RWE Renewables UK Onshore Wind Limited

Lorg Wind Farm

Peat Management Plan

This report was prepared by WSP Environment & Infrastructure Solutions UK Limited (formerly known as Wood Environment & Infrastructure Solutions UK Limited), company registration number 02190074, which is carrying out these services as a subcontractor and/or agent to Wood Group UK Limited

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Report for

Jamie Gilliland
Onshore Wind Development Manager
RWE Renewables UK
Westwood Way
Westwood Business Park
Coventry
CV4 8LG

Main contributors

Peter Munro
Graham Burt-Smith

Issued by

.....
Graham Burt-Smith

Approved by

.....
Gareth Hughes

WSP Environment & Infrastructure Solutions UK Limited

2nd Floor
St Vincent Plaza
St Vincent Street
Glasgow G2 5LP
United Kingdom
Tel +44 (0)141 237 1700

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Executive summary

Purpose of this report

This report has been produced for the purpose of setting out how peat will be managed prior to, during and after construction of the proposed Lorg Wind Farm ("the Proposed Development").

A series of peat probing surveys have been carried out in accordance with standard guidance and the results of these studies have been used to develop a map showing interpolated peat depths across the Proposed Development. Using this map, the wind farm layout has been designed to avoid deeper peat as much as possible.

The interpolated peat depth map has also been used to carry out a quantitative analysis of the indicative volumes of peat that would need to be excavated during construction of the Proposed Development. The results are presented within this Peat Management Plan (PMP) along with proposed re-uses for the excavated peat.

The analysis demonstrates that all excavated peat can be re-used within the Proposed Development in ways that are ecologically beneficial.

The PMP sets out a series of peat protection measures that will minimise effects upon excavated peat as far as possible and it also sets out roles and responsibilities, together with monitoring and inspection measures that will be adopted to allow any corrective actions to be taken where necessary.

The PMP is a live document, and the contents will be updated as more information becomes available following detailed ground investigations should the wind farm be consented. It is also expected that micrositing would be used, where possible, to further reduce potential impacts upon peat.

Contents

1. Introduction

1.1 Background

In 2019, consent was received for a nine-turbine scheme known as Lorg Wind Farm ("the Consented Development"). RWE Renewables UK Onshore Wind ("the Applicant") is now submitting an application for an alternative scheme, still called Lorg Wind Farm ("the Proposed Development"), which will replace that previously consented.

The Lorg Wind Farm Environmental Statement (E.ON Climate and Renewables UK, 2015) was submitted to accompany an application for an earlier 15 turbine wind farm. In September 2017, Further Environmental Information (FEI) was submitted (E.ON Climate and Renewables UK, 2017), including a Peat Management Plan (PMP) at FEI Appendix 6.A and it was this layout that was subsequently granted consent.

This PMP addresses the peat management requirements for the Proposed Development and has been prepared in general accordance with the following guidance and best practice documents:

- Scottish Renewables and SEPA (2012) Developments on Peatland: Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and the Minimisation of Waste.
- Scottish Renewables, Scottish Natural Heritage, SEPA, Forestry Commission (2019) Good Practice During Wind Farm Construction, 4th Edition.
- Scottish Government (2017) Guidance on Developments on Peatland – Peatland Survey (2017).
- SEPA Regulatory Position Statement – Developments on Peat.
- Forestry Civil Engineering and Scottish Natural Heritage (2010) Floating Roads on Peat: A Report into Good Practice in Design, Construction and Use of Floating Roads on Peat with particular reference to Wind Farm Developments in Scotland.
- SEPA Guidance WST-G-052 (May 2017) Developments on Peat and Off-Site Uses of Waste Peat.
- NatureScot – Peatland Action: Peat depth and peat condition survey guidance and recording form guidance.

The Proposed Development is located approximately 11.5km south-southeast of New Cumnock in East Ayrshire and 13km southwest of Sanquhar in Dumfries and Galloway and straddles the boundary of the two counties (**Figure 1.1**).

The layout of the Proposed Development is set out in **Figure 1.2** and comprises the following key elements of infrastructure:

- Up to 15 Wind Turbines/ Foundations; Crane Pads; and Blade Storage Areas.
- Up to 30 auxiliary crane pads (two at each turbine location).
- Maximum two permanent anemometer (met) masts and associated crane pads.
- Two wind farm control buildings and compounds (including Substations A and B).
- Two temporary construction compounds.

- Approximately 18km of access tracks including turning heads and up to 36 passing places.
- Approximately 18km of cable trenches (running alongside access tracks).
- Maximum 15 watercourse crossings.

1.2 Definition of Peat

Peat is an organic material formed by the accumulation of plant matter at various stages of decomposition, formed over many thousands of years. The characteristics of peat vary widely depending on, but not limited to, the nature of plant material that the peat is derived from, the degree of decomposition, the type of peat bog and the quality of the water sustaining the bog. In Scotland, the Scottish Government defines peat and deep peat as follows (Scottish Government, 2017):

- Organo-soils (or peaty soils): soils with an organic horizon <0.5m thick.
- Peat: soils with an organic surface horizon greater than 0.5m in thickness and an organic matter content exceeding 60%.
- Deep peat: a peat as defined above, with a depth greater than 1.0m.

Within a peat profile, there are two distinct layers termed acrotelmic and catotelmic peat. The interface between the two layers is controlled by the position of the water-table. The upper layer of the peat (the acrotelm) is typically fibrous and comprises the living and partially decomposed peat forming plant matter (vegetation). The thickness of the acrotelm is typically controlled by seasonal variations in the water-table that creates cycles of aerobic and anaerobic conditions near the surface. The catotelm is situated below the minimum average depth of the water-table resulting in permanent anaerobic decomposition of the plant matter and the formation of less fibrous sometimes amorphous peat.

1.3 Hierarchy of Peat Management

A hierarchy of peat management is provided in guidance issued by Scottish Renewables and SEPA (2102 and 2017):

- Prevention – prevent or minimise peat excavation/disturbance through considered design that avoids or minimises wind farm infrastructure within areas of peat. Where avoidance is not possible, minimise excavation of peat using engineering solutions such as floating roads.
- Re-Use/Reinstatement – re-use extracted peat close to its original location in the reinstatement or restoration of temporary infrastructure, road verges and borrow pits. Peat may also be used where appropriate to improve or restore peatland habitats.
- Recycle/Recover/Treat – while the priority should always be to prevent and re-use peat on site there may be situations in which there may still be a surplus of excavated peat. Where demonstrated that it is suitable for use peat, may be blended, dewatered, or treated to improve its properties to support re-use on site.
- Temporary storage – store the peat temporarily during construction prior to re-use in on site reinstatement or restoration activities.
- Disposal - Disposal of peat, particularly catotelmic peat, can lead to a number of issues due to its very low tensile strength and high-water content. Where landfill on-site is identified as the preferred option for the disposal of waste peat it will be necessary to obtain a Pollution Prevention and Control permit from SEPA prior to the

commencement of any landfill operations on-site. In such cases the operator should contact their local SEPA office to discuss their proposals.

The PMP sets out procedures to minimise excavated volumes of peat and a range of methods and control measures to ensure that peat resources are protected as far as possible.

1.4 Site Overview

The accompanying Lorg Wind Farm Peat Landslide Risk Assessment (EIA Report Appendix 6C) provides a detailed analysis of the pedology, superficial geology, solid geology, topography, hydrology and hydrogeology (including Private Water Supply Locations) of the Proposed Development and this is not duplicated here.

However, key factors to note from a peat management perspective are:

- Turbines 1 to 10 are located in the east of the Proposed Development which is largely dominated by a mix of blanket bog, marsh/ marshy grassland and flushes overlying peat/ peaty gleys (**Figure 2.1**). The NatureScot Carbon and Peatland map (2016) indicates that this area is dominated by nationally important Class 1 peat, which is defined as *carbon-rich and deep peat with all cover priority peatland habitats* (**Figure 2.2**).
- Turbines 11 to 15 are located in the west of the Proposed Development which predominantly supports acid grassland underlain by peaty podzols and mineral gleys (**Figure 2.1**). The NatureScot Carbon and Peatland map (2016) indicates that this area is dominated by Class 3 soils which are defined as *mostly carbon-rich soils with some deep peat and occasional peatland habitats* (**Figure 2.2**).

1.5 Report Structure

- **Section 1** provides an introduction which includes a summary of the background to the Proposed Development, key definitions, the hierarchy of peat management and a brief overview of the site layout.
- **Section 2** sets out the peat balance comprising the estimated volume of peat that will need to be excavated together with reinstatement/ restoration proposals.
- **Section 3** sets out the peat protection measures that will be adopted.
- **Section 4** sets out the roles and responsibilities for implementation of the PMP.
- **Section 5** sets out monitoring and inspection requirements.
- **Section 6** provides a reference list.

2. Peat Balance

2.1 Methods Employed to reduce Peat Excavation

The layout of the Proposed Development has gone through a series of iterations to ensure that, where practically possible, key infrastructure is not located within areas where the peat depth exceeds 1m. These are outlined in (EIA Report Chapter 2: Scheme Need and Alternatives).

Micrositing within agreed limits will be used to further reduce peat excavation where possible.

2.2 Peat Excavation

The following peat probing surveys have been carried out:

- August - September 2013: a Phase 1 peat depth survey was undertaken on a 100m-by-100m grid across the parts of the Development Site shown to contain peat and peaty soils. The remainder of the Development Site, generally through the Water of Ken valley and steeper slopes was undertaken at 250m-by-250m survey intervals.
- October 2015: Phase 2 survey undertaken. At the same time, the Phase 1 survey was extended over the area between Alhang, Alwhat and Mid Rig due to an extension of the Development Site boundary.
- April 2017: Further probing was undertaken in the south-east of the site due to the relocation of turbines and associated infrastructure.
- June 2021: supplementary Phase 1 peat depth survey across the north-west of the Development Site through the valley of Afton Water between the north side of Alhang, Millaneoch Hill, Wedder Hill and the forestry surrounding Afton Reservoir. In addition, a supplementary Phase 1 survey was undertaken over Sour Snout, Whigs' Hole and the upper slopes of Black Hill and Cairn Hill.
- June – July 2022: Phase 2 survey on the Proposed Development

Further details on the methodology of the peat probing surveys are provided in **Section 4.1** of the Lorg Wind Farm Peat Landslide Hazard Risk Assessment (**EIA Report Appendix 6C**).

In total, 4,158 peat depth measurements have been taken across the Proposed Development (**Figure 3.1**).

These have been used to generate an interpolated peat depth map[1] for the Proposed Development (**Figure 3.2**).

A breakdown of the proposed infrastructure by category of peat depth is provided in **Table 2.1**.

[1] The interpolated peat depth map has been achieved by using ESRI ArcGIS and the Natural Neighbour interpolation method. This method was chosen given the relative simplicity of the weighting compared to other interpolation methods. It also avoids exaggeration of minimal and maximal values and results in a modelled surface that passes through the sample point value.

Table 2.1 Categories of peat depth at proposed locations of infrastructure

Peat Depth	Infrastructure
0.00m to 0.50m (carbon rich/ peaty soils)	Turbine: 8, 12, 13, 14, 15, Crane Pads: 8, 12, 13, 14, 15 Auxiliary Crane Pads: 8a, 8b, 11a, 12b, 13b, 14a, 14b, 15a, 15b Blade Storage Areas: 8, 12, 13, 14, 15 Met Mast: A Temporary Compound: B Substations: A and B Borrow Pit Search Area: East Access Tracks: 8,463m Turning Heads: 1,725m^2 Cable Trenches: 8,604m
0.50m to 1.00m (peat)	Turbines: 1, 2, 6, 7, 9, 10, 11 Crane Pads: 2, 5, 6, 9, 10, 11 Auxiliary Crane Pads: 1a, 2a, 2b, 3a, 3b, 5b, 6b, 9a, 9b, 10b, 11b, 12a, 13a Blade Storage Areas: 2, 4, 5, 6, 9, 10, 11 Temporary Compound: A Borrow Pit Search Area: West Access Tracks: 5,817m Turning Heads: 725m^2 Cable Trenches: 5,704m
>1.00m (deep peat)	Turbines: 3, 4, 5 Crane Pads: 1, 3, 4, 7 Auxiliary Crane Pads: 1b, 4a, 4b, 5a, 6a, 7a, 7b, 10a Blade Storage Areas: 1, 3, 7 Met Mast: B Access Tracks: 4,425m Turning Heads: 5,450m^2 Cable Trenches: 4,396m

The interpolated peat depth map has been used to estimate the volume of peat that will need to be excavated at each location of infrastructure (**Table 2.2**).

Table 2.2 Assessment of Peat Extraction Volumes

Infrastructure	Peaty soils[2]	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)	Assumptions re size of excavation
Turbine Foundations (x15)	1,282	4,600	4,483	10,365	~34m diameter circular at surface. Typical foundation depth 3m. Foundation batter angle 45° Total area 13,725m^2
Crane Pads (x15)	1,655	5,200	4,906	11,761	~45m x ~25m (excl turbine base) Total area 15,725m^2
Assistance Crane Pads (x30 – 2 for each turbine)	525	2,187	2,052	4,764	~12m x ~20m Total area 6,150m^2
Blade Storage Areas (x15)	3,311	9,200	8,012	20,523	~15m x ~150m Total area 27,700m^2
Met Masts (x2)	103	213	295	611	Foundation ~5m x ~5m and Crane pad ~20m x ~20m Total area 875m^2
Substations (x2)	1,446	0	0	1,446	Compound A 100m x 50m; Building dimensions 20m x 30m Compound B 25m x 20m, Building dimensions 18m x 6m Total area 5,550m^2
Construction compounds (x2)	105	1,250	719	2,074	CC1 – 50m x 50m CC2 – 50m x 50m Total area 5,000m^2
Borrow Pits (x2)	395	1,000	495	1,890	East Borrow Pit 2,000m^2 West Borrow pit 2,000m^2

[2] Peat that is less than 0.5m deep is classified a s a peaty (carbon rich) soil. The volumes of peaty soils are included within peat calculations in this PMP as, apart from depth, they generally share many of the characteristics of peat.

