
A96

0 200 400 600 800 1,000
Metres
N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: BW
PROJECT: 0720281	CHECKED: CM
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Figure 1 - 12
Spittal - Loch Buidhe - Beauly 400 kV OHL Connection
Peat Landslide Hazard and Risk Assessment
Site Layout

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Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

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- Tower Location
- Alignment Section A
- Alignment Section B
- Special Arrangement
- Limit of Deviation
- Temporary Tower Compound Area
- Equipotential Zone (EPZ) (Pulling Position)
- Temporary Access Track - Cut/Fill
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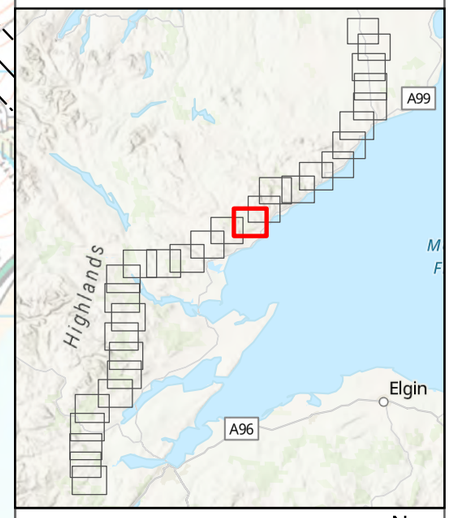
- Temporary Access Track - EPZ
- Permanent Access Track - Cut/Fill
- Permanent Access Tracks - Floating
- Alignment Section Break



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Metres

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SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: BW
PROJECT: 0720281	CHECKED: CM
DATE: 06/08/2025	APPROVED: KG

Figure 1 - 13
Spittal - Loch Buidhe - Beauly 400 kV OHL Connection
Peat Landslide Hazard and Risk Assessment
Site Layout

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Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

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