

Aggregate Testing	Ballast	General Bulk Fill	Capping 6F1 / 6F2	Sub-base Type 1	Structural Fill 6N (6P)	Concrete Aggregate
Grading	✓	✓	✓	✓	✓	✓
Bulk Density	✓					
PI		✓				
Compaction mc & omc	?	✓	✓	?	✓ (or MCV)	
LA coefficient			✓	✓	✓	✓
Slake durability			?	?	?	
MSSV				✓		✓
Water absorption				✓ (NR)		✓
Micro Deval				✓ (NR)		
Frost susceptibility				?		
CBR				?		
Drying shrinkage						✓
Flakiness Index						✓
Petrographic examination						✓
Total Sulphur						✓
Acid soluble (AS) Sulphate						✓
Water soluble Chloride						✓
Water soluble (WS) Sulphate	✓ #					
Oxidisable Sulphide (OS)	✓ #					
pH value	✓ #					

✓ = yes

? = not specified but may be worth doing ...?

NR = SHW requires test but there's no limit(s).

for fills placed within 500m of concrete or metallic elements (SHW).

Appendix 2 – Peat Depth Survey Report

**Pencloe Windfarm
Peat Depth Survey Report
FINAL**

**for
Pencloe Wind Energy Limited**



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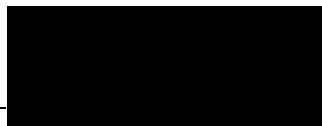
**Pencloe Windfarm
Peat Depth Survey Report
September, 2015
FINAL**

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Table of Contents

1	Introduction	1
1.1	Scope of Works	1
2	Methodology	2
2.1	Site Visits and Field Work	2
2.2	Limitations	3
3	Results	4
4	Volume calculations	7
5	Summary	17

Figures

Figure 1	Probing locations and Interpreted Peat Depth Previous Campaign
Figure 2	Probing and Coring Locations (First Iteration Layout)
Figure 3	Interpreted Peat Depth (First Iteration Layout)
Figure 4	Interpreted Peat Depth (Final Layout)

Appendices

Appendix I	Example Photographs of Typical Ground Conditions
Appendix II	Depth of Penetration Probing Data
Appendix III	Coring Data – Von Post
Appendix IV	Coring Logs

1 Introduction

Fluid Environmental Consulting Ltd (Fluid) were commissioned by Pencloe Wind Energy Limited (PWEL) to complete depth of penetration probing and coring at the site of the proposed Pencloe Windfarm, the planning application boundary of which, at its closest point, is located about 2km to the south of New Cumnock in East Ayrshire. The site is located to the west of the Afton road public road and around Auchincally Hill and Milray Hill. Extensive commercial plantations owned by Forestry Commission Scotland cover the majority of the area.

The Pencloe Windfarm planning application boundary covers an area of about 8.71km² with access tracks leading to a total of 19 turbines (Final Layout). The infrastructure of the final layout is comprised of 6.86km of existing tracks that will be upgraded and widened and 8.67km of new tracks, 19 wind turbine locations, two construction compounds, a substation and three meteorological masts. The total area of the windfarm footprint final layout is 253,894m². The area of actual development (and therefore excavation) is smaller as the existing track is already present and covers an area of 235,303m².

Previous depth of penetration probing investigations of the site have been completed by Jacobs in 2013 with probing undertaken on a 200m grid across the entire site and subsequently a 100m grid around proposed infrastructure. In addition a number of cores were obtained in 2014. These locations and the associated depth of penetration at each point are presented on Figure 1 along with the associated interpreted peat depth and the proposed infrastructure (First Iteration Layout – this included 21 turbines).

Based on the 2013 interpreted peat depth contour map Fluid defined the locations requiring additional probing and coring as those where the proposed infrastructure of the First Iteration Layout intersected with peat depths in excess of 0.5m. A total of 1,744 probing locations were defined along with 118 cores. In these areas the locations were probed and also cored at an appropriate density to allow determination of the depth of peat and its structure. The probe and core locations associated with this phase of investigation are presented in Figure 2.

This document presents the methodologies and guidance associated with this survey, the data obtained and calculations of peat volumes required to be excavated based on the first iteration layout and then the proposed Final Layout.