Infrastructure	Peaty soils[2]	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)	Assumptions re size of excavation
Cut access tracks (includes passing places)	13,467	17,238	8,177	38,882	14,279m x average 6m Total area 85,675m^2
Turning heads	586	363	231	1,180	Total area 7,900m^2
Floating Access Tracks	0	0	0	0	It is assumed that 4,425m of track (average 6m wide) on peat that is more than 1m deep will be floated Total area 26,550m^2
Cable trenches[3]	2,693	6,085	6,751	15,530	Alongside access tracks - 1.2m wide Total area 22,445m^2
TOTALS	**25,567**	**47,335**	**36,123**	**109,025**	

[3] For the laying of electrical cables, it is anticipated that cable trenches will be located within verges alongside the access tracks. Trenches will be excavated by stripping surface peat in a single process, laying the turf and excavated peat or mineral soil aside temporarily while the cable trench is prepared, and cables laid. Excavated peat or mineral soil will be replaced, and peat turf reinstated as soon as possible after the cables are laid.

- Peat represents approximately 77% of the total volume of soils that will need to be excavated; and
- Peaty soils represent the remaining ~23% of soils that will need to be excavated.

A more detailed breakdown of the calculation for each element is presented in **Appendix A**

2.3 Peat Reinstatement/ Restoration

The characteristics of the excavated peat (e.g., fibrosity and water content) determines its suitability for re-use with the wettest most amorphous peat generally being the least suitable.

In general, samples collected as part of the peat surveys within the Proposed Development noted that the peat generally had a single layer profile, low moisture content values and humification values typically less than H6 on the Von Post scale (Scottish Government, 2017). For the purpose of this PMP it has therefore been assumed that the top 0.5m will be acrotelmic peat consisting of fibrous and pseudo-fibrous peat and the surface vegetation.

The following assumptions have been made with regard to the characteristics of the peat and the intended suitable reuses:

- Acrotelmic peat / peat soils – when stripped with the vegetation, intact turves of acrotelmic peat or peaty soils will be suitable for surface reinstatement, dressing back and tying in infrastructure to the surrounding vegetation and habitats.
- Fibrous catotelmic peat – most suitable for reinstatement beneath the replaced acrotelm. Subject to suitability (to be assessed by the Ecological Clerk of Works (ECoW) in consultation with a suitably experienced peat specialist if necessary) it may also be used as a surface layer with careful site selection and management to control erosion and encourage vegetation recovery (e.g., seeding, translocation of vegetation and fencing to deter deer grazing).
- Amorphous peat – peat of this type will only be suitable for reinstatement of excavations beneath a surface vegetation layer. The peat may also be used in the restoration of the borrow pits beneath an acrotelmic layer to create conditions which will support development of a mire or wet heath plant community. However, the volume of amorphous peat that will require removal is anticipated to be small given that infrastructure has avoided the need to excavate deep peat where possible.

It is anticipated that all excavated peat that has been stored correctly (see **Section 3**) should be suitable for reuse.

Table 2.3 outlines how excavated peat and peaty soils can be reused/ reinstated together with indicative volumes and associated assumptions. A more detailed breakdown of the calculation for each element is presented in **Appendix B**.

Table 2.3 Proposed uses of excavated peat for reinstatement/ restoration together with indicative volumes

Infrastructure	Peaty soils[2]	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)	Assumptions re size of excavation
Turbines Foundations (x15)	1,255	4,502	4,387	10,143	The turbine bases and battered excavations will be reinstated apart from a stoned walkway over the foundation reinstatement.
Crane Pads (x15)	440	1,425	1,360	3,226	The crane pads will not be reinstated or reduced in size following construction but will be retained for future turbine maintenance. They will be reinstated along edges that are not connected to the access track to create a suitable tie-in with the surrounding vegetation on three sides. The peat will be reinstated to the previous depth where that was less than 0.5m. Elsewhere, subject to approval by the ECoW, reinstatement could be to a depth of up to 1m where the peat is of sufficient quality, the surrounding peat is of a similar depth and it is agreed that this would be the best option to achieve a good tie-in with the surrounding vegetation. The width of the reinstatement is estimated to be 3.0m, although exceptions may occur where the topography requires larger areas of cut and fill.
Assistance Crane Pads (x30 – 2 for each turbine)	353	1,386	1,418	3,157	The assistance crane pads will not be reinstated or reduced in size following construction but will be retained for future turbine maintenance. They will be reinstated along edges that are not connected to the access track to create a suitable tie-in with the surrounding vegetation on three sides. The peat will be reinstated to the previous depth where that was less than 0.5m. Elsewhere, subject to approval by the ECoW, reinstatement could be to a depth of up to 1m where the peat is of sufficient quality, the surrounding peat is of a similar depth and it is agreed that this would be the best option to achieve a good tie-in with the surrounding vegetation. The width of the reinstatement is estimated to be 3.0m, although exceptions may occur where the topography requires larger areas of cut and fill.
Blade Storage Areas (x15)	3,311	9,200	8,012	20,523	The blade storage areas will be reinstated to their original peat profile

Infrastructure	Peaty soils[2]	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)	Assumptions re size of excavation
Met Masts (x2)	39	73	16	127	The met mast crane pads will not be reinstated or reduced in size following construction but will be retained for future maintenance. They will be reinstated along edges that are not connected to the access track to create a suitable tie-in with the surrounding vegetation on three sides. The peat will be reinstated to the previous depth where that was less than 0.5m. Elsewhere, subject to approval by the ECoW, reinstatement could be to a depth of up to 1m where the peat is of sufficient quality, the surrounding peat is of a similar depth, and it is agreed that this would be the best option to achieve a good tie-in with the surrounding vegetation. The width of the reinstatement is estimated to be 3.0m, although exceptions may occur where the topography requires larger areas of cut and fill.
Substations (x2)	323	0	0	323	The batter (which varies between approximately 3.0m and 5.0m wide) will be reinstated around two sides of each substation compound to a depth to tie in with the surrounding vegetation.
Construction Compounds (x2)	105	1,250	719	2,074	The temporary construction compounds will be reinstated to their original peat profiles.
Borrow Pits (x2)		2,000	5,050	7,050	The borrow pit will be restored with peat to an average depth of approximately 1.76m with the potential for localised deeper areas. The borrow pit design (and hence restoration proposals) may evolve during construction subject to the quality of material being excavated and thereby the quantity of useful material won and extracted.
Cut access tracks (includes passing places)	16,462	17,238	8,177	41,877	For cut tracks, the verges will be reinstated. to ensure that a suitable tie-in with the surrounding vegetation and habitats is created. The peat will generally be reinstated to the previous depth where that was less than 0.5m. Elsewhere, subject to approval by the ECoW, reinstatement could be to a depth of up to 1m where the peat is of sufficient quality, the surrounding peat is of a similar depth and it is agreed that this would be the best option to achieve a good tie-in with the surrounding vegetation. Verges will generally be 3.0m wide although exceptions may occur where the topography requires larger areas of cut and fill.

Infrastructure	Peaty soils[2]	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)	Assumptions re size of excavation
Turning Heads	586	363	231	1,180	Verges will be created around turning heads using the same principles applied to cut access tracks.
Floating Access Tracks/ Turning Heads	0	3,815	0	3,815	Verges may be created alongside floating roads only where approved by the ECoW. Peat will be no more than 0.5m deep. For the purposes of this PMP it is assumed that verges could be created in this way along up to 30% of the proposed length of floated road.
Cable Trenches	2,693	6,085	6,752	15,530	Cable trenches will be reinstated to their original peat profiles.
Peatland Restoration	TBC	TBC	TBC	TBC	The Lorg Outline Habitat Management Plan (OHMP) (**EIA Report Appendix 11G**) contains proposals for the restoration/improvement of degraded blanket peat in the east area of the Proposed Development, particularly around turbines 2, 3, 5 and 9. Options include the blocking of grips and drainage ditches to increase water table levels and promote the restoration/establishment of peat forming communities. Suitable excavated peat could be used for this purpose. Reference should be made to SEPA prior to undertaking any works if peat is to be used for this purpose.
TOTALS	**25,567**	**47,335**	**36,123**	**109,025**	

Table 2.3 shows that surplus peat which cannot be used for reinstatement around the immediate area from which it is excavated would be used for borrow pit restoration, further details of which will be provided in a separate Borrow Pit Scheme of Works expected to be required by a Planning Condition. It is possible that peat that is currently destined for borrow pit restoration could beneficially be used to support peatland restoration proposals presented in the OHMP. Further consideration will be given to this as the PMP and OHMP are developed prior to construction. It is expected that any diversion of peat for this purpose would not significantly affect the proposed borrow pits restoration.

2.4 Peat Balance Summary

The indicative volume of peat that will be stripped and excavated for the Proposed Development during construction will be approximately 109,025m^3, all of which can be beneficially re-used for reinstatement/ restoration.

3. Peat Protection Measures

Where peat excavation is unavoidable care must be taken when handling, transporting and stockpiling peat to protect the peat structure and strength as far as possible. Where possible the movement of peat over long distances will be minimised and peat will be stored locally for re-use as soon as possible. Furthermore, double handling will be minimised, and a robust planning and monitoring programme will be developed to ensure that peat and mineral soils are not mixed.

Protection of In Situ Peat

The layout of the wind farm has already taken into account constraints relating to sensitive areas of deep peat. The wind farm layout and access track route will be marked on an Access Plan, which will provide a designated controlled route and a permissible corridor within which service vehicles and plant can operate. The purpose of the Access Plan is to protect *in situ* peat in areas that are not affected by the Proposed Development and to prevent unnecessary damage by vehicle and plant movements across these areas. The following rules will apply to the Access Plan:

- There will be no vehicle access to areas of the Development Site outwith the area marked on the Access Plan (i.e., the layout/working area marked on the plan).
- Servicing or refuelling activities will only take place within clearly designated areas within the Access Plan which will be identified in the CEMP.
- Laydown of materials (either construction materials or waste materials) will take place only within designated areas within the Access Plan. There will be no laydown, unless identified in the construction drawings, of any type of materials either within the access route corridors or anywhere outwith the designated areas. Laydown areas will be checked with the peat landslide risk assessment prior to their designation.

Access routes and working areas will be clearly delimited throughout the construction phase to ensure that peat compaction and damage in areas not directly involved in the works will be avoided. The construction works will be phased to ensure that peat is stripped in each part of the Development Site ahead of mineral subsoil.

Stripping and Excavation of Peat

Peat Turves (Acrotelmic Peat)

In all locations where there is an organic surface layer, the stripping and excavation method(s) to be used in each part of the Development Site will be agreed in advance. Wherever possible, a 360^{o} excavator will be used to permit stripping of large-scale surface peat turves, with their vegetation intact. Ideally these should be a minimum of 0.5m deep and with an area up to a maximum of 1m^{2}. However, the depth and scale will depend on the depth, consistency, and condition of the surface peat at each location and the plant used for stripping. The general rule should be that the largest possible turf should be stripped, which allows it to remain intact.

The turves will be transferred intact, using for example, the bucket of the excavator, to their temporary storage location where they will be stored, with vegetation upright. The ECoW will determine whether laydown on geotextile is required to ensure that underlying vegetation and peat is protected as much as possible from the effects of temporary storage.

Deeper Peat (Catotelmic Peat)

Where excavation of catotelmic peat is necessary it is more likely to have reduced structure (depending on its water content and fibrosity) and could be very wet. If possible, it should be transferred straightaway to a designated location for re-use. If not possible, a suitable temporary storage location will be identified in a location which minimises the distance of travel. Storage will be for as short a period as possible and control measures implemented to minimise damage to the peat (see "General Principles for Temporary Peat Storage").

During peat and soil stripping, handling and temporary stockpiling, all efforts will be made to prevent unnecessary trafficking over peat. Appropriate scale plant will be used, such as 360^0 excavators rather than bulldozers. Double handling will be avoided as much as possible, and a robust planning and monitoring programme will be invoked by the ECoW and Site Environmental Manager to ensure that peat and mineral soil are not mixed.

To ensure a minimum amount of damage to peat during stripping activities, strict procedures will be adopted for heavy plant access, stripping and handling/ transport of surface, intact, peaty turf and subsurface wetter peat. Antecedent moisture conditions are critical for this and peat stripping and handling will not take place if there are heavy rainfall conditions which exceed those specified for cessation of works (see below).

Where mineral soil is encountered, soil stripping and excavation will generally follow the methodologies recommended for mineral soil by Ministry of Agriculture Fisheries and Food (2000) and the Department for Environment Food and Rural Affairs (2009).

