Technical Report

Lochluichart East BESS

Peat Management Plan

Boralex Ltd

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1. Introduction

1.1 Objective

This report is prepared by Atmos Consulting for Boralex Ltd.

The objective is to support the Planning Application for the construction of a new battery energy storage project. This Peat Management Plan (PMP) is focused on the excavation associated with the project and the access road.

1.2 Scope

- Review peat data (collected by Atmos).
- Summarise the environmental setting.
- Prepare a Peat Management Plan including peat balance.

1.3 Data

Table 1 outlines the data sources consulted.

Table 1: Data Sources

Information	Source(s)
Proposed site development layout	Client map
Peat depth	Atmos collected data
Soils	Scotland's Soils Website
OS 1:25,000	Online mapping, accessed from Bing maps February 2025
Superficial and bedrock geology	BGS Geology of Britain viewer accessed February 2025

1.4 Development description

The development proposed at Lochluichart (hereafter referred to as the 'Site') is for a 36 MW Battery Energy Storage System (BESS) with associated infrastructure. A 33kV underground cable will connect the BESS to Corremoillie Substation.

The Site (approximate central national grid reference NH 34178 63847) is located to the north of Loch Luichart, approximately 5 km northwest of Garve in the Highland region. The Site is located within a section of coniferous forestry plantation. At the time of the survey, the proposed battery storage areas have largely been felled, with coniferous plantation and woodland mainly to the edges of the site and at proposed access tracks.

In brief the development will consist

- **Energy Storage Units –** likely to be 55 in total, each unit would typically be approximately 6 m long, 2.5 m wide and 3 m high. It is likely that the units will sit on small, concrete footings or bases that will be approximately 0.5 m high.
- **Inverter and Transformer Units -** Each group of four energy storage units would be associated with a single combined inverter and transformer unit, which means that circa 11 of these would be required The combined inverter and transformer units would typically be 6.1 m long, 2.4 m wide and 2.9 m high.

- **Switchgear and Control Building - **there would be one switchgear and control building. They are typically 21.5 m long, 6.0 m wide. Four parking places will be provided adjacent to the battery facility operator's building for visiting maintenance personnel. The Proposed Development would not have a foul sewer connection. Foul drainage from staff welfare facilities on site would be disposed of either by a packaged biological foul treatment plant with discharge to the surface water system or to a storage tank for offsite disposal via road tanker. The battery units would be connected to the onsite switchgear and control building via cables which would be buried in trenches of around 0.5 m to 1 m in depth, within the compound.
- **Fencing –** If required, the compound would be enclosed by a 4 m high timber acoustic fence, designed to provide noise attenuation and will visually screen the internal infrastructure. For security purposes, a 3 m high steel palisade fence would also be installed along the outer perimeter, adjacent to the acoustic barrier. There will also be a peripheral outer standard wire mesh deer fence, to protect the landscaping while it becomes established.
- **Lighting -** There will be no permanent visible lighting within the BESS. The visible lighting within the main compound will solely consist of motion-sensitive lighting at the entrances to the storage units and buildings, which will only be activated during occasional visits by maintenance personnel. This will be designed to be downward facing to minimise any light-spill beyond the enclosure.
- **Closed Circuit Television Masts -** It is anticipated that there would be seven closed circuit television (CCTV) masts with security cameras on the perimeter of the compound. The masts would be slender and approximately 4 m high.
- **Hardstanding -** The BESS compound will be formed of crushed aggregate laid on permeable membranes. The aggregate will be sourced from local quarries and transported to the site via the A832, existing access junction and track and proposed new track.Cut and fill earthworks across the compound area would be carried out at an early stage of the construction process to create a suitable level development platform. The earthworks will be designed to minimise the need for fill material to be brought to the site or for excess material to be removed from site, as far as practicable.
- **Potential Future Augmentation Area -** The storage capacity and maximum output from the battery units is likely to diminish after a period of about 10 years. There are various methods of maintaining the output including: progressive replacement of battery cells within units, replacement of whole units within the main facility (commonly known as repowering) or installing additional battery units within or next to the main facility. The decision on whether to install further battery units would be taken at a later date. As a precaution, a potential future augmentation area measuring 50 m by 30 m has been included in the Proposed Development layout design and planning application. This is located immediately to the east of the access track opposite the main BESS compound access gate. The potential future augmentation area would be laid out as a crushed rock hardstanding, during the construction programme for the main facility.
- **Construction Compound -** During the construction phase a temporary construction compound area will be required. This will be located within the potential future augmentation area. The compound would be used to store materials, provide vehicle parking, and would form a location for site cabins, offices and welfare facilities.
- **Access Track-** Access to the BESS from the Site entrance along the A832 will initially be along the existing forestry track which extends northeasterly adjacent to the western Site boundary and then along a new section of track approximately 400 m long, orientated west-east. The new section of track will be constructed of crushed rock and have an approximate

running width of 5 m. The track passes across land that is undulating, and it has been designed to avoid areas of deep peat.

- **Attenuation Basin -** An attenuation basin has been included in the overall scheme layout. The basin will be designed as a SuDS feature..
- **Grid Connection -** The proposed development will connect into Corriemoillie Substation, which lies approximately 250 m to the west of the BESS compound. A 33 kV underground cable will connect into Corriemoillie Substation
- **Forestry Felling -** Felling is required on site for the proposed new track and BESS compound. This will include small areas of native pinewood or native birch woodland. The design has minimised the tree felling area. Further tree felling is required along the A832 to enable a 4.5 m x 160 m visibility splay at the site entrance.

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2. Legislation, Policy and Peat Guidance.

2.1 Definitions

Peat is the partially decomposed remains of plants and soil organisms which have accumulated at the surface of the soil profile. SEPA adopt the Joint Nature Conservation Committee (JNCC) report 445 Towards an Assessment of the State of UK Peatlands definitions of peat for Scotland where:

- Peaty (or organo-mineral) soil: a soil with a surface organic layer less than 0.5m deep;
- Peat: a soil with a surface organic layer greater than 0.5m deep which has an organic matter content of more than 60%;
- Deep peat: a peat soil with a surface organic layer greater than 1.0m deep.

Scotland's National Peatland Plan also encompasses organic soil less than 50cm, which can support typical peatland vegetation (SNH, 2015a).

The structure of an active peatland typically comprises a thin surface layer of living vegetation (the acrotelm) overlying a usually thicker layer of well decayed and humified peat, comprising the consolidated remains of former surface vegetation (the catotelm). Where there are no discernible plant remains the peat is known as amorphous. Below the peat is the basal substrate; mineral soil, mineral superficial deposit or bedrock.

Increasingly only a minority of peatlands are actually active peat forming.

The acrotelm is the upper aerobic layer of active peat and consists of living and partially decayed plant material. It is very fibrous and contains plant roots etc. Acrotelmic peat is relatively dry and has some tensile strength. It typically has a higher hydraulic conductivity than underlying peat. Strictly it is defined with relation to distance to the water table. Acrotelm thickness varies with topography - such as hummocks peat hags, hollows and with time, especially in drought periods or when it is drained. The acrotelm is not always present.

The catotelm is the lower layers which sits beneath the acrotelm and consists of decayed and humified material. Catotelmic peat is dense with a very low hydraulic conductivity. It has high water content and tends to have very low tensile strength. It is less cohesive than the acrotelm and tends to disrupt on excavation and handling. Strictly, catotelmic peat is permanently anaerobic and anoxic because the catotelm is permanently below the water table. However, this is often not the case in non-active or otherwise degraded peat.