1.1 Scope of Works

Fluid were commissioned to undertake the following probing and coring:

- Complete depth of penetration probing at the following locations (as presented on Figure 2):
 - along specific sections of access tracks at 50m intervals with 10m offset probes – 8,635m of the total 17,300m (462 probes);
 - at turbine bases Nos. 1, 2, 3, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 and 21 (area of 40m x 40m) on a 10m grid (25 probes per turbine base) and at the associated crane pads (irregular shape) on a 20m grid (35 probes per crane hardstanding – this results in detailed coverage of an area of about 100m x 160m (1,140 probe locations for the 19 turbines and associated hardstanding);

- at the two construction compounds (area of 100m x 50m) on a 20m grid (30 probes);
- at the substation (area of 100m x 50m) on a 20m grid (64 probes); and
- at the three met masts (area of 31m x 17m) on a 10m grid (48 probes for the three masts).
- This specification provided a total of 1,744 probes (shown on Figure 2).
- Complete coring in the following areas/frequencies:
 - At 200m intervals along the tracks (43 cores);
 - Three cores at each turbine base and hardstanding (57 cores);
 - Three cores at each construction compound (6 cores);
 - Three cores at the substation (3 cores);
 - Three cores at each met mast (9 cores)
 - This totals 118 cores.
- Record the depth of penetration at each probe location along with an estimate of the geology at the limit of penetration;
- Collect data from cores on total peat depth, Von Post measurements every metre, the thickness of the acrotelm, catotelm and amorphous peat, the underlying geology and comments on water table if possible;
- Take a photographic record of all cores;
- Present all data in tables with appropriate labelling of locations according to the specification document;
- Provide a peat depth contour plan across the area of probing and coring;
- Collect additional photos of specific watercourse crossings; and
- Provide a factual report detailing the work completed and the data collected.

2 Methodology

The project commenced with liaison between Fluid, PWEL and Jacobs and an exchange of information including the proposed site layout, mapping information, shapefiles, specification of works, information on access contacts and other conditions relating to the site. Fluid reviewed all available information and produced a series of maps with the proposed infrastructure, access routes and probing and coring locations marked. Fluid also provided a Risk Assessment and Health and Safety plan for the field work campaign.

Peat probing, coring and sampling was undertaken in accordance with the locations and frequencies outlined above and the details within the specification document. This task included field data collection and daily data management.

An extendable fibre glass peat probe of up to 8m length was used by the two field technicians to obtain the depth data along with a gouge peat auger for obtaining profiles of the peat, actual depth and Von Post measurements along with observations on underlying geology and nearby water features. Probe locations were located and recorded using a handheld global position system (GPS) device, with Birdseye aerial imagery, to a six figure grid reference (to 1m) and georeferenced photographic records were obtained for all cores.

2.1 Site Visits and Field Work

Depth of penetration probing and coring was undertaken between 13 May and 29 May 2015 by two field technicians at the required locations. Depth of penetration probing has now been completed at the Pencloe Windfarm project site and around required infrastructure

locations at a specific configuration on a 10m or 20m grid, along the track at 50m intervals with 10m offsets and across a specified area of the site on a 100m and 200m grid basis. The probing used narrow diameter fibre glass probes that do not allow a sample to be obtained. They are pushed into the ground until there is sufficient resistance to prevent further penetration and the depth recorded as the depth of penetration. A description of the resistant substrate below is made based on the feel of the resistance (grit, bedrock, clay, sand, rock or resistance where unable to differentiate).

This probe provides the depth of penetration in soft formations and if peat is present is often representative of the actual peat depth when the formation underlying the peat is sands and gravels or bedrock. However the depth of penetration can be an overestimate of the depth of peat where the substrate below is soft and penetrable, such as soft clay or silt. In some cases peat is not present and the whole of the probe penetrates through silt or clay sediments. Coring is therefore necessary to verify some of the probe results by extracting a core of the deposits for examination.

A series of cores have therefore been obtained using a gouge auger to determine the actual depth of the peat and obtain a sample of the underlying formation. Observations on the soil and peat characteristics were determined from the cores using recognised criteria (Von Post assessment). The acrotelm, catotelm and amorphous layers (if present) within the peat have also been identified within the peat where possible. The probes and gouge auger used at Pencloe Windfarm are of the types shown in Photo 1, Appendix I.

The data obtained from the current and previous site investigations was verified with the coring data and then used to produce a contour plot of probe penetration depth across the whole of the site (Figure 3). The infrastructure layout on Figure 3 is the First Iteration Layout. The final layout is then produced with the same contour plot as Figure 4.

In Scotland peat is present where organic soils are present greater than 0.5m in depth and deep peat is classified at >1.0m.

A shaded contour interval of 0-0.5m, >0.5m-1m, >1m – 1.5m, >1.5m – 2m, >2m – 3m, >3m – 4m and >4m+ has been used on the figures.

The data obtained is presented within this factual report on peat occurrence and properties across the site along with the contour plot. The results of the probing and coring have been tabulated in Appendices I to IV along with photographs and a table of peat conditions.