General Principles for Temporary Peat Storage

- Separate stockpiles will be created for peat and mineral soil. Documentation and physical control measures will be set in place to prevent accidental mixing and to ensure that peat and mineral soils are appropriately segregated.
- The selection of temporary peat storage locations will consider the environmental constraints including peat landslide risk, avoidance of sensitive peatland habitats and avoidance of water features.
- The number and locations of temporary peat storage areas will be chosen to minimise the distance that stripped and excavated peat would have to be transported both at the time of excavation and at the time of replacement/ restoration.
- Each storage location must be approved by the ECoW, taking into account each location's suitability in terms of its proximity to the source of peat, environmental impact, safety, constructability and whether special mitigation measures will be required.
- The decision on height of temporary peat storage for each infrastructure element in each part of the Development Site will be approved by the ECoW, with the principal aim of keeping the peat in suitable condition for reinstatement/ restoration by minimising problems of erosion, soil compaction, dewatering and instability.
- Peat stockpiles will generally be to a depth of 1m. However, where the condition of the peat is suitable and where approved by the ECoW (who must be a suitably experienced peat specialist), peat can be stored to a maximum height of 2m. This would have the advantage of reducing the footprint area of peat storage and the surface area exposed to sunlight and drying. The ECoW will determine, on a case-by-case basis, whether any drainage control measures need to be applied (e.g. settling ponds, drainage ditches, check dams etc) and whether a bund should be constructed around the perimeter of the peat storage area(s) (if so, the bunds will extend to a minimum level of above the toe of the stockpiled peat to restrain surface runoff.

- A summary of the stockpiling method for a low water content peat (to be determined by the ECoW or a suitably experienced peat specialist) is provided below:
  - Step 1 – The peat will be loose tipped in heaps to a maximum height of 2m starting at the furthest point in the storage area and working back toward the access point. To avoid compaction, no machinery (even tracked plant) will traverse the stockpile.
  - Step 2 – The surface of the stockpile will be lightly tamped and smoothed off with the bucket of an excavator to reduce rainwater infiltration.
- Should excavated catotelmic peat be very wet (to be determined by the ECoW or a suitably experienced peat practitioner), this will be stored in a purpose-built bunded location with the final peat depth no greater than 1m. Each bunded storage area will be designed with a settling pond to collect run-off and infiltrated rainwater and enable sediment retention. Each settling pond will be designed with appropriate filtration treatment facilities prior to connection into the surface water drainage scheme for the Proposed Development. It will also be regularly inspected and maintained with peat sediment returned to the stockpile as necessary. If significant erosion of the storage area is observed, it should be covered to protect it from further erosion by heavy rainfall and frost during the winter months.

Table 3.1 sets out criteria for the selection of suitable temporary peat storage areas.

Table 3.1 Temporary peat storage criteria

Suitability	Criteria
High (most favoured locations for peat storage)	Less than 75m from proposed infrastructure (to minimise extent of construction envelope). More than 50m from watercourses. More than 25m from active ditches or gullies. Avoids active blanket bog vegetation (to be determined by the ECoW, in consultation with a suitably experienced peatland ecologist where necessary) Located and constructed so that erosion and runoff is limited, leachate from the material is controlled, and stability of the existing peatland in the vicinity is not affected. Located on peat that is less than 1.0m deep. Located in an area with negligible or low peat landslide risk Avoids groundwater dependent terrestrial ecosystems (GWDTEs).
Moderate	Defined in the same way as High but GWDTEs are present.
Low (least favoured locations for peat storage)	Areas which do not meet one or more of the defined criteria (excluding the presence of GWDTEs).

The Principal Contractor will develop a programme of works to identify the specific locations and estimate the volume of peat that will require temporary storage at any one time.

Stockpiles will be designed to include measures that avoid instability of the stockpiles and the run-off of peat laden sediment into watercourses.

Measures to manage and treat Site run-off and prevent erosion during peat stripping and stockpiling works will be set in place through a series of specific control measures relating to surface water management which may include specifically orientating the stockpile, levelling/benching, bunding to contain stored materials and site-specific drainage to ensure that

runoff waters are sufficiently controlled (to be provided as part of the Drainage Management Strategy within the CEMP).

Stockpile Monitoring

There will be frequent, routine, and regular inspections of peat in all stockpiles and temporary storage areas as part of the PMP audit process by the ECoW (**Table 4.1**). The inspections will assess *in situ* peat physical conditions, integrity of containment, temporary drainage conditions and will confirm that stockpile design and management is adequate to prevent erosion and peat landslide. It is recommended that these inspections take place weekly during the stockpile creation and throughout the storage duration, as well as following any large rainfall events. The inspection should include, but not necessarily be limited to, the list of inspection criteria set out in **Table 5.1**.

Should any problems be observed during regular visual inspections of peat stockpiles, this will invoke implementation of an appropriate corrective action which will be recorded and monitored for effectiveness. Types of corrective actions will include, but will not be limited to:

- Modification of temporary drainage.
- Additional or modified bunding.
- Incorporating of sediment fencing if required.
- Light re-grading to correct any areas of surface erosion.
- Where necessary covering with geotextile (that does not prevent rainwater infiltration).

Peat Reinstatement Methods

The primary objective of peat reinstatement is to create conditions alongside, around and within the Proposed Development that will enable the re-establishment of habitats that tie into adjacent undisturbed habitats. A key aim of such reinstatement is also to stabilise the track verges and crane pad batters to prevent peat erosion.

The peat reinstatement process will involve two main stages to recreate the peat profile within the reinstatement areas. The first stage (where peat is to be greater than 0.5m deep) involves the spreading of catotelmic peat, and the second stage involves the replacement of peat turves on top to create conditions that will allow the reinstatement of peatland vegetation. During peat reinstatement the following fundamental measures will be taken to preserve peat quality and to ensure the speediest re-establishment of appropriate vegetation:

- Replace, spread out and lightly tamp down the peat in layers in the following order: catotelmic peat first and replaced peat turves second, either to the depth of peat recorded prior to construction, or to the pre-determined depth of peat prescribed in the PMP.
- In all reinstatement activities, avoid over compaction and any unnecessary damage to peat turves.
- Regularly water the replaced turves if reinstatement activities take place in dry summer conditions.

In order to ensure that the minimum amount of peat compaction occurs during placement when heavy machinery is used, the Principal Contractor will develop a method for tipping and spreading of catotelmic peat in each area (where required) prior to placing acrotelmic peat on top. This may include working progressively backward from furthest point to the track/hardstanding to minimise

tracking as well as spreading and very light tamping down by use of the bucket on a long reach excavator.

Peat handling and placement during reinstatement activities should be scheduled to take place as soon as possible to limit time in storage.

During habitat reinstatement works, mitigation is required to reduce some inevitable damage to peat and peat turves caused by handling and removal of peat from temporary stockpiles, transport and peat placement and re-grading on previously stripped areas. Mitigation measures during this phase of work would closely follow those used during the initial peat stripping phase of work, particularly methods to prevent peat compaction by heavy plant, erosion or peat landslide. This would include, but not be limited to, the implementation of an access and egress plan for vehicles and plant to prevent unnecessary trafficking of reinstated areas, use of appropriate scale, low bearing, plant, such as 360° excavators rather than bulldozers, forward planning to minimise double handling of peat and avoidance of mixing peat with mineral soil.

During reinstatement works, measures to manage and treat run-off, and prevent soil erosion during the works will also be set in place through a series of specific drainage control measures set out in the CEMP. In addition, where the vegetation will need to be given time to re-establish it may be necessary to temporarily fence parts of the reinstated areas to prevent damage by grazing livestock. The ECoW will monitor the re-establishment of peat forming vegetation and, where problems have been caused by inappropriate or incorrect peat storage, the Principal Contractor may need to carry out seeding and/or translocation of vegetation to achieve the desired outcome.

4. Roles and Responsibilities

The implementation of the PMP will require certain key responsibilities to be assigned to defined roles. An updated version of this PMP will form part of the CEMP and the hierarchy of roles and responsibilities illustrated in that document will also be appropriate for the PMP. The roles described below are key to the success of the PMP.

The Principal Contractor will be responsible for ensuring that a named individual has responsibility to supervise and provide quality control on peat stripping, stockpiling and restoration aspects of work. This individual will also have ultimate responsibility to ensure that all peat management and monitoring obligations are met and that the control measures described in this PMP are correctly implemented.

The ECoW (If necessary, in consultation with a suitably experienced peat specialist) will be responsible for carrying out peat inspections of temporary storage/stockpiling areas and peat conditions in restored areas.

Roles and responsibilities in relation to the PMP are summarised below in **Table 4.1**.

Table 4.1 Summary of PMP roles and responsibilities

Role	Responsibility
Principal Contractor	Appointment of a named individual to: • Oversee the implementation of the PMP, checking that prescribed methodologies are being correctly implemented. • Provide overall quality control on peat management. • Ensure that all peat management and monitoring obligations are met. • Work with the ECoW to ensure joined up thinking and implementation between the proposed mitigation in the EIA and environmental management plans including both the construction and operational drainage schemes.
ECoW	• Carries out regular inspection of: o peat stripping (checking that peat and mineral soil are not being mixed); o peat handling; o methods of peat storage/stockpiling; o conditions of peat in temporary storage/stockpiling areas; and o peat restoration activities and conditions. • Works with the Principal Contractor's named individual with responsibility for peat management to ensure joined up thinking and implementation between the proposed mitigation in the EIA and environmental management plans including both the construction and operational drainage schemes. • Reports any non-compliances to the Principal Contractor's named individual with responsibility for peat management.

5. Monitoring and Inspection

Neither *in situ* monitoring of peat conditions, nor sampling and analysis of peat is prescribed. However, water quality monitoring and regular inspections of restored vegetation conditions and runoff water conditions will be carried out throughout the construction and restoration phases of work. These will act as surrogates for peat monitoring – since both depend heavily on correct peat management, particularly correct temporary storage, and restoration. Regular inspections of vegetation restoration conditions and runoff water quality conditions will be carried out by the ECoW as part of the routine inspections.

Regular, frequent inspections of peat conditions during construction and restoration phases of work will be carried out by the ECoW as follows:

- Peat surface, peat profile and peat consistency conditions will be carried out as part of the peat depth survey prior to the start of construction. This information will provide the baseline conditions for each part of the infrastructure footprint and the basis of site-specific Peat Landslide Risk Assessments for the temporary storage of excavated peat.
- Temporary peat stockpiles and storage of peat turves will be inspected weekly according to the checklist set out in **Table 5.1**.

Table 5.1 Checklist for checking peat stockpiles and storage of turves

No	Criteria to check
1	Any locations where stockpiles have been constructed to higher than the threshold 2m elevation.
2	Any locations where boundaries between segregated peat and mineral soil stockpiles have become amalgamated, causing contamination of peat with mineral soil.
3	Any signs of surface peat erosion – caused by surface water runoff, frost or wind.
4	Any locations of surface water ponding, indicating that the stockpile is not shedding water correctly.
4	Any signs of inappropriate vehicle tracking, indicating inappropriate access and trafficking, causing additional unnecessary compaction.

Corrective Actions

Should there be any incidences where inspections of peat storage areas or reinstated peat areas identify any issues, corrective actions will be invoked. This procedure is particularly important at the storage/stockpiling stage to ensure that there is no risk of peat landslide or peat erosion and in the final phase of works, once reinstatement activities are completed, to ensure that any non-compliances are corrected before re-vegetation activities take place.

Should any non-compliances be identified, they will be reported via the PMP Audit procedure.

PMP Audit Procedure

An auditing process is required to ensure that the correct checks and inspections are carried out and that non-compliances are identified, reported, and rectified, with measures put in place to prevent future occurrences. In addition, it ensures that the required inspections are carried out, correctly interpreted, reported, and acted upon as required.

The auditing process for recording peat conditions in storage/stockpile areas will form part of the overall construction documentation procedure. The PMP auditing process will include documentation, incident reporting and a procedure for implementing corrective actions. It will also describe any required review procedures.

The documentation and database to be used to log and chronicle the origin, handling, transport, storage/stockpiling, inspections and final peat reuse will be developed in detail by the Principal Contractor prior to the start of construction. The written procedure for peat stripping and storage/stockpiling will form part of the Construction Method Statement.

As construction activities proceed, the PMP will indicate temporary storage locations and quality of *in-situ* peat and peaty soils: particularly the depth of peat, together with details of expected after-use. Documentation will identify the person(s) responsible for supervising and overseeing peat management during the works.

An indicative Audit checklist is provided in **Table 5.2**.

Table 5.2 Indicative Audit Checklist

Element	Indicative Checklist
Access Plan/ Trafficking	Inspect to ensure that the Access Plan is being adhered to and that there is no trafficking, stopping of vehicles or refuelling of vehicles or plant outside of permitted areas marked on the Access Plan. Inspect to ensure that there is no laydown of any materials outside of permitted areas on the Access Plan. Ensure that no plant traffics across any area of virgin peat and issue non-compliances where this occurs. Advise on restoration of any trafficked and/or damaged area.
Peat Stripping Method	Ensure that correct peat turf depth is being adhered to when stripped – to ensure that peat structure and strength is maintained; and Ensure that correct methods for excavation and transport of 'loose' peat are being adhered to.
Peat Storage/ Stockpiling	Inspect peat turf storage areas for each element of infrastructure and ensure that correct storage is being adhered to. Advise on whether watering of turves is required. Inspect storage of 'loose' peat and carry out checklist in **Table 5.1**. Advise on any corrective actions on storage/stockpiles.
Peat Restoration	Inspect replacement of 'loose' peat and peat turves and advise on any necessary corrective actions (e.g., methods for prevention of erosion). Advise on whether watering of turves after replacement is required.

This should be used to ensure that weekly inspections and checks are implemented and recorded in a timely manner and that monthly status reports are prepared on schedule.

Reporting of Non-compliances

Non-compliances will be reported as soon as they are identified by programmed inspections. They will be reported via the PMP Auditing procedure to the Construction Manager and corrective actions will be identified and implemented promptly. This will require timely decision making. If further inspections are required to ensure that acceptability criteria have been achieved, this will be prescribed and implemented. To facilitate speedy rectification of any non-compliances, the Principal Contractor's Site Environmental Engineer will be responsible for day-to-day decisions on routine non-compliance issues.