Pseudo fibrous peat is found in the catotelm and is moderately decomposed organic matter which is somewhat fibrous, yet is still soft, noncoherent and plastic and shrinks greatly upon drying.

Amorphous peat is highly decomposed organic material where all recognisable plant remains are absent and is found only at depth, typically below 1m in catotelmic peat. These deposits are unable to stand unsupported >1m when stockpiled.

2.2 Peat Importance, Legislation and Guidance

Peatlands are carbon-rich terrestrial wetland ecosystems in which waterlogged conditions prevent plant material from fully decomposing. Consequently, the production of organic matter exceeds its decomposition, which results in a net accumulation of peat. In cool climates, peatland vegetation is mostly made up of Sphagnum mosses, sedges and shrubs and are the primary builder of peat.

Peatlands include landscapes that are still actively accumulating peat (mires) and others that are no longer accumulating and do not support the principal peat forming plants.

Peatlands are important for carbon storage, water regulation and biodiversity. They provide multiple ecosystem service benefits. The management of peat has implications for habitat conservation, carbon emissions, climate change and water quality.

The significance of peatlands is evident in their protection by various legislation, policy and local, national or international initiatives.

- The Kyoto Protocol (1997);
- The Kyoto Protocol and National Accounting for Peatlands (2012);
- The UK Climate Change Act (2008);
- The Carbon and Water Guidelines, Carbon Landscapes and Drainage www.clad.ac.uk;
- SEPA Regulatory Position Statement – Developments on Peat (2010)
- SEPA Guidance: Developments on Peatland – Site Surveys (2013);
- Scottish Government, Guidance on Developments on Peatland – Site Surveys (2011);
- Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and the Minimisation of Waste, Scottish Renewables and SEPA (2012);
- Scottish Biodiversity List (SBL) (Scottish Government, 2013);
- Scotland's National Peatland Plan (SNH, 2015);
- Scottish Planning Policy (SPP) - Table 1, (2014);
- The SNH Carbon and Peatland 2016 map
- National Planning Framework 4 (NPF4)

A full set of relevant peatland guidance is given in References, Chapter 8 below.

2.3 Geotechnical

Peat soils comprise broken down plant remains rather than mineral particles. Peat has high water content and low density and varies enormously in its hydraulic and strength characteristics. It is typically up to 85-90% water and 10-15% organic matter by weight, therefore making the ground surface very soft. Even when actively drained, bog systems rarely contain less than 75% water by weight and thus peat very soft in its natural state. A peat bog retains its structural integrity due to the fibrous nature of the living layer and the underlying peat matrix.

Under loading, there is a rapid phase of primary consolidation followed by a much slower phase of secondary compression (SNH, 2013). Scheduling of construction activities must take into account this behaviour to ensure that infrastructure constructed over peat takes account of its settlement characteristics.

Peat strength plays a role in determining construction on or with peat, and in the reuse of peat for restoration. The acrotelm is typically stronger than the catotelm, with the former afforded a degree of tensile strength from its vegetation layer, and the latter lacking this and the cohesion associated with some other soft sediments such as clays. The catotelm can be separated into pseudo fibrous and amorphous peat with decreasing strength and the different characteristics are relevant to storage and reuse of peat.

3. Methodology

3.1 Environmental Setting

Peat habitats rely upon the ecology, hydrology and hydrogeology of the area. Characterisation of these is therefore addressed separately in an Environmental Setting section. These Environmental Setting section details are then drawn upon in the peat section.

3.2 Peat

3.2.1 Desk Study

A desk study was carried out to determine the likely presence of peat within the Site using the British Geological Survey (BGS) Geology of Britain superficial geology viewer[1], as well as the BGS Geo Index database.

The BGS Geology Map viewer presents bedrock and superficial geology maps of Great Britain, and the Geo Index Database contains extra information of the geology of Great Britain including borehole and hydrology information.

3.2.2 Peat Probing

The desk studies and habitat surveys were supplemented by a series of detailed peat probing surveys undertaken across the site using survey points taken at $10m^2$ resolution, concentrated on two potential location for the proposed BESS - a lower resolution and survey points taken at $50m^2$ in areas where proposed supporting infrastructure is to be located. Further probes we taken along the proposed access trach at 50m intervals with 2no. offsets to allow for micrositing. The peat probing results were then used to finalise the site design in areas which would minimise the impact on peat.

The survey grid was generated by GIS software, using adapted methodology from Scottish Government et al. (2017) [2] and was deemed appropriate for the Site, given its relatively small size.

3.2.3 GIS Analysis

GIS analysis resulted in production of a peat depth figure. This was a display of interpolated peat depth, created using the Topo to Raster tool in ArcGIS software 10.3.1, based on 20m spaced survey data.

[1] BGS Geology of Britain viewer accessed February 2025

[2] Scottish Government, Scottish Natural Heritage, SEPA (2017) Peatland Survey.

Guidance on Developments on Peatland, online version only.

3.3 Peat Management Plan (PMP)

The following steps were followed to prepare the PMP.

a. Review geology maps

b. Review SNH Carbon and Peatland Maps

c. Carry out peat probing surveys

d. Develop interpolated peat depth maps and overlay with development plans

e. Iterate development plans for peat avoidance, and minimisation of loss and disturbance of identified peat

f. Review peat restoration and reuse opportunities

g. Carry out peat balance.

4. Environment setting

4.1 Topography

Loch Luichart lies to the south of the Site along with the Dingwall – Kyle of Lochalsh railway line. The surrounding landscape consists of various grasslands, both planted forestry and semi-natural woodland in addition to the remote upland landscape typical of the Highlands.

Close to the Site access track are a few warehouse buildings used by the nearby shooting estate, and some of the land close by is used for game shooting, target practice and the rearing of pheasants.

4.2 Hydrology

4.2.1 Surface Water

No water bodies were present on Site.

4.3 WFD Groundwater Body

The Water Framework Directive (WFD) groundwater body which underlies the Site is Loch Luichart (ID: 100131), in the River Conon catchment of the Scotland river basin district. It is 6.3 square kilometres in area. The water body has been designated as a heavily modified water body on account of physical alterations that cannot be addressed without a significant impact on water storage for hydroelectricity generation. It has an area of 9382.3km^2 and is at Good Ecological Potential Status. There has been no change in this status and therefore no measures in place.

Table 2: WFD Groundwater Body

Parameter	2014 Status	2023 Status
Overall	Good	Good
Water flows and levels	Good	Good
Water quality	Good	Good

4.4 Ecology

The majority of the Site consists of conifer plantations of various age classes and with different management interventions, leading to a contrast between dense plantations dominated by spruce *Picea* and more open woodland structures. Some of the thinned plantations are broadleaved dominated, mainly by silver birch *Betula pendula*, and others are conifer dominated. Habitats on Site are frequently mixed with invasive, non-native rhododendron *Rhododendron ponticum*. Habitats within the site boundary also include degraded M17 *Trichophorum germanicum – Eriophorum vaginatum* and M19 *Calluna vulgaris – Eriophorum vaginatum* blanket mires and M15 *Trichophorum germanicum – Erica tetralix* wet heath.

The extended phase 1 and National Vegetation Classification (NVC) surveys considered habitats to be typical of the area with no protected species identified. Further details of the ecology of the Site are available in the accompanying Ecological Assessment report.

4.5 Geology

4.5.1 BGS

The superficial geology of the site is shown in Figure 1 (Appendix A).