2.2 Limitations

Although the forestry on site was dense all requested probing and coring locations were accessed and the required data recorded. Much of the site has undergone extensive commercial forestry activities, where ground conditions have been worked and reworked, which have altered the natural peat conditions. Probing along existing tracks has only been undertaken at the offset locations, as requested, as penetration through the existing track is not possible.

3 Results

Depth of Penetration Probing – Previous campaigns (2013 and 2014)

A campaign of penetration depth probing was undertaken across the whole of the site on a 200m grid in 2013 by Jacobs to define peat occurrence and assist with infrastructure layout design (Figure 1). Subsequently a campaign of penetration depth probing was undertaken around the areas of proposed infrastructure on a 100m grid by Jacobs in 2014. These two campaigns resulted in a total of 711 probe locations.

A total of 711 locations recorded the depth of penetration. Of the 711 locations probed a total of 423 probes (59%) recorded depths of 0.5m or less, 201 probes (28%) recorded depths of penetration between >0.5m and 1.0m and 87 probes (12%) recorded depths of penetration >1.0m (Table 1).

Table 1 Depth of Penetration Distribution (2013 and 2014 campaigns)

Depth Range (m)	Number of Probes	Percentage of Probes
0 to 0.5	423	58
>0.5 – 1.0	201	20
>1.0 – 1.5	53	8.1
>1.5 – 2.0	22	5.2
>2.0 – 2.5	7	3.7
>2.5 – 3.0	3	4.1
>3.0 – 3.5	2	0.4
Total	711	100%

Coring – Previous campaign (2014)

In addition a total of 171 cores were completed in 2014 by Jacobs focused on infrastructure locations. The cores identified 0 – 0.5m of peat in 135 of the 171 locations (79%) and >0.5m to 1m in 25 of the 171 locations (15%). Only 12 (7%) locations recorded peat in excess of 1m with a maximum depth of 2m.

Based on the depth of penetration results and the peat depths from coring, an interpreted peat depth contour plot was developed by Jacobs (Figure 1) and used to determine the additional probing and coring locations for the May 2015 campaign (Figure 2). The locations requiring additional probing and coring were defined as those where the interpreted peat depth contour map indicated peat depths in excess of 0.5m in areas of the Final Layout infrastructure.

Depth of Penetration Probing – May 2015 Campaign

A total of 1,744 probes were undertaken during the May 2015 campaign. Each probe recorded the depth of penetration and the potential substrate at the limit of penetration (Appendix II).

Of the 1,744 locations probed a total of 996 probes (57%) recorded depths of 0.5m or less, 556 probes (32%) recorded depths of penetration between >0.5m and 1.0m and 192 probes (11%) recorded depths of penetration >1.0m (Table 2).

Table 2 Depth of Penetration Distribution

Depth Range (m)	Number of Probes	Percentage of Probes
0 to 0.5 (no peat)	996	57
>0.5 – 1.0	556	32
>1.0 – 1.5	115	6.6
>1.5 – 2.0	51	2.9
>2.0 – 2.5	15	0.9
>2.5 – 3.0	8	0.5
>3.0	3	0.2
Total	1,744	100%

The depth of penetration at each probe location is presented on Figure 2.

Coring – current campaign

A total of 118 locations around the site have been cored during the May 2015 campaign where peat was found to be potentially present, based on the 50m spacing system along the track and the 10m or 20m grids required at each turbine, borrow pit and other infrastructure locations. All the proposed infrastructure locations were cored at the specified frequency to support the previous coring.

The data collected at each core including Von Post test results, acrotelm and catotelm thickness, observations on the peat structure and any observations on water features nearby are presented in Appendix III. Comparison of the probe depth of penetration and the peat depth verified from the core is also presented in Appendix III and full logs of each core, including a photographic record, are presented in Appendix IV.

Of the 118 locations cored, a total of 54 identified peat greater than 0.5m depth (this was biased to ward coring at locations both where there were significant depths of peat for verification purposes, and also as coring was undertaken almost exclusively in areas where the 2013 and 2014 campaigns had identified the presence of peat).

Comparison of the coring to the depth of penetration probes demonstrated the following:

- 96 (81%) locations were the same (within 0.1m) as the core verified depth of peat - these are spread across a variety of depths – 44 at 0m – 0.5m, 42 at >0.5m – 1.0m, 4 at >1.0m – 1.5m, 4 at >1.5m – 2.0m; 1 at >2.0m – 2.5m and 1 at >2.5m;
- 22 (19%) probe depths were deeper (>0.1m) than the core identified the actual peat depth - of these:
 - The majority of these, 20 probe depths (17% of total cores) were for probe depths up to 0.5m depth i.e. not classified as