Criteria for Cessation of Works

Experience has shown that the combination of wet weather and wet peat conditions create very difficult conditions for vehicle and plant operations and elevate the possibility of peatslide and peat erosion, leading, for example, to impaired water quality impacts. For this reason, appropriate weather criteria are prescribed in this section to provide thresholds beyond which peat stripping, handling and stockpiling activities will cease.

If sustained heavy rainfall, or flash flooding, occurs during soil/peat stripping operations, work must be suspended and not restarted until the ground has at least one full dry day to recover.

If sustained snowfall and freezing conditions occur, soil/peat stripping and/or stockpiling, and/or restoration activities will cease. When thawing conditions occur, the Principal Contractor will use forecast meteorological conditions to determine the appropriate timescale for restarting any peat management activities (stripping, handling, storage, restoration). The decision-making will pay due attention to the potential for rapid and turbulent snowmelt runoff, peat erosion and peatslide risk.

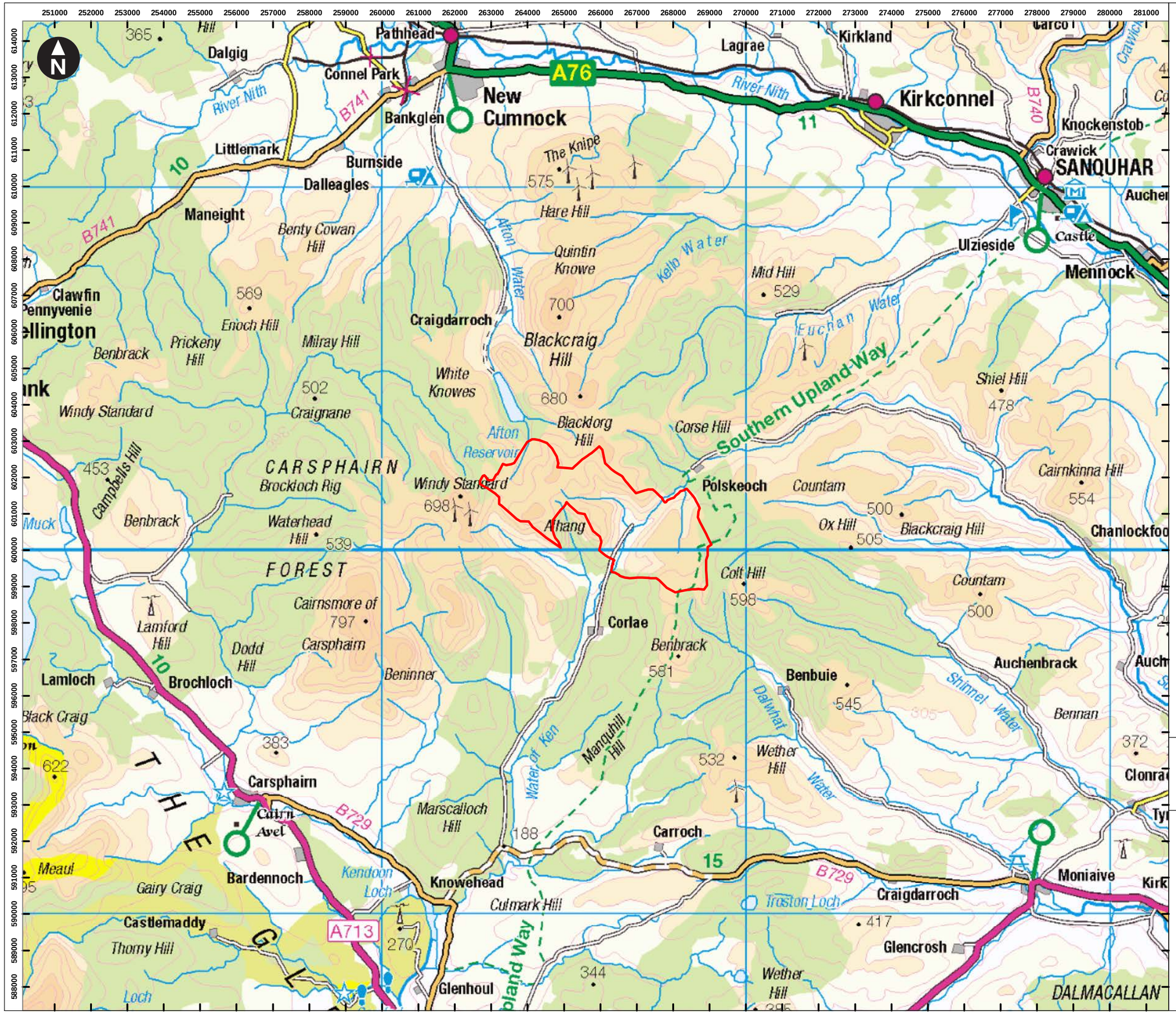
Toolbox Talks

Regular toolbox talks will be used to ensure that all staff are aware of the PMP and applicable peat handling and protection procedures. The toolbox talks will be site-specific, discussing peat conditions at the Proposed Development.

An indicative list of possible toolbox talks is provided in **Table 5.3**.

Table 5.3 Indicative Toolbox Talks

Topic	Contents
Peat Protection	Why peat resources need to be protected. Site restrictions and good practice activities in order to protect peat resources.
Planning	Importance of planning peat management for example access and egress routes, temporary peat storage locations.
Peat Stripping	Why segregation of peat and mineral soils is important.
Peat Reinstatement	Why and how.



Key

Development Site boundary

0 1 2 3 4 5 Kilometers

Scale at A3: 1:100,000

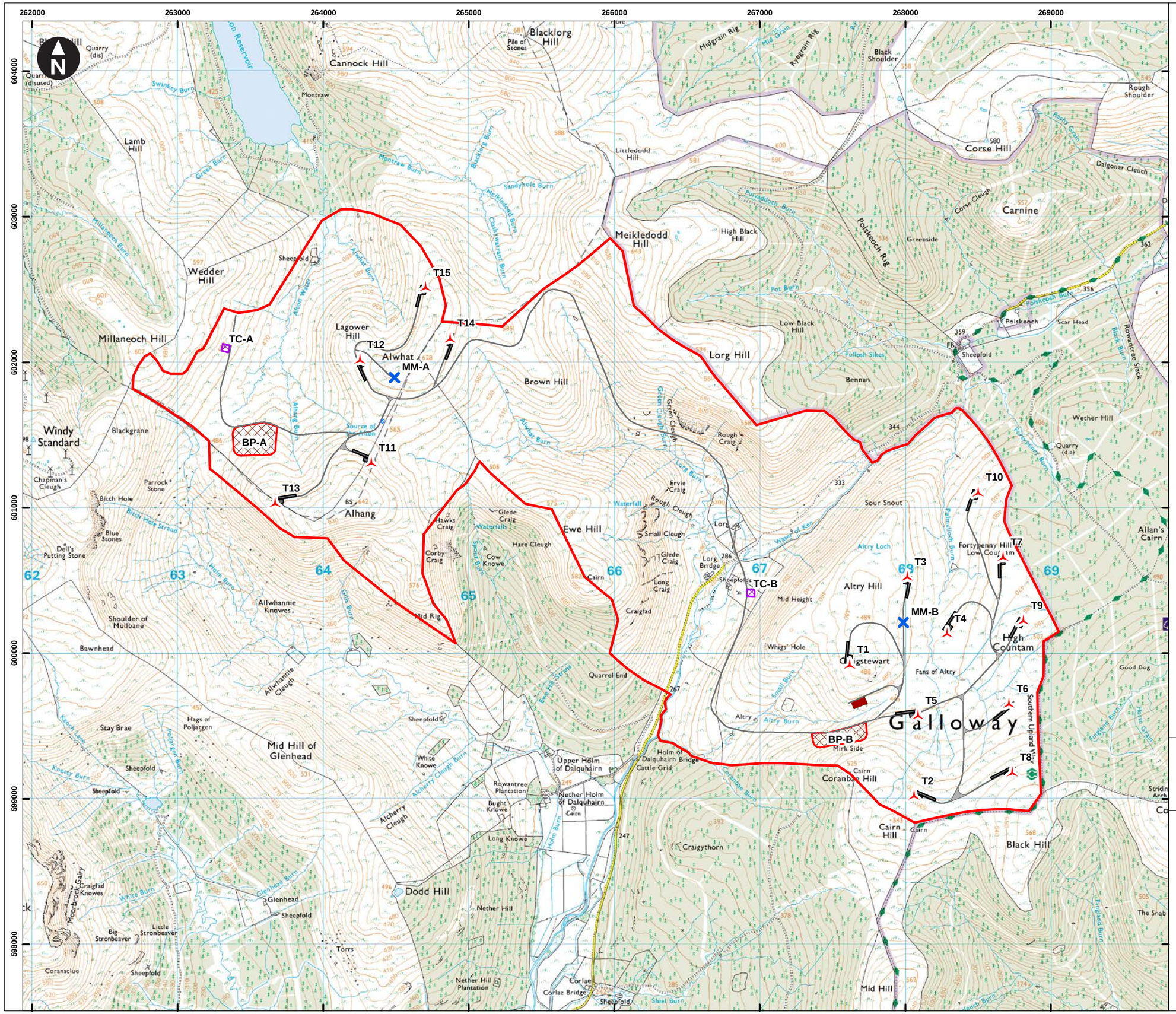
Client

RWE

Lorg Wind Farm
Peat Management Plan

Figure 1.1
Site location

November 2022



Client

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Peat Management Plan

Figure 1.2
Site layout

November 2022

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262000 263000 264000 265000 266000 267000 268000 269000

604000 603000 602000 601000 600000 599000 598000

N

T15 T14 T12 MM-A TC-A BP-A T11 T13 T10 T7 T3 TC-B MM-B T9 T4 T1 T5 T6 BP-B T8 T2

Cannock Hill Blacklorg Hill Meikledodd Hill Littledodd Hill Lamb Hill Wedder Hill Millaneoch Hill Lagower Hill Alwhat Brown Hill Lorg Hill Windy Standard Alhang Ewe Hill Corse Hill Carnine High Black Hill Black Shoulder Rough Shoulder Greenside Polskeoch Scar Head Wether Hill Altry Hill High Countam Galloway Coranbae Hill Cairn Hill Black Hill Allan's Cairn Mid Hill of Glenhead Dodd Hill Stay Brae Shoulder of Mullbane Deil's Putting Stone Upper Holm of Dalquhairn Nether Holm of Dalquhairn Holm of Dalquhairn Bridge Cattle Grid Craigythorn Corlae Nether Hill Plantation Mid Hill

Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Temporary compound
- Access tracks
- Substation
- Borrow pit

National Soil Map of Scotland Generalised Soil Type

- Alluvial soils
- Brown soils
- Calcareous soils
- Immature soils
- Lochs
- Mineral gleys
- Mineral podzols
- Montane soils
- Peat
- Peaty gleys
- Peaty podzols

0 0.25 0.5 0.75 1 1.25 Kilometers

Scale at A3:1:25,000

Client

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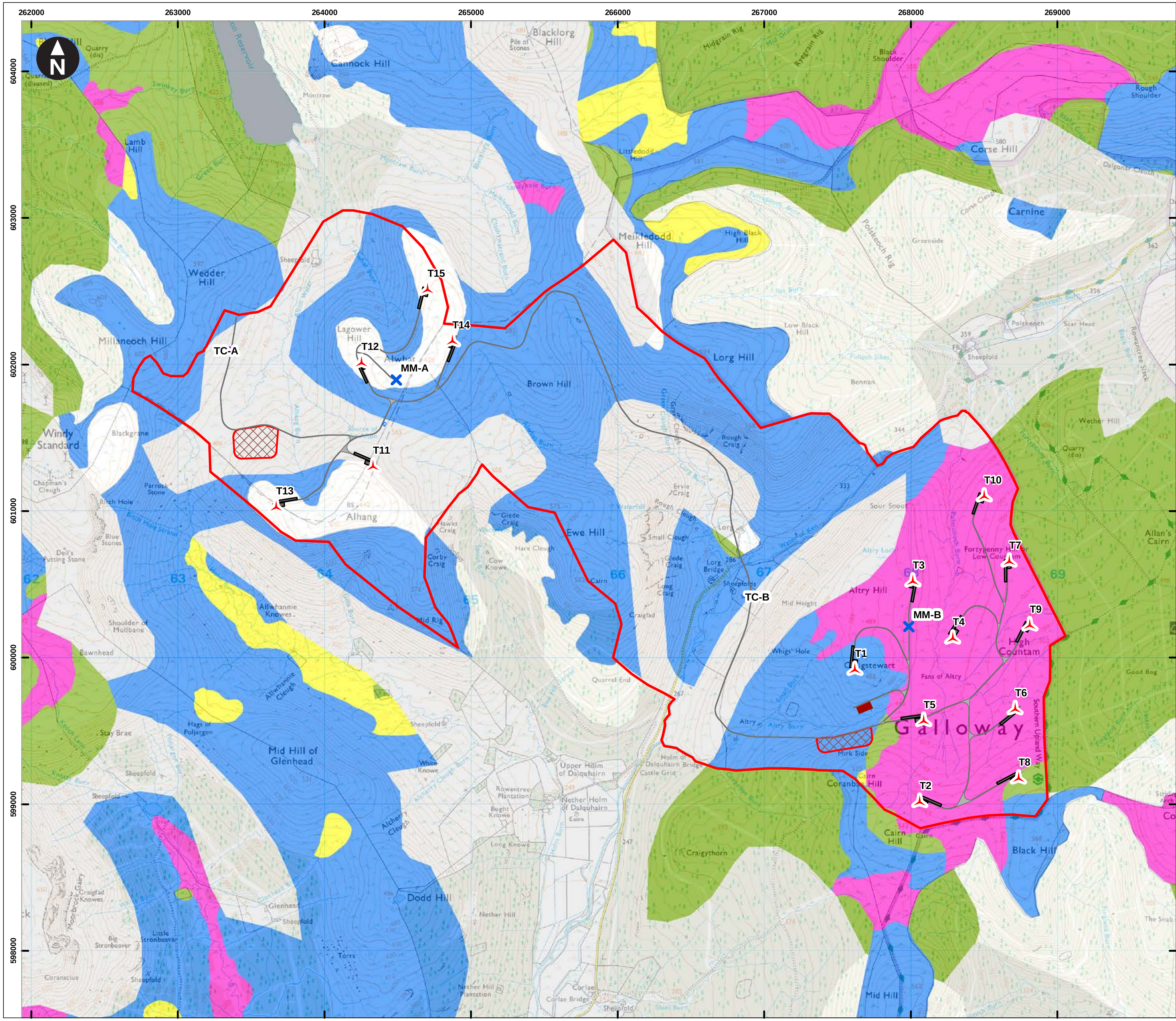
Peat Management Plan