BGS1 classifies the superficial deposits as having formed during the Pleistocene era. The area is a fairly even mixture between areas of glacial deposits (Diamicton Gravel, Sand and Silts) and Peat (quaternary).

4.5.2 Soils

Two soil types are shown on Scotland's Soils website (Figure 2 – Appendix A).

The track is comprised of humus-iron podzols with peaty gleyed podzols and then as it reaches the main build area, the soil changes to peaty gleyed podzols with dystrophic semi-confined peat with peaty gleys.

4.5.3 NatureScot Carbon and Peatland Map

The NatureScot Carbon & Peatland map (Figure 3 – Appendix A) indicates the Site lies within an area of Class 5 Peatland.

The topsoil organic concentration map (Figure 4 – Appendix A) suggest the Site sits entirely within an area of organic soil (<35%), with the entirety of the Site and the wider area being dominated by organic soils.

[4] Scotland's Soils Website, National soil Map of Scotland https://map.environment.gov.scot/Soil_maps/?layer=1 accessed April 2025

[5] Nature Scot, Scotland's Soil Website, Carbon and Peatland Map https://map.environment.gov.scot/Soil_maps/?layer=10

4.6 Peat

BGS peat mapping suggests that peat does not occur on site although Scotland's soil map indicates the presence of peaty gleys within the site.

The SNH Carbon and Peatland Map, 2016 suggests the site lies within Class 5 Peatland.

It should be cautioned that base mapping is indicative. Indeed, the peat surveys undertaken have been analysed to produce Figure 5 (Appendix A) which show interpolated peat depths. The raw data is provided in Appendix B.

There is limited peat present within the access track route and Site itself, the majority of the access track being less than 0.5m in depth and is therefore classed as peaty soil. There is one pocket where deep peat sits at 2.5m in depth, and another pocket at 1.5m in depth, however the access track is planned to avoid the deep pockets meaning the planned excavation for the access track at the site is mostly on peaty soil ranging in depths mostly in the 0-0.5m range and one pocket laying between 0.5-1m in peat depth.

The area for the BESS station sits on a 0-0.5m so peat excavation will be minimal.

5. Peat Management

5.1 Avoidance

With reference to the current status of the project design as portrayed in Figure 5 Peat Map (Appendix A), the following high-level avoidance can be demonstrated:

- No areas of peat >1.0m will be excavated.
- The development itself is focused on the erection of the BESS and associated infrastructure and will not encroach on any of the surrounding habitats.

5.2 Peat Loss

Peat loss calculations are shown in Table 3 below. The proposed new length of track and permanent augmentation hardstanding area, are the only area where peat (>0.5m) will be excavated. Within the other infrastructure locations there are only peaty soils (<0.5m in depth). This means the total excavation volume on the site is low, with a maximum potential volume of 1112.79m^3 on the Site. A 25m micro-siting allowance has been requested for the new track which will allow peat loss to be further minimised. The PMP is written as a 'worst-case' scenario with the highest possible excavation of peat calculated to ensure there is a balance. It has been assumed that installation the underground cable from the BESS to the substation will be neutral in terms of peat loss.

Table 3: Peat Loss

Infrastructure	Volume of peat excavated m^3
Proposed Track	336.07
Hardstanding	0
Compound	776.72
Battery Storage	0
Substation	0
Transformer	0
Building	0
Other - CCTV	0
Total	1112.79

5.3 Peat Reuse

Reuse seeks to utilise the top hierarchical options as per SEPA guidance to avoid this excavated peat being classified as waste and to ensure is reused beneficially both to protect its carbon and to support enhancement of existing peatland habitats and wetlands. The following reuse opportunities have emerged:

1. Prevent creation of waste peat - Minimise peat excavation and disturbance to prevent the unnecessary production of waste peat, only three areas of peat excavation in total.
2. Site reinstatement of 2m wide / average 0.5m deep fringe around infrastructure and boundary.

The demand for peat re-use for infrastructure reinstatement on Site is 1525.83 m^3. Practically, the best option is likely to be in Site reinstatement.

The reuse demand is greater than the excavation volume/areas.

5.4 Peat Balance

An initial iteration of the peat balance table is summarised in Table 4 below.

Table 4: Peat Balance

Peat	Volume m3
Excavated Peat	1112.17
Reinstatement – along road verge and site perimeter etc, 2m fringe up to 0,5m deep	1525.83

The predicted volume of peat excavation of 1112.17m^3 can be reused as shown by the potential peat demand for re-instatement of 1525.83m^3. With this approach a peat balance would be achieved and there would be no residual peat, as the reuse demand is greater than the excavation.

5.5 Peat Management Protocol

This section contain advice for management of peat during excavation, storage and reuse.

5.5.1 Excavation Methods

The following methods are recommended for excavation of peat containing area:

i. During excavation works the vegetated top layer of peat material will be stripped carefully to a minimum nominal 250mm depth as turf (this may have to be substantially less in places).

ii. Excavated peat turfs will be kept as intact as possible by removing large turfs, to minimise carbon losses;

iii. Excavated peat will be handled minimally to preserve the structural integrity and ecological potential of the peat;

iv. When excavated, the peat will be segregated according to its classification (turves, pseudo-fibrous peat and amorphous peat);

v. if stored, soil should be brushed and packed into all turf joint to assist moisture retention and regrowth.

vi. if stored, excavated peat condition will routinely be inspected to confirm its suitability and stockpiled separately;

vii. Bare Peat will be minimised at all stages;

ix. Timing of the excavation works will as much as possible avoid periods when peat materials are likely to be wetter;

x. Amorphous peat (if present) will be placed in temporary stockpiles located and designed to take account of the amorphous peat's specific physical characteristics.

xi. All excavations in peat will be subject to a temporary works design to ensure the stability of any excavation;

xii. Any edges of cut peat that may remain exposed or areas of peat excavation on steep slopes will be covered with geotextile or similar approved covering. This will allow re-turfing and re-vegetation and reduce erosion risks;

5.5.2 Peat Storage

The range of organic compounds that form during decomposition of living organisms makes peat a material with some unique characteristics. When peat becomes very dry, it can form a water-repellent barrier making the peat difficult to rewet and thus leave it prone to erosion by wind and water. If peat ceases to be waterlogged, decomposition is no longer retarded, and the peat gradually decomposes. This process results in the release of greenhouse gases to the atmosphere, and dissolved organic carbon to adjacent streams and water bodies – both of which represent significant environmental concerns.

It is recognised that once excavated, unless it is handled appropriately, peat typically loses some of its physical structure and strength, becomes poorly or unconsolidated, and therefore has a limited range of uses. In light of this and other environmental aspects, stockpiles should:

i. Store turves separately and, in a fashion, to avoid contamination by other soils;

ii. Separate topsoil, catotelmic pseudo-fibrous peat and amorphous peat;

iii. Optimally located as far as possible in hollows and close to saturated ground;

iv. Sited to minimise haul distances and therefore plant movements.

v. Be <2m deep;

vi. Engineered to prevent run-off to watercourses;

vii. Maintain geotechnical stability to prevent geo-technical failure of the material (using as appropriate shallow slope angles, geo-textiles, designed temporary supporting bunds etc.), to minimise handling so to avoid loss of its remaining inherent shear strength and to avoid over-compaction.

viii. Peat turfs require careful storage and wetting and to be maintained to prevent drying out and subsequent oxidisation, to ensure that they remain fit for reuse. Therefore, turves will be stored turf side up and not allowed to dry; thereby allowing rapid regeneration when reinstated.

ix. Peat stockpiles will be routinely inspected and wetted during prolonged dry spells so that turves are not allowed to dry out.

x. Amorphous peat will be placed in temporary stockpiles located and designed to take account of the amorphous peat's specific physical characteristics.

xi. The stockpiled peat and open excavations will be routinely inspected by the contractor for any evidence of geotechnical failure in stockpiles of peat (slumps, slips etc.) and/or evidence of geo-technical failure in the underlying soils and surrounding soils (cracking, bulging etc.);

xii. Where there is any evidence of distress, the causes will be immediately investigated, and appropriate mitigation undertaken (which may vary from resealing the stockpile to complete removal).