Figure 2.1
Soil Map of Scotland for Site covering Proposed Development

November 2022

wsp



Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

NatureScot Soil Carbon Classification

- Class -2: Non-soil
- Class 0: Mineral soils
- Class 1: Carbon-rich and deep peat with all cover priority peatland habitats
- Class 2: Carbon-rich and deep peat with cover dominated by peatland habitats
- Class 3: Mostly carbon-rich soils with some deep peat and occasional peatland habitats
- Class 4: Area unlikely to include carbon-rich soils
- Class 5: No peatland habitat recorded

0 0.25 0.5 0.75 1 1.25 Kilometers

Scale at A3:1:25,000

Client

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Lorg Wind Farm
Peat Management Plan

Figure 2.2
NatureScot Carbon & Peatland covering Proposed Development

November 2022

wsp

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262000 263000 264000 265000 266000 267000 268000 269000

604000 603000 602000 601000 600000 599000 598000

Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0

0 100 200 300 400 500 600 700 800 900 1,000 1,100 1,200 1,300 1,400 m

Scale at A3: 1:25,000

Client

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Peat Management Plan

Figure 3.10
Peat Probing Locations

November 2022

32964-WOOD-XX-XX-FG-R-0009_S3_P01.2

263000

602000

N

Weader Hill

eoch Hill

607

590

550

590

470

0.10m
1.15m
0.90m
0.80m
0.50m
0.50m
0.70m
0.00m
0.00m
0.00m
0.80m
0.39m
0.26m
0.90m
0.95m
0.80m
1.20m
0.70m
0.60m
0.90m
2.35m
0.80m
0.60m
0.80m
0.83m
0.63m
0.60m
0.59m
1.20m
0.54m
1.20m
0.50m
0.60m
1.00m
1.00m
1.00m
1.15m
1.10m
1.20m
0.60m
1.00m
0.95m
0.65m
1.10m
0.50m
0.92m
0.56m
1.07m
0.40m
0.55m
0.67m
0.90m
1.32m
0.65m
1.10m
0.00m
0.40m
0.40m
0.52m
0.84m
0.80m
0.10m
0.25m
0.30m
0.15m
1.80m
1.40m
1.10m
1.35m
0.95m
1.10m
1.45m
0.60m
1.00m
1.55m
0.95m
0.95m
1.05m
0.70m
0.77m
0.45m
1.05m
1.00m
1.00m
1.00m
0.50m
0.40m
0.65m
0.65m
0.60m
0.50m
0.87m
1.16m
0.85m
0.85m
1.35m
2.10m
1.40m
1.20m
1.10m
0.94m
1.00m
1.62m
1.28m
0.95m
0.60m
0.25m
0.30m
1.80m
2.00m
0.40m
0.00m
1.05m
0.90m
1.00m
1.10m
1.36m
1.80m
1.10m
0.90m
1.10m
1.60m
1.50m

Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0

0 100 200 m

Scale at A3: 1:3,500

Client

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Lorg Wind Farm
Peat Management Plan

Figure 3.11
Peat Probing Locations

November 2022

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264000

603000

N

Sheepfold

Afton Water

Alwhat Burn

450

480

510

530

0.85m
0.35m
1.50m
0.10m
0.20m
0.44m
1.00m
0.05m
0.30m
0.25m
0.40m
0.16m
0.14m
0.70m
0.90m
0.10m
1.56m
0.43m
0.27m
0.23m
0.59m
0.72m
0.67m
0.80m
0.30m
0.75m
0.75m
1.05m
0.10m
0.35m
0.42m
0.35m
0.90m
0.90m
1.45m
0.80m
0.42m
0.88m
0.95m
0.45m
0.27m
0.10m
1.35m
0.30m
1.00m
0.80m
0.37m
0.45m
0.36m
0.55m
0.17m
0.50m
1.50m
0.30m
0.80m
0.20m
0.28m
0.31m
0.24m
0.91m
0.36m
0.20m
0.30m
0.14m
0.25m
0.15m
0.30m
0.15m
0.10m
0.25m
0.25m
0.15m
0.10m
0.34m
0.10m
0.35m
0.20m
0.20m
0.10m
0.47m
0.25m
0.35m
0.30m

Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0

0 100 200 m

Scale at A3: 1:3,500

Client

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Lorg Wind Farm
Peat Management Plan

Figure 3.12
Peat Probing Locations

November 2022

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265000

602000

Brown Hill

Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0

0 100 200 m

Scale at A3: 1:3,500

Client

RWE

Lorg Wind Farm
Peat Management Plan

Figure 3.13
Peat Probing Locations

November 2022

32964-WOOD-XX-XX-FG-R-0009_S3_P01.2

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266000

602000

N

610 630 643 590 570 594 580

0.41m 0.26m 0.40m 0.35m 0.23m 0.55m 0.40m 0.44m 0.65m 0.80m 0.20m 0.65m 0.10m 1.19m 1.00m 0.49m 0.42m 0.95m 0.85m 0.80m 0.35m 0.85m 0.75m 0.20m 1.59m 0.65m 0.77m 0.90m 0.99m 0.90m 0.98m 0.10m 0.20m 0.10m 1.42m 1.15m 0.70m 0.75m 0.40m 0.90m 0.89m 1.52m 1.65m 0.59m 0.87m 1.75m 0.35m 0.35m 1.61m 1.43m 1.56m 0.20m 0.39m 0.45m 0.60m 0.10m 0.35m 0.22m 0.00m 0.21m 0.16m 0.00m 0.00m 0.00m

Originator: peter.munro

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Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0

0 100 200 m

Scale at A3: 1:3,500

Client

RWE

Lorg Wind Farm
Peat Management Plan

Figure 3.14
Peat Probing Locations

November 2022

263000

601000

Parrock Stone

Bitch Hole Strand

Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0

0 100 200 m

Scale at A3: 1:3,500

Client

RWE

Lorg Wind Farm
Peat Management Plan

Figure 3.15
Peat Probing Locations

November 2022

32964-WOOD-XX-XX-FG-R-0009_S3_P01.2

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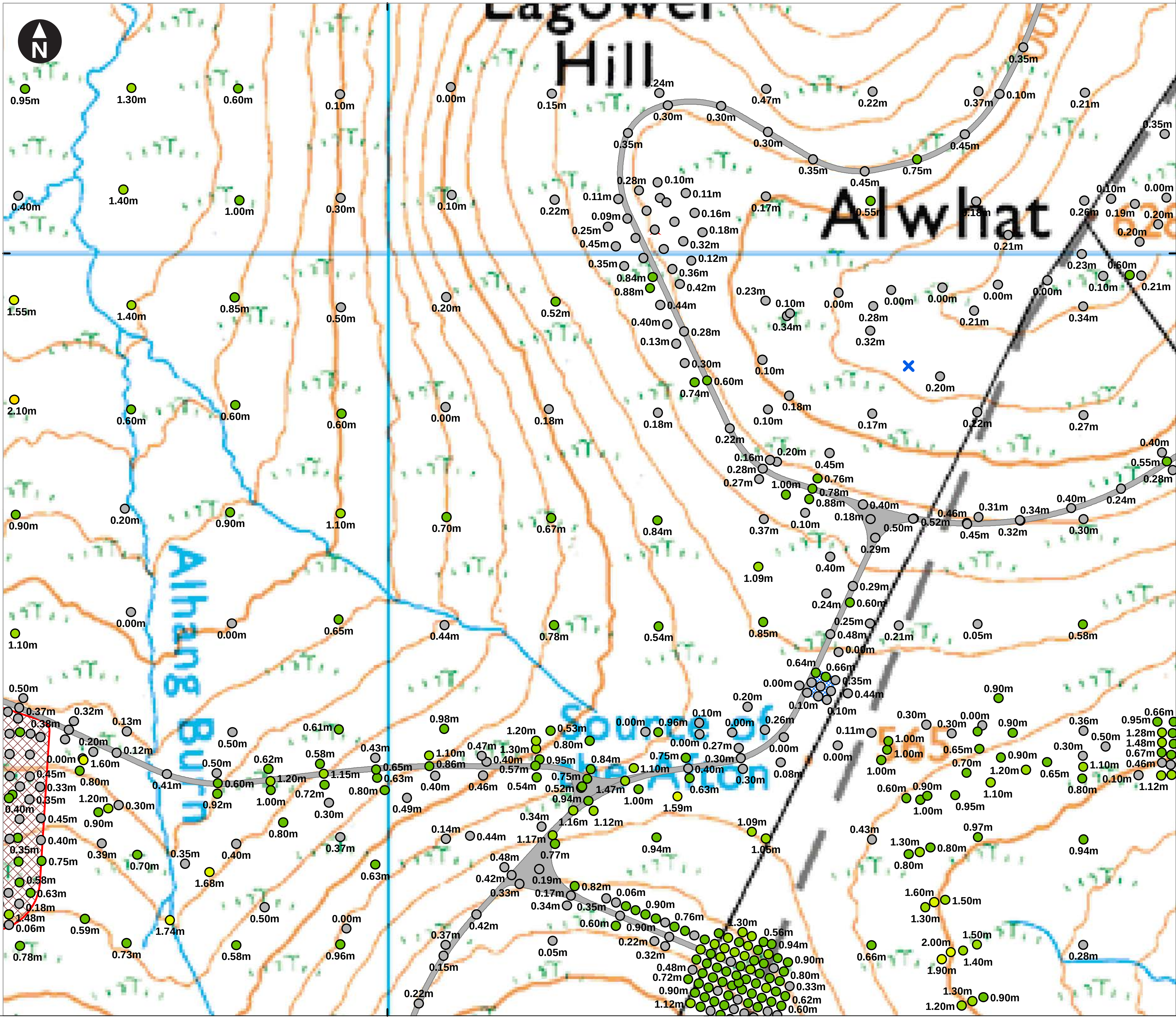
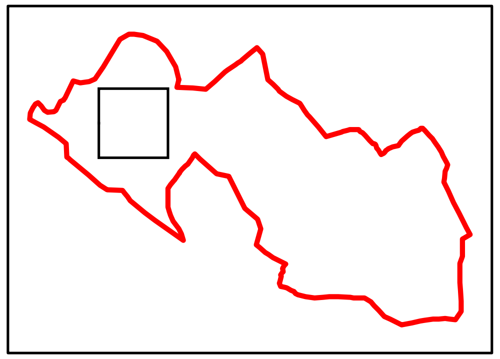


Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0



0 100 200 m
Scale at A3: 1:3,500

Client

RWE

Lorg Wind Farm
Peat Management Plan

Figure 3.16
Peat Probing Locations

November 2022

wsp

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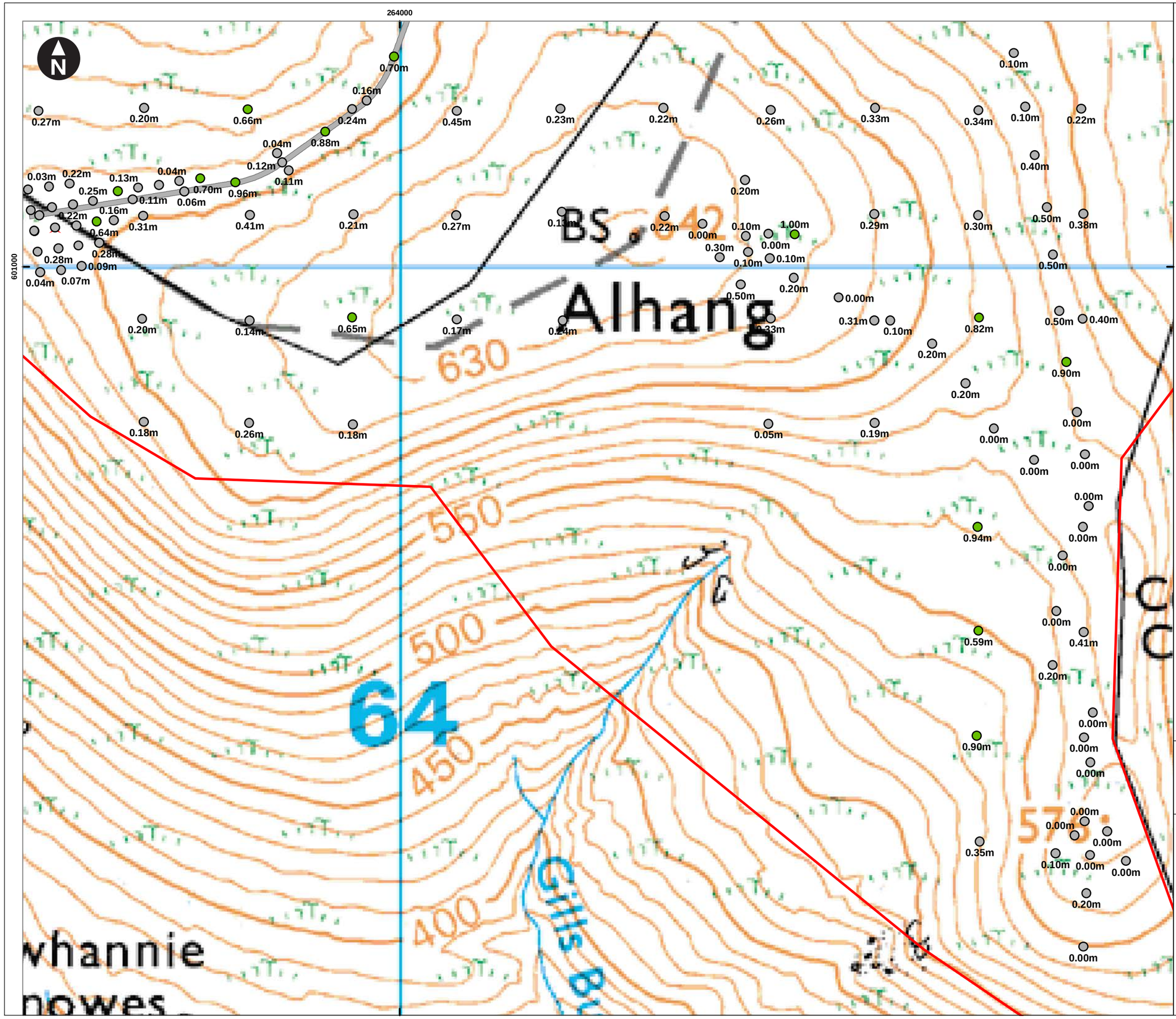
32964-WOOD-XX-XX-FG-R-0009_S3_P01.2



Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0

0 100 200 m

Scale at A3: 1:3,500

Client

RWE

Lorg Wind Farm
Peat Management Plan

Figure 3.17
Peat Probing Locations

November 2022

W:\32964 Afton II Sub Folder\D040 Design\Drawings\ArcGIS\MXD\PSRA\32964-WOOD-XX-XX-FG-R-0009_S3_P01.2 Originator: peter.munro

265000

601000

Alwhat Burn

Glede Craig

Hawks Craig

Waterfalls

505

575

550

Ew

Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0

0 100 200 m

Scale at A3: 1:3,500

Client

RWE

Lorg Wind Farm
Peat Management Plan

Figure 3.18
Peat Probing Locations

November 2022

32964-WOOD-XX-XX-FG-R-0009_S3_P01.2

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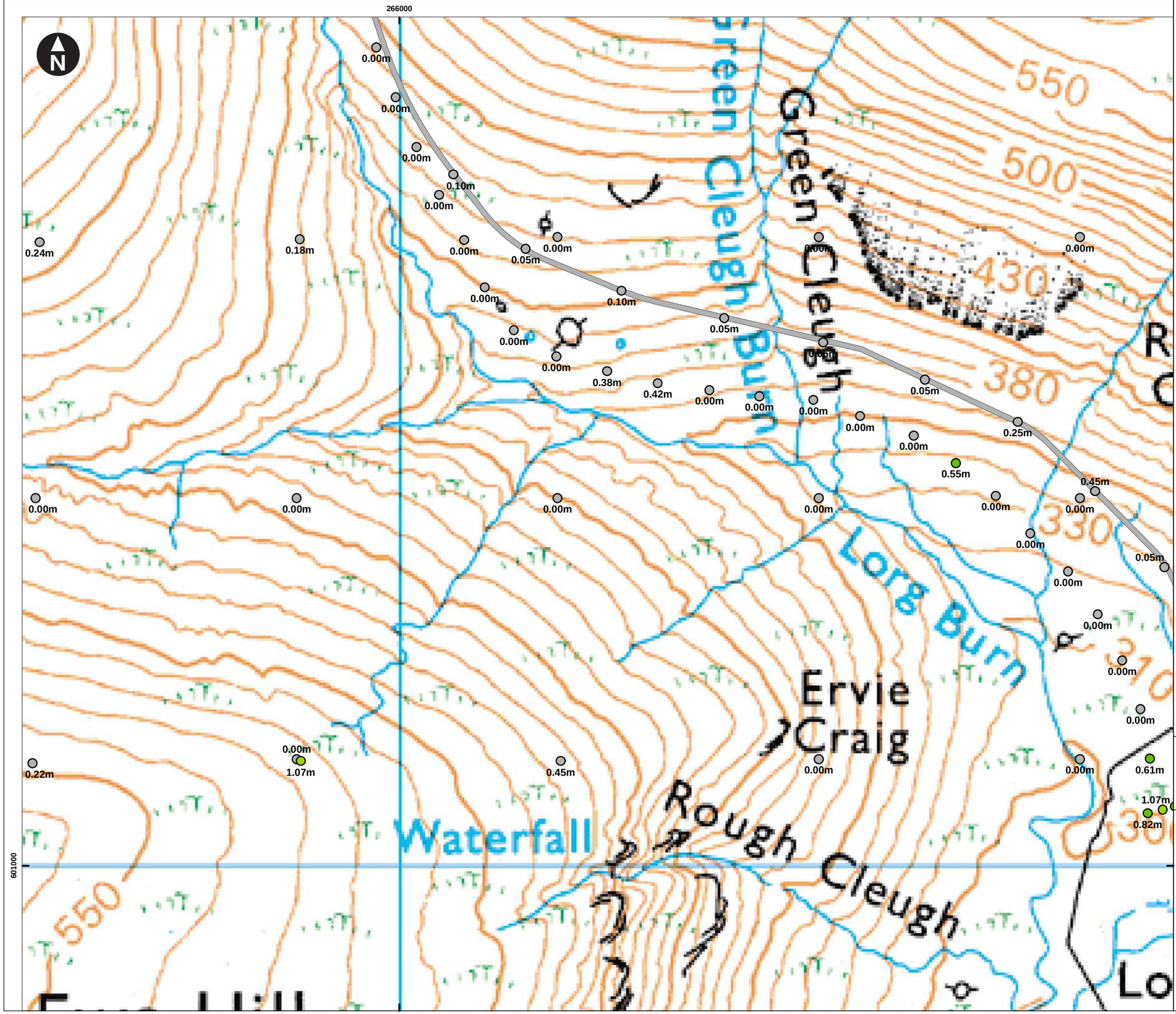

Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0

0 100 200 m

Scale at A3: 1:3,500

Client

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Lorg Wind Farm
Peat Management Plan

Figure 3.19
Peat Probing Locations

November 2022

32964-WOOD-XX-XX-FG-R-0009_S3_P01.2

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267000

601000

Rough Craig

558

333

0.00m
0.45m
0.05m
0.25m
0.61m
0.10m
0.82m
0.63m
1.07m
0.30m

Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0

0 100 200 m

Scale at A3: 1:3,500

Client

RWE

Lorg Wind Farm
Peat Management Plan

Figure 3.110
Peat Probing Locations

November 2022

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268000

601000

N

344

Sour Snout

Pulmu

370

350

400

420

440

460

0.00m 0.60m 0.15m 0.40m 0.45m 0.85m 0.40m 0.25m

0.45m 0.05m 0.35m 0.90m 0.81m 2.71m

0.00m 0.70m 0.95m 0.25m 0.30m 0.53m

0.00m 0.00m 0.00m 0.36m

0.75m 0.50m 0.85m 0.20m 1.40m 1.03m 0.84m

0.60m 0.55m 0.95m 0.35m 1.01m 0.19m 0.59m

0.58m 1.18m 0.70m 0.46m 0.69m 0.30m 0.96m 0.25m 0.94m 0.27m 0.96m 0.40m 0.50m 0.41m 0.50m 0.83m 0.46m 0.77m 1.52m 1.50m 1.00m 1.00m 1.05m 0.82m 0.43m 0.82m 1.88m 0.53m 1.27m 1.46m 1.26m 1.60m 1.70m 2.00m 1.46m 1.48m 1.64m 2.20m 2.10m 1.50m 1.48m 0.60m

Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0

0 100 200 m

Scale at A3: 1:3,500

Client

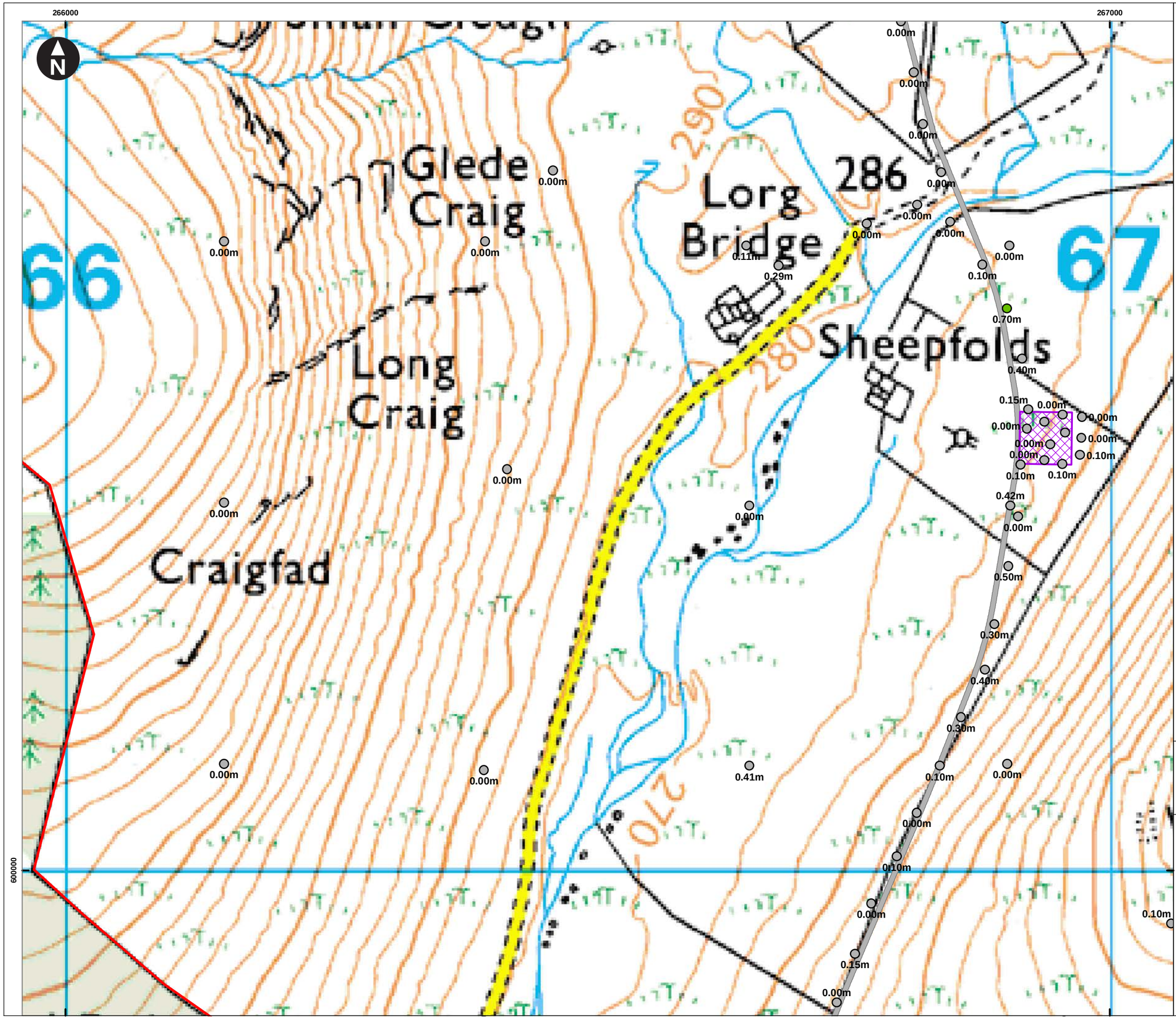
RWE

Lorg Wind Farm
Peat Management Plan

Figure 3.111
Peat Probing Locations

November 2022

32964-WOOD-XX-XX-FG-R-0009_S3_P01.2



Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0

0 100 200 m

Scale at A3: 1:3,500

Client

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Lorg Wind Farm
Peat Management Plan

Figure 3.112
Peat Probing Locations

November 2022

Originator: peter.munro

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267000

268000

600000

Altry Loch

Altry Hill

Mid Height

Whigs' Hole

Craigstewart

Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0

0 100 200 m

Scale at A3: 1:3,500

Client

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Peat Management Plan

Figure 3.113
Peat Probing Locations

November 2022

32964-WOOD-XX-XX-FG-R-0009_S3_P01.2

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268000

269000

600000

Forty penny Hill or Low Coultam

High Coultam

Fans of Altry

ch Burn

N

Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0

0 100 200 m

Scale at A3: 1:3,500

Client

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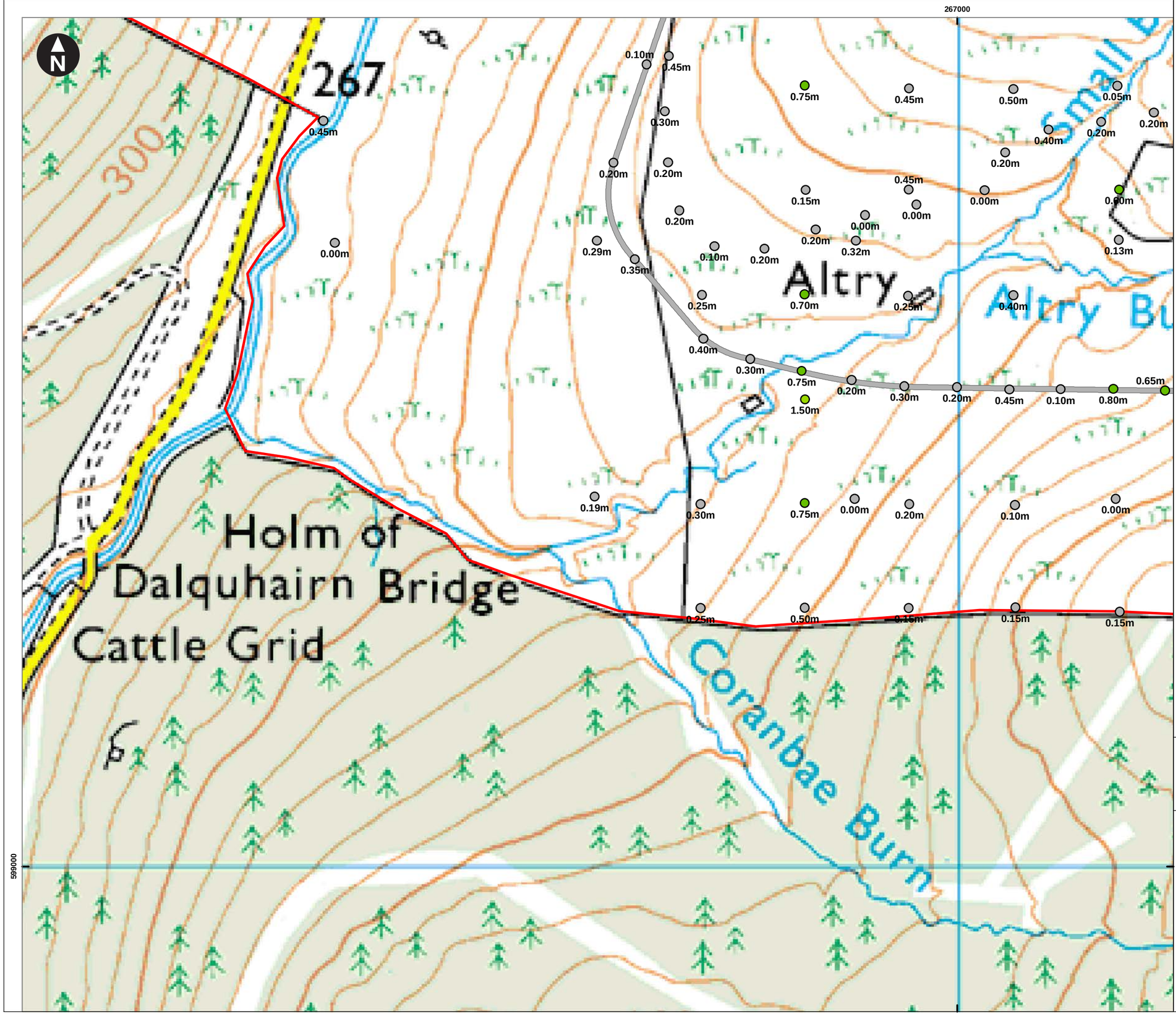
Lorg Wind Farm
Peat Management Plan

Figure 3.114
Peat Probing Locations

November 2022

32964-WOOD-XX-XX-FG-R-0009_S3_P01.2



Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Access tracks
- Substation
- Borrow pit

Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0

0 100 200 m

Scale at A3: 1:3,500

Client

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Lorg Wind Farm
Peat Management Plan

Figure 3.115
Peat Probing Locations

November 2022

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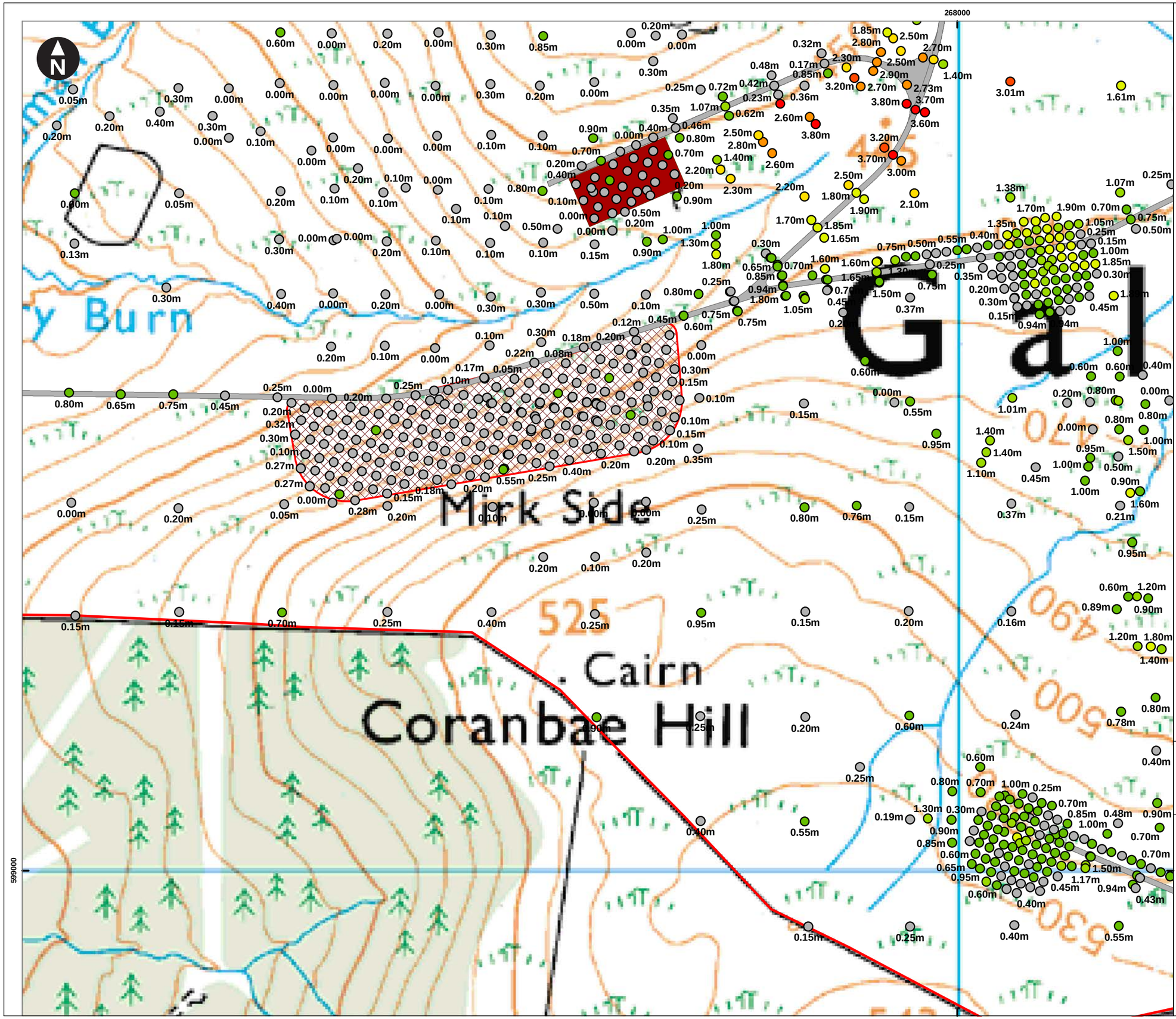
268000
599000
N
Mirk Side
Cairn
Coranbae Hill
Key
Development Site boundary
Turbine location
Met mast location
Western control building
Crane pads
Access tracks
Substation
Borrow pit
Peat Depth (m)
0.0 - 0.5
0.5 - 1.0
1.0 - 1.5
1.5 - 2.0
2.0 - 2.5
2.5 - 3.0
3.0 - 3.5
3.5 - 4.0
0
100
200 m
Scale at A3: 1:3,500
Client
RWE
Lorg Wind Farm
Peat Management Plan
Figure 3.116
Peat Probing Locations
November 2022
wsp
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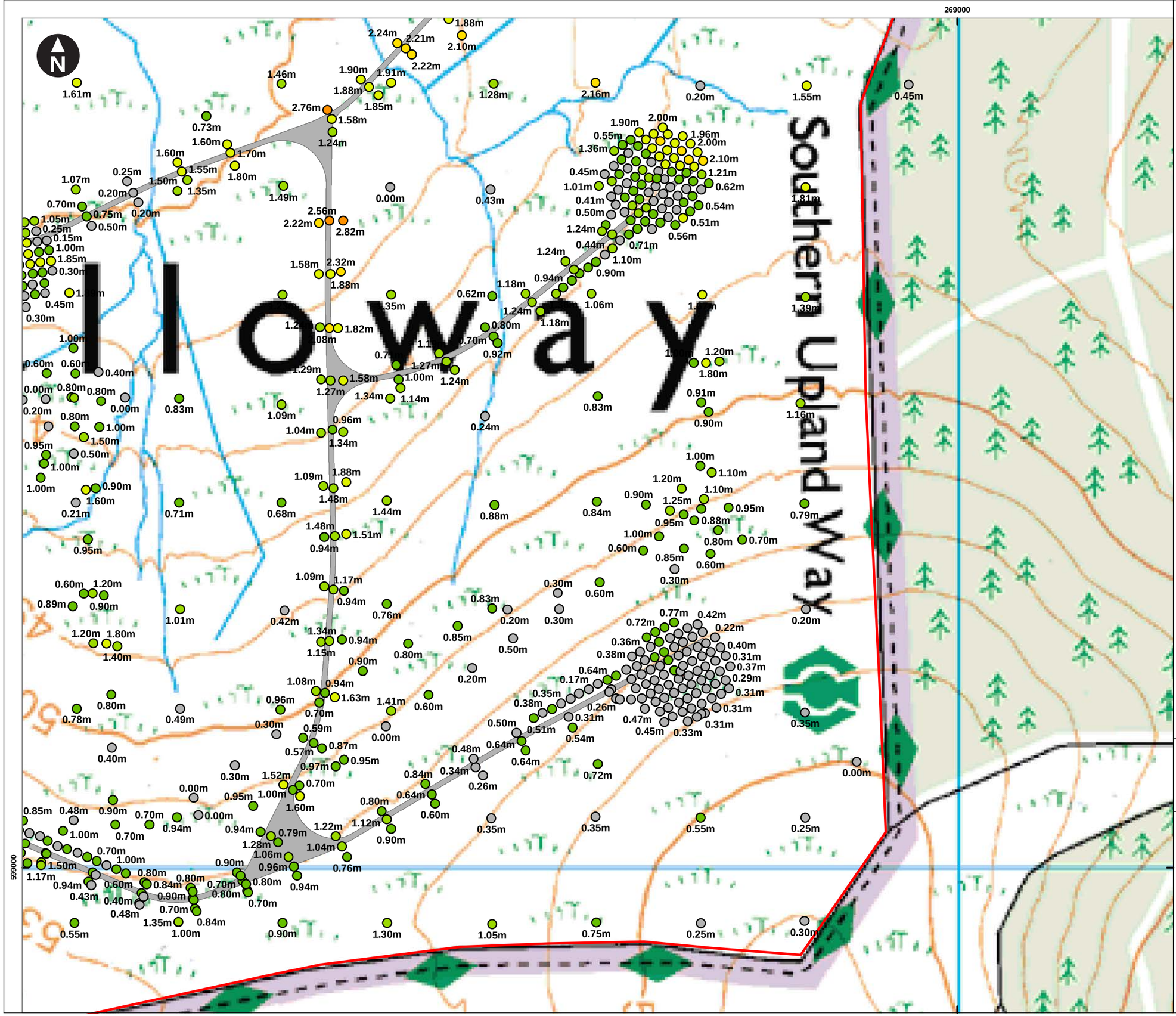
32964-WOOD-XX-XX-FG-R-0009_S3_P01.2



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Peat Management Plan

Figure 3.117
Peat Probing Locations

November 2022

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262000 263000 264000 265000 266000 267000 268000 269000

604000 603000 602000 601000 600000 599000 598000

Key

- Development Site boundary
- Turbine location
- Met mast location
- Western control building
- Crane pads
- Temporary compound
- Access tracks
- Substation
- Borrow pit

Interpolated Peat Depth (m)

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0
- • Peat survey locations

0 0.25 0.5 0.75 1 1.25 Kilometers

Scale at A3: 1:25,000

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Lorg Wind Farm
Peat Management Plan

Figure 3.2
Interpolated Peat Depth

November 2022

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Appendix A
Indicative Peat Excavation Volumes

WTG Foundations						
WTG_ID	Area (m^2)	Mean depth (m)	Peaty Soils (m^3)	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)
T1	950	0.89	0	475	371	846
T2	800	0.98	0	400	383	783
T3	950	1.12	0	475	590	1,065
T4	925	1.81	0	463	1,211	1,673
T5	925	1.20	0	463	644	1,107
T6	950	0.67	0	475	163	638
T7	925	0.99	0	463	455	917
T8	875	0.33	291	0	0	291
T9	950	0.76	0	475	245	720
T10	875	0.69	0	438	166	603
T11	950	0.77	0	475	256	731
T12	925	0.34	315	0	0	315
T13	875	0.17	150	0	0	150
T14	950	0.37	355	0	0	355
T15	900	0.19	171	0	0	171
	13,725	**TOTALS**	**1,282**	**4,600**	**4,483**	**10,365**