5.5.3 Peat Reuse

Reuse of peat will be subject to specific conditions on site during construction flowing the general minimisation and beneficial use principles.

i. Reinstatement will, in all instances, be undertaken at the earliest opportunity to minimise storage of turfs and other materials;

ii. Reinstatement of exposed earthworks surfaces will be completed at the earliest opportunity to minimise the time that pseudo-fibrous peat and turves are kept in stockpiles. The saturated amorphous peat likely to be encountered will be replaced.

iii. Excavated peat reuse will be emplaced in order in to recreate surrounding sub-surface conditions. Amorphous peat would be placed at the base, followed by any pseudo-fibrous peat, peat with more tensile strength and then covered with the turves. The turves will be returned to the same habitat type.

iv. Avoid landscaping peat so it dries out, always keep peat below or within 20 cm of possible water levels

v. Stripped turves will not be stacked but placed beside each other and should be reinstated on top with the vegetation layer facing up. Turves should be cut to an appropriate depth to maintain plant root systems. Provision will be made to keep stripped turves and soils moist prior to reinstatement.

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Appendices

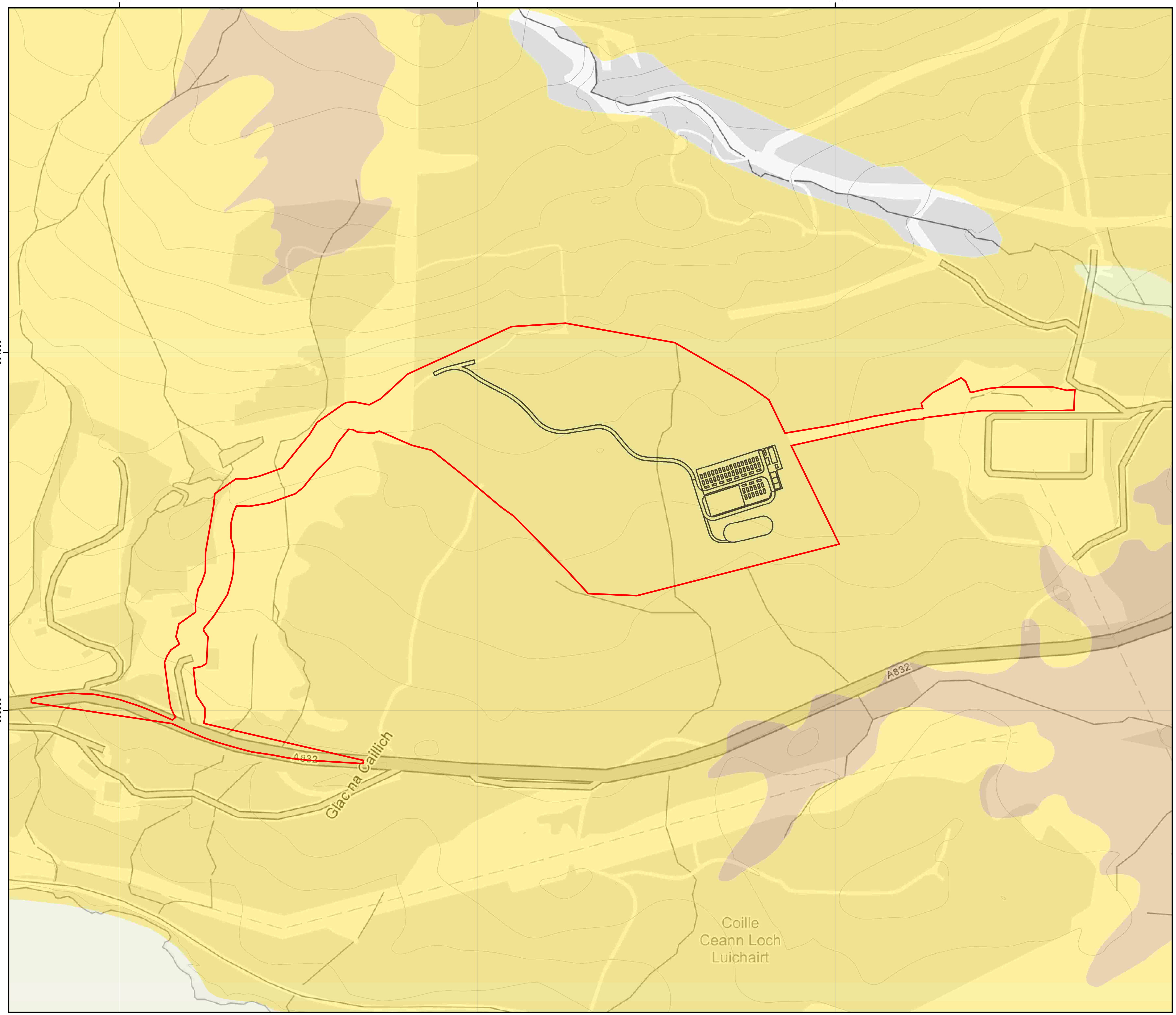
Appendix A.

- Figure 1 – BGS Superficial Soil Deposits.
- Figure 2 – National Soil Map of Scotland.
- Figure 3 – NatureScot Carbon and Peatlands Map.
- Figure 4 – Topsoil Organic Carbon Concentration.
- Figure 5 – Interpolated Peat Depth.
- Figure 6 – Peat Depth Results
- Figure 7 – Peatland Condition Assessment
- Figure 8 – Final Site Layout

Lochluichart East

BORALEX

Figure 1
BGS Superficial Soil Deposits

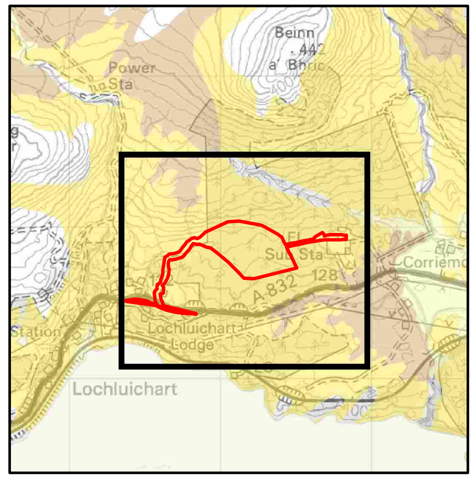


Key

- Site boundary
- Proposed infrastructure

Superficial Geology

- Glacial Deposits (Diamicton Gravel, Sand and Silt) - Pleistocene
- Peat - Quaternary