WTG Crane Pads						
WTG ID	Area (m^2)	Mean depth (m)	Peaty Soils (m^3)	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)
T1	1,050	1.15	0	525	680	1,205
T2	1,050	0.83	0	525	351	876
T3	1,025	1.41	0	513	938	1,450
T4	1,000	1.49	0	500	990	1,490
T5	1,075	0.53	0	538	33	570
T6	1,075	0.66	0	538	177	714
T7	1,025	1.46	0	513	983	1,495
T8	1,100	0.34	376	0	0	376
T9	1,000	0.78	0	500	278	778
T10	1,050	0.77	0	525	282	807
T11	1,050	0.69	0	525	195	720
T12	1,100	0.39	432	0	0	432
T13	1,075	0.31	333	0	0	333
T14	1,025	0.30	306	0	0	306
T15	1,025	0.20	207	0	0	207
	15,725	**TOTALS**	**1,655**	**5,200**	**4,906**	**11,761**

WTG Auxiliary Crane Pads						
WTG ID	Area (m^2)	Mean depth (m)	Peaty Soils (m^3)	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)
	275	0.62	0	138	34	172
T1	225	1.12	0	113	139	252
	175	0.72	0	88	39	126
T2	200	0.62	0	100	25	125
	225	0.92	0	113	94	206
T3	225	0.52	0	113	5	118
	175	2.81	0	88	404	492
T4	175	1.78	0	88	224	312
	225	1.16	0	113	150	262
T5	225	0.60	0	113	22	134
	175	1.19	0	88	120	208
T6	225	0.85	0	113	79	191
	175	1.50	0	88	175	262
T7	150	1.13	0	75	94	169
	200	0.48	96	0	0	96
T8	225	0.28	63	0	0	63
	200	0.71	0	100	41	141
T9	250	0.91	0	125	102	227
	175	1.44	0	88	165	252
T10	225	0.83	0	113	74	186
	225	0.36	80	0	0	80
T11	200	0.71	0	100	42	142
	225	0.59	0	113	21	134
T12	175	0.28	49	0	0	49
	250	0.52	0	125	5	130
T13	200	0.12	24	0	0	24
	175	0.26	46	0	0	46
T14	175	0.48	83	0	0	83
	200	0.18	36	0	0	36
T15	200	0.23	47	0	0	47
	6,150	**TOTALS**	**525**	**2,188**	**2,052**	**4,764**

Blade Storage Areas						
WTG ID	**Area (m^2)**	**Mean depth (m)**	**Peaty Soils (m^3)**	**Acrotelm (m^3)**	**Catotelm (m^3)**	**Volume (m^3)**
T1	1,775	1.24	0	888	1,318	2,206
T2	3,675	0.66	0	1,838	583	2,421
T4	1,850	1.54	0	925	1,930	2,855
T5	1,800	0.88	0	900	690	1,590
T6	1,825	0.76	0	913	468	1,380
T7	1,925	1.20	0	963	1,350	2,312
T8	1,825	0.48	872	0	0	872
T9	1,900	0.80	0	950	562	1,512
T10	1,825	0.83	0	913	602	1,515
T11	1,825	0.78	0	913	509	1,421
T12	1,825	0.45	817	0	0	817
T13	1,825	0.25	449	0	0	449
T14	1,900	0.40	763	0	0	763
T15	1,925	0.21	410	0	0	410
	27,700	**TOTALS**	**3,311**	**9,200**	**8,012**	**20,523**

Met Mast Foundations						
Met Mast ID	**Area (m^2)**	**Mean depth (m)**	**Peaty Soils (m^3)**	**Acrotelm (m^3)**	**Catotelm (m^3)**	**Volume (m^3)**
MM-A	50	0.22	11	0	0	11
MM-B	25	1.14	0	13	16	29
	75	**TOTALS**	**11**	**13**	**16**	**40**

Met Mast Crane Pads						
Met Mast ID	**Area (m^2)**	**Mean depth (m)**	**Peaty Soils (m^3)**	**Acrotelm (m^3)**	**Catotelm (m^3)**	**Volume (m^3)**
MM-A	400	0.23	92	0	0	92
MM-B	400	1.20	0	200	279	479
	800	**TOTALS**	**92**	**200**	**279**	**572**

Temporary Compounds						
ID	Area (m^2)	Mean depth (m)	Peaty Soils (m^3)	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)
TC-A	2,500	0.79	0	1,250	719	1,969
TC-B	2,500	0.04	105	0	0	105
	5,000	**TOTALS**	**105**	**1,250**	**719**	**2,074**

Substations						
ID	Area (m^2)	Mean depth (m)	Peaty Soils (m^3)	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)
A / Western Control Building	500	0.36	178	0	0	178
B	5,050	0.25	1,267	0	0	1,267
	5,550	**TOTALS**	**1,446**	**0**	**0**	**1,446**

Borrow Pits						
ID	Area (m^2)	Mean depth (m)	Peaty Soils (m^3)	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)
East Borrow Pit	2,000	0.20	395	0	0	395
West Borrow Pit	2,000	0.75	0	1,000	495	1,495
	4,000	**TOTALS**	**395**	**1,000**	**495**	**1,890**

Access Tracks - Excavated					
Depth (m)	Length (m)	Peaty Soils (m^3)	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)
0.0m to <0.5m	8,463	13,467	0	0	13,467
0.5m to <1.0m	5,817	0	17,238	8,177	25,415
Totals	**18,704**	**13,467**	**17,238**	**8,177**	**38,882**

Access Tracks - Floating					
Depth (m)	Length (m)	Peaty Soils (m^3)	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)
>1.0m deep	4,425	0	0	0	0
Totals	**4,425**	**0**	**0**	**0**	**0**

Turning Heads					
Depth (m)	**Length (m)**	**Peaty Soils (m^3)**	**Acrotelm (m^3)**	**Catotelm (m^3)**	**Volume (m^3)**
0.0m to <0.5m	1,725	586	0	0	586
0.5m to <1.0m	2,125	0	363	231	594
>1.0m deep	4,050	0	0	0	0
Totals	**7,900**	**586**	**363**	**231**	**1,180**

Cable Trenches					
Depth (m)	**Length (m)**	**Peaty Soils (m^3)**	**Acrotelm (m^3)**	**Catotelm (m^3)**	**Volume (m^3)**
0.0m to <0.5m	8,463	2,693	0	0	2,693
0.5m to <1.0m	5,817	0	3,448	1,635	5,083
>1.0m deep	4,425	0	2,638	5,116	7,754
Totals	**18,704**	**2,693**	**6,085**	**6,752**	**15,530**

Appendix B
Indicative Peat Reinstatement Volumes

WTG Foundations - Reinstatement						
WTG_ID	**Area (m^2)**	**Mean depth (m)**	**Peaty Soils (m^3)**	**Acrotelm (m^3)**	**Catotelm (m^3)**	**Volume (m^3)**
T1	930	0.89	0	465	363	829
T2	780	0.98	0	390	373	763
T3	930	1.12	0	465	578	1,043
T4	905	1.81	0	453	1,185	1,638
T5	905	1.20	0	453	631	1,083
T6	930	0.67	0	465	159	625
T7	905	0.99	0	453	445	898
T8	855	0.33	285	0	0	285
T9	930	0.76	0	465	240	705
T10	855	0.69	0	428	162	590
T11	930	0.77	0	465	251	716
T12	905	0.34	308	0	0	308
T13	855	0.17	147	0	0	147
T14	930	0.37	348	0	0	348
T15	880	0.19	168	0	0	168
	13,430	**TOTALS**	**1,255**	**4,502**	**4,387**	**10,143**

WTG Crane Pads						
WTG ID	Area (m^2)	Mean depth (m)	Peaty Soils (m^3)	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)
T1	285	1.15	0	143	185	327
T2	285	0.83	0	143	95	238
T3	285	1.41	0	143	261	403
T4	285	1.49	0	143	282	425
T5	285	0.53	0	143	9	151
T6	285	0.66	0	143	47	189
T7	285	1.46	0	143	273	416
T8	285	0.34	98	0	0	98
T9	285	0.78	0	143	79	222
T10	285	0.77	0	143	77	219
T11	285	0.69	0	143	53	195
T12	285	0.39	112	0	0	112
T13	285	0.31	88	0	0	88
T14	285	0.30	85	0	0	85
T15	285	0.20	58	0	0	58
	4,275	**TOTALS**	**440**	**1,425**	**1,360**	**3,226**

WTG Auxiliary Crane Pads						
WTG ID	Area (m^2)	Mean depth (m)	Peaty Soils (m^3)	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)
	132	0.62	0	66	16	82
T1	132	1.12	0	66	82	148
	132	0.72	0	66	29	95
T2	132	0.62	0	66	16	82
	132	0.92	0	66	55	121
T3	132	0.52	0	66	3	69
	132	2.81	0	66	305	371
T4	132	1.78	0	66	169	235
	132	1.16	0	66	88	154
T5	132	0.60	0	66	13	79
	132	1.19	0	66	91	157
T6	132	0.85	0	66	46	112
	132	1.50	0	66	132	198
T7	132	1.13	0	66	83	149
	132	0.48	64	0	0	64
T8	132	0.28	37	0	0	37
	132	0.71	0	66	27	93
T9	132	0.91	0	66	54	120
	132	1.44	0	66	124	190
T10	132	0.83	0	66	43	109
	132	0.36	47	0	0	47
T11	132	0.71	0	66	27	93
	132	0.59	0	66	12	78
T12	132	0.28	37	0	0	37
	132	0.52	0	66	2	68
T13	132	0.12	16	0	0	16
	132	0.26	35	0	0	35
T14	132	0.48	63	0	0	63
	132	0.18	24	0	0	24
T15	132	0.23	31	0	0	31
	3,960	**TOTALS**	**353**	**1,386**	**1,418**	**3,157**

Blade Storage Areas						
WTG ID	**Area (m^2)**	**Mean depth (m)**	**Peaty Soils (m^3)**	**Acrotelm (m^3)**	**Catotelm (m^3)**	**Volume (m^3)**
T1	1,775	1.24	0	888	1,318	2,206
T2	3,675	0.66	0	1,838	583	2,421
T4	1,850	1.54	0	925	1,930	2,855
T5	1,800	0.88	0	900	690	1,590
T6	1,825	0.76	0	913	468	1,380
T7	1,925	1.20	0	963	1,350	2,312
T8	1,825	0.48	872	0	0	872
T9	1,900	0.80	0	950	562	1,512
T10	1,825	0.83	0	913	602	1,515
T11	1,825	0.78	0	913	509	1,421
T12	1,825	0.45	817	0	0	817
T13	1,825	0.25	449	0	0	449
T14	1,900	0.40	763	0	0	763
T15	1,925	0.21	410	0	0	410
	27,700	**TOTALS**	**3,311**	**9,200**	**8,012**	**20,523**

Met Mast Foundations						
Met Mast ID	**Area (m^2)**	**Mean depth (m)**	**Peaty Soils (m^3)**	**Acrotelm (m^3)**	**Catotelm (m^3)**	**Volume (m^3)**
MM-A	50	0.22	11	0	0	11
MM-B	25	1.14	0	13	16	29
	75	**TOTALS**	**11**	**13**	**16**	**40**

Met Mast Crane Pads						
Met Mast ID	**Area (m^2)**	**Mean depth (m)**	**Peaty Soils (m^3)**	**Acrotelm (m^3)**	**Catotelm (m^3)**	**Volume (m^3)**
MM-A	120	0.23	28	0	0	28
MM-B	120	0.50	0	60	0	60
	240	**TOTALS**	**28**	**60**	**0**	**88**

Temporary Compounds						
ID	Area (m^2)	Mean depth (m)	Peaty Soils (m^3)	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)
TC-A	2,500	0.79	0	1,250	719	1,969
TC-B	2,500	0.04	105	0	0	105
	5,000	**TOTALS**	**105**	**1,250**	**719**	**2,074**

Substations						
ID	Area (m^2)	Mean depth (m)	Peaty Soils (m^3)	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)
A / Western Control Building	750	0.36	270	0	0	270
B	210	0.25	53	0	0	53
	960	**TOTALS**	**323**	**0**	**0**	**323**

Borrow Pits						
ID	Area (m^2)	Mean depth (m)	Peaty Soils (m^3)	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)
East Borrow Pit	2,000	1.76	0	1,000	2,525	3,525
West Borrow Pit	2,000	1.76	0	1,000	2,525	3,525
	4,000	**TOTALS**	**0**	**2,000**	**5,050**	**7,050**

Access Tracks - Excavated					
Depth (m)	Length (m)	Peaty Soils (m^3)	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)
0.0m to <0.5m	8,463	16,462	0	0	16,462
0.5m to <1.0m	5,817	0	17,238	8,177	25,415
Totals	**18,704**	**16,462**	**17,238**	**8,177**	**41,877**

Access Tracks - Floating					
Depth (m)	Length (m)	Peaty Soils (m^3)	Acrotelm (m^3)	Catotelm (m^3)	Volume (m^3)
>1.0m deep	4,425	0	3,815	0	3,815
Totals	**4,425**	**0**	**3,815**	**0**	**3,815**

Turning Heads					
Depth (m)	**Area (m^2)**	**Peaty Soils (m^3)**	**Acrotelm (m^3)**	**Catotelm (m^3)**	**Volume (m^3)**
0.0m to <0.5m	1,725	586	0	0	586
0.5m to <1.0m	2,125	0	363	231	593
>1.0m deep	4,050	0	0	0	0
Totals	**7,900**	**586**	**363**	**231**	**1,180**

Cable Trenches					
Depth (m)	**Length (m)**	**Peaty Soils (m^3)**	**Acrotelm (m^3)**	**Catotelm (m^3)**	**Volume (m^3)**
0.0m to <0.5m	8,463	2,693	0	0	2,693
0.5m to <1.0m	5,817	0	3,448	1,635	5,083
>1.0m deep	4,425	0	2,638	5,116	7,754
Totals	**18,704**	**2,693**	**6,085**	**6,752**	**15,530**