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atmos CONSULTING

0 50 100 200
Meters

N

Scale @ A3: 1:5,000

30/07/2025 90150/GY/017a

Drawn by: ET Checked by: TH Approved by: GF

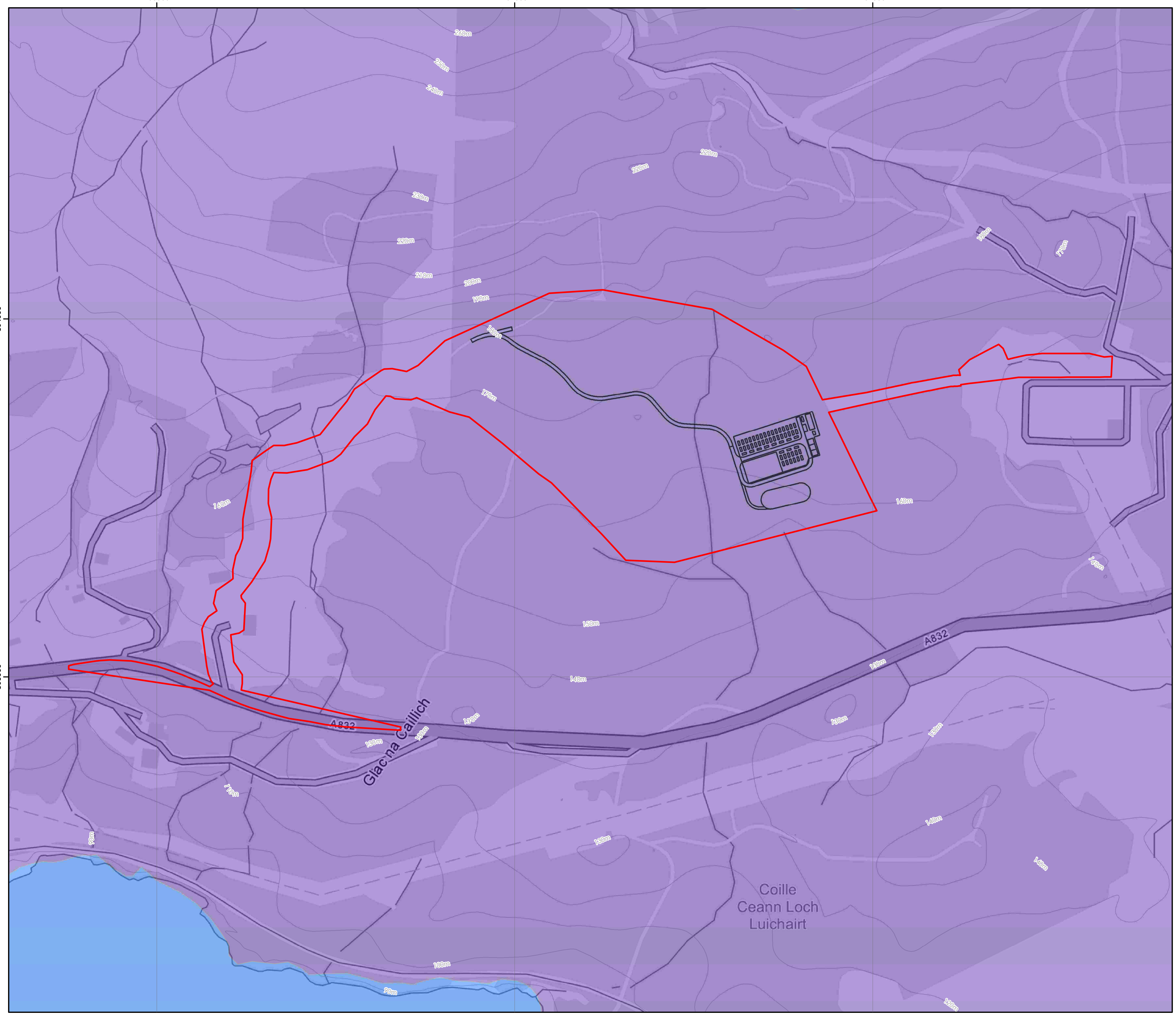

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Figure 2
National Soil Map of Scotland

Key

Site boundary

Proposed infrastructure

National Soil Map (1:250K)

Waterbodies

Humus-iron podzols with peaty gleyed podzols

Peaty gleyed podzols with dystrophic semi-confined peat with peaty gleys

atmos CONSULTING

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Meters

N

Scale @ A3:
1:5,000

30/07/2025 90150/CP/018a

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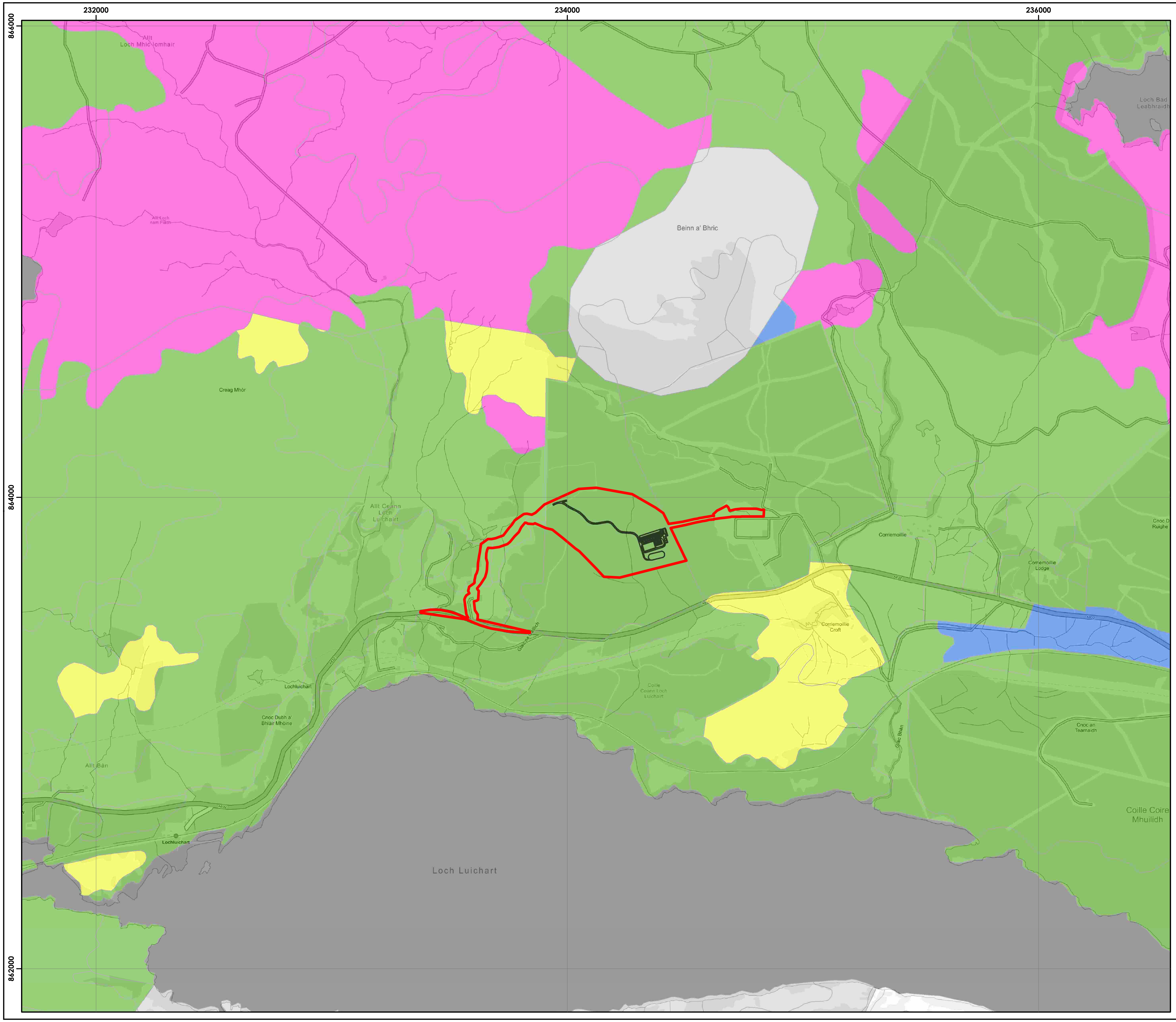

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Figure 3
Carbon and Peatlands Map

Key

- Site boundary
- Proposed infrastructure

NatureScot Carbon & Peatlands Map (2016)

- Non-soil
- Mineral soil
- Class 1
- Class 2
- Class 3
- Class 4
- Class 5

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0 0.25 0.5 1
Kilometers

N

Scale @ A3:
1:15,000

30/07/2025 90150/GY/013a

Drawn by: ET Checked by: KM Approved by: AR

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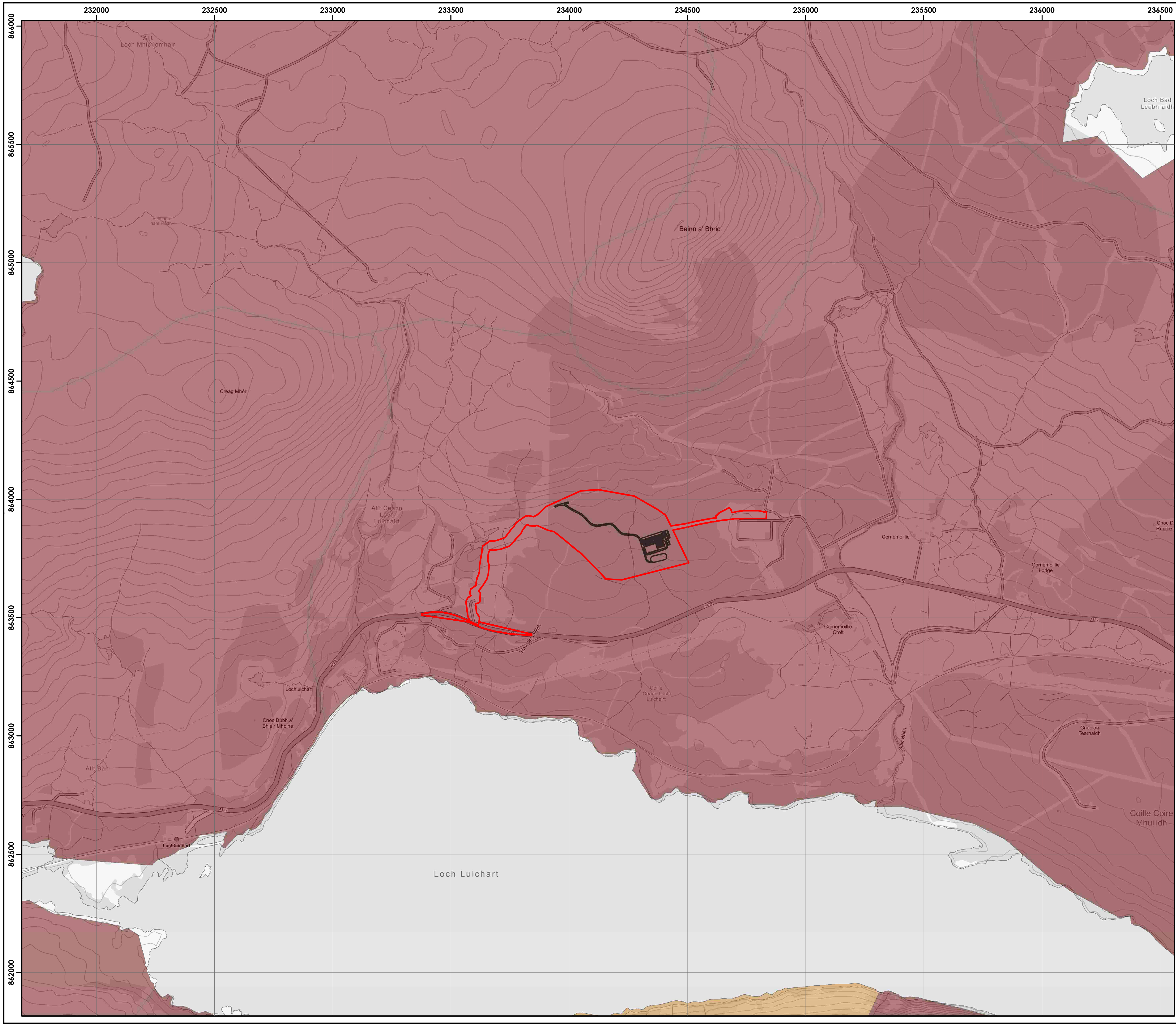
Figure 4
Topsoil Organic Carbon Concentration



Key

Site boundary

Proposed infrastructure

Topsoil organic carbon concentration

Humose (5.0 - 12.0 %)

Organic (> 35 %)

0 0.25 0.5 1
Kilometers

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Scale @ A3:
1:15,000

30/07/2025 90150/GY/019a

Drawn by: ET Checked by: TH Approved by: YM

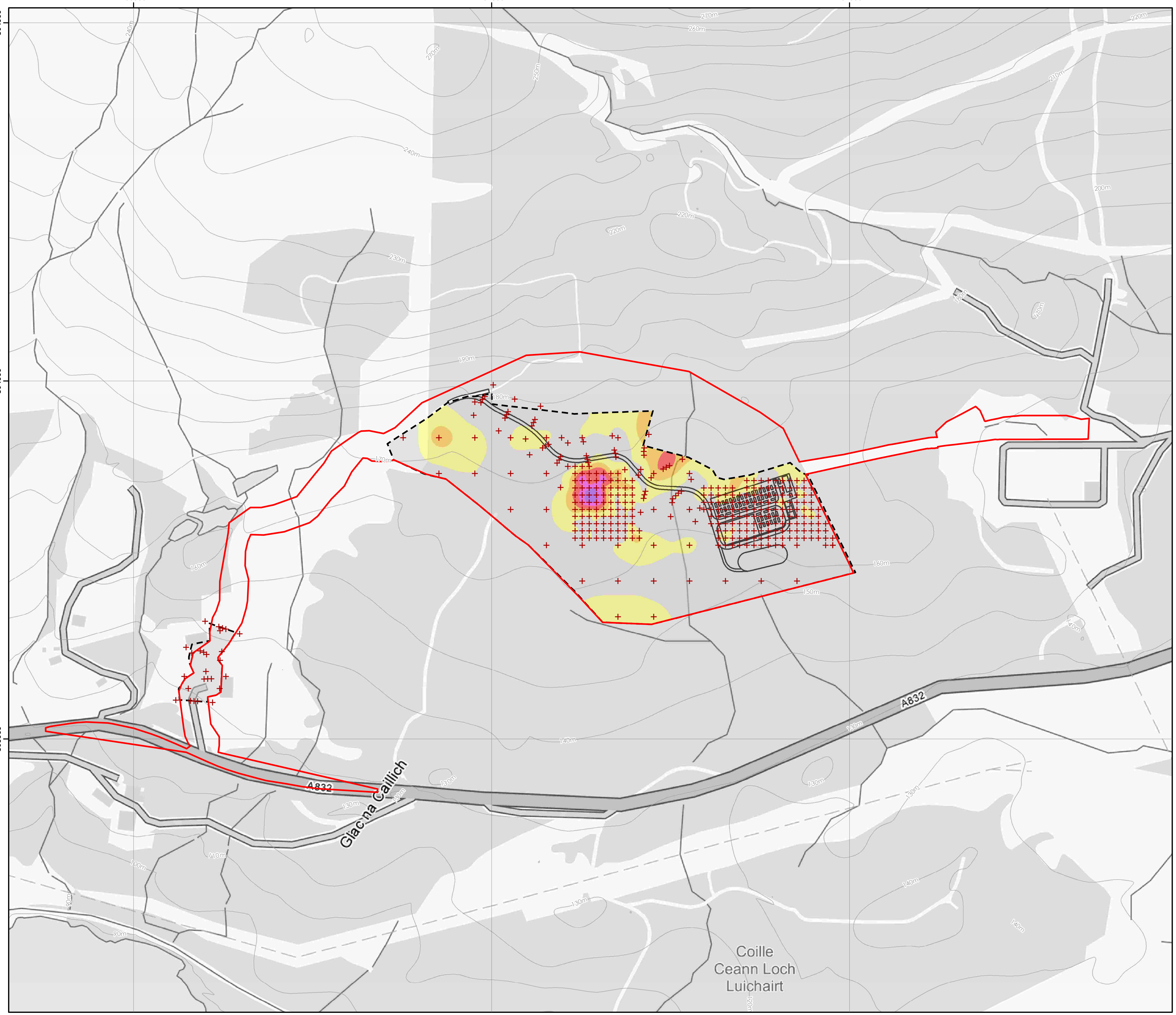

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Figure 5
Interpolated Peat Depth

Key
- Site boundary
- Peat survey area
- Proposed infrastructure
- + Surveyed peat points

Interpolated peat depth
- < 0.5m
- 0.5 - 1m
- 1 - 1.5m
- 1.5 - 2m
- 2 - 2.5m
- 2.5 - 3m
- > 3m

atmos consulting

0 75 150 300
Metres

N

Scale @ A3:
1:5,000

30/07/2025 90150/GY/016a
Drawn by: ET Checked by: KM Approved by: AR

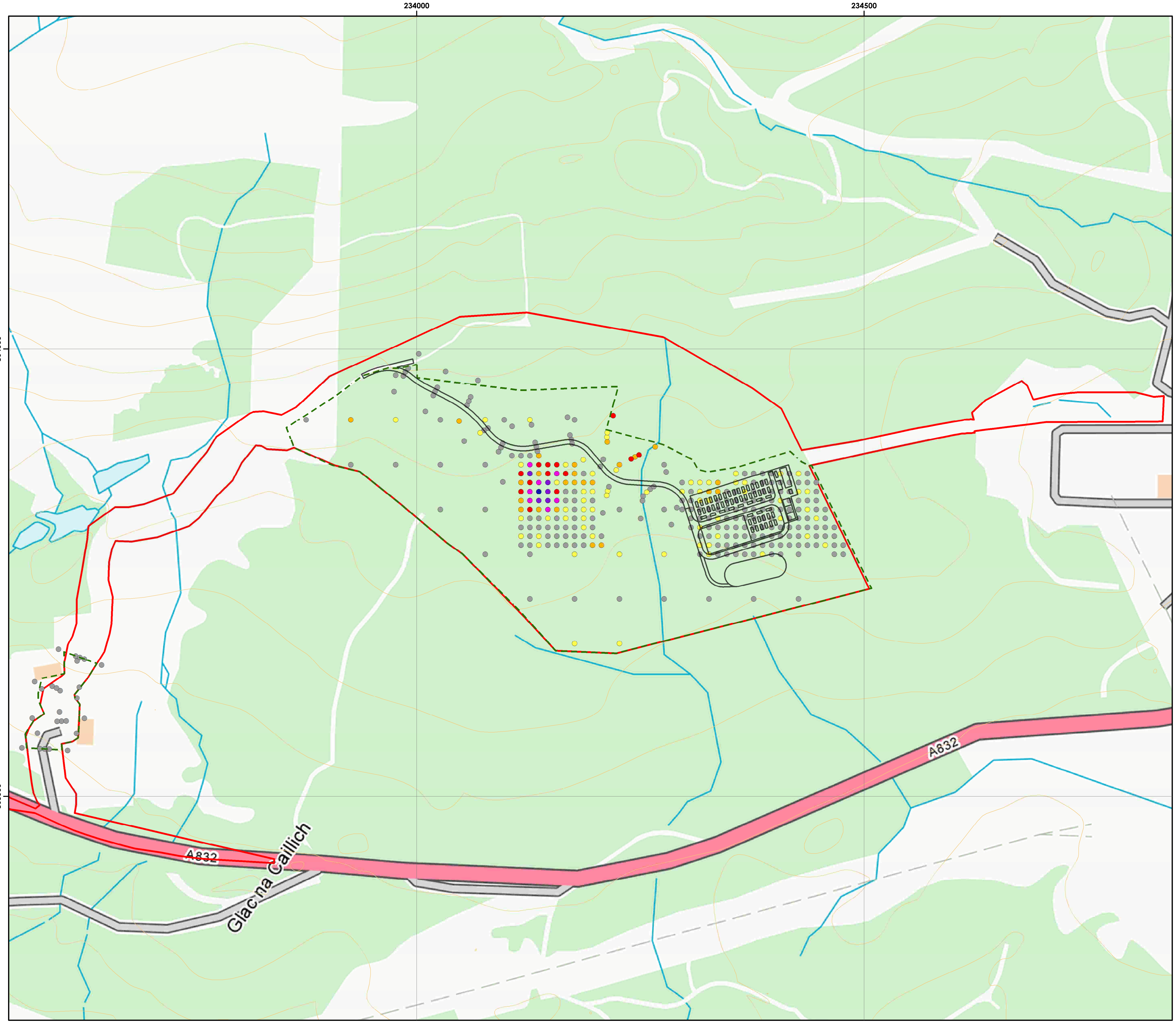

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Figure 6
Peat Depth Results

Key

Site boundary
Survey Area
Proposed infrastructure

Measured peat depth

< 0.5m
0.5 - 1m
1 - 1.5m
1.5 - 2m
2 - 2.5m
2.5 - 3m
> 3m

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0 50 100 200
Meters

N

Scale @ A3:
1:4,000

30/07/2025 90150/GY/015a
Drawn by: ET Checked by: KM Approved by: AR

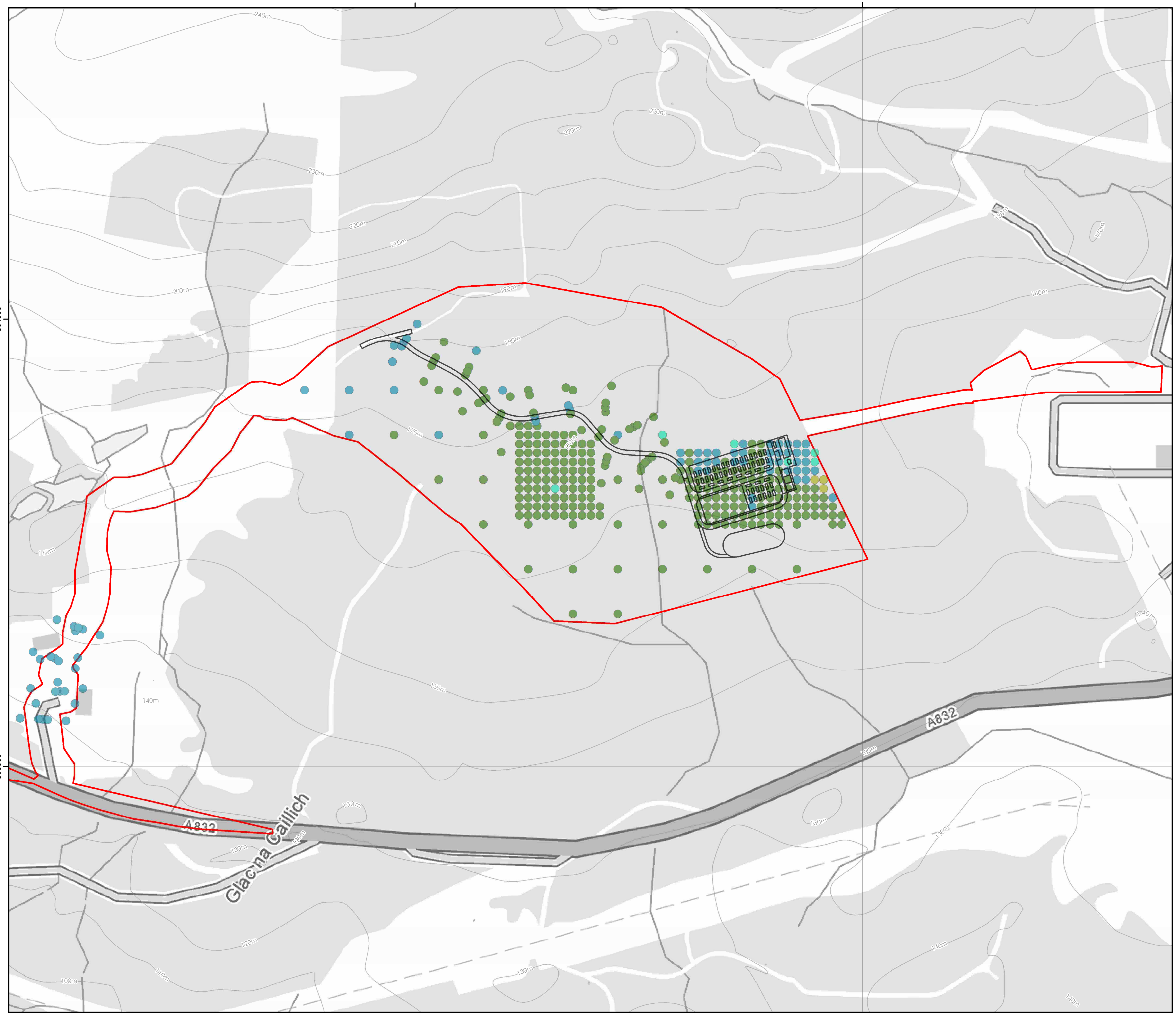

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Figure 7
Peatland Condition Assessment

Key

- Site boundary
- Proposed infrastructure

Peatland Condition Assessment

- Forestry/felled forestry
- Modified
- Actively eroding - Flat bare
- Actively eroding - Hagg/gully

atmos CONSULTING

0 50 100 200
Metres

N

Scale @ A3:
1:4,000

30/07/2025 90150/GY/020a
Drawn by: ET Checked by: TH Approved by: YM

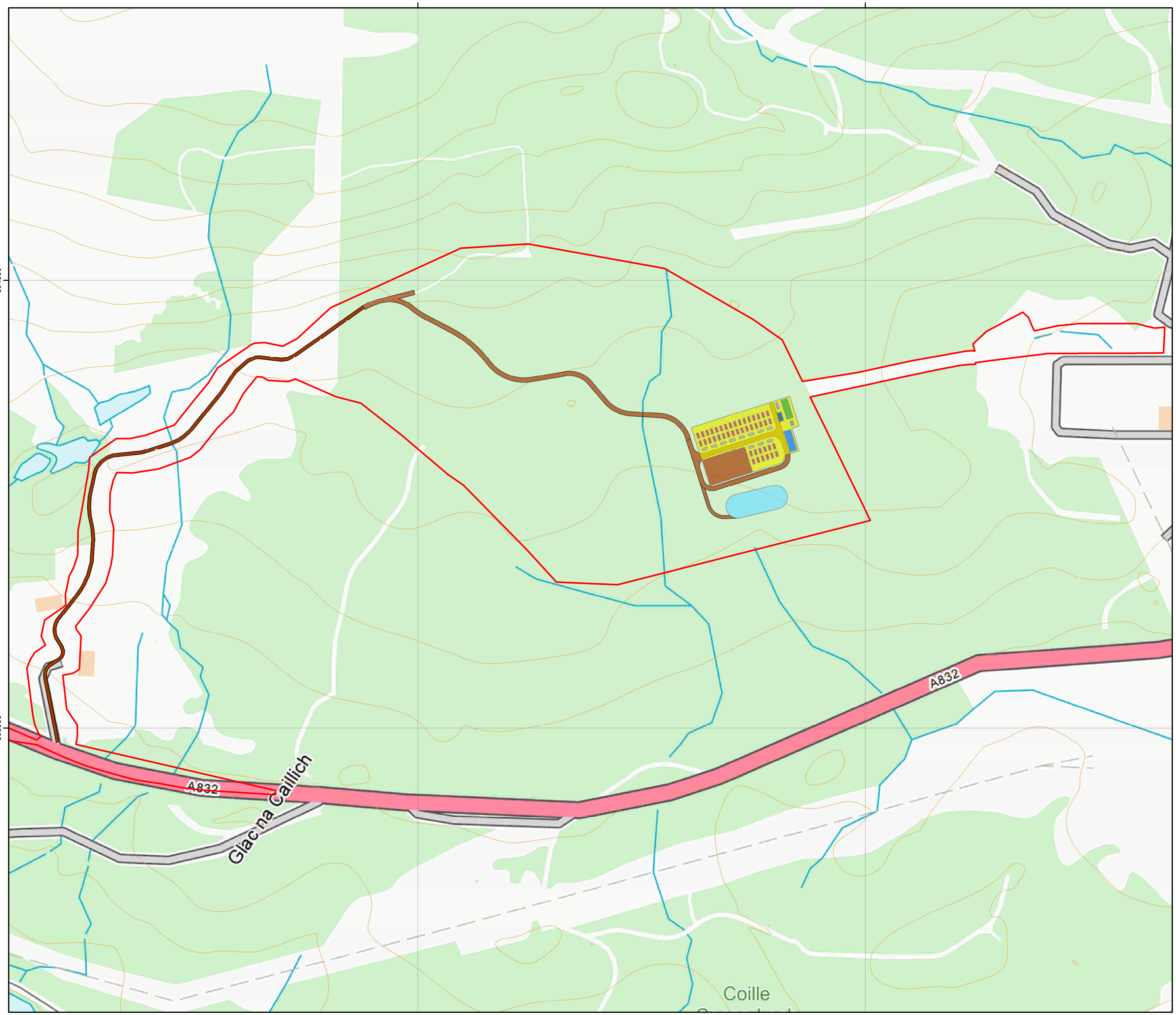

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Figure 8
Final Site Layout

Key

- Site boundary

Proposed infrastructure

- Auxiliary transformer
- BESS compound
- BESS container
- Control building
- Future augmentation area
- Generator
- Parking
- SUDs pond
- Transformer
- Water tank

Access Tracks

- New

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0 50 100 200
Meters

N

Scale @ A3:
1:4,000

10/07/2025 90150/SL/010a

Drawn by: LB Checked by: KM Approved by: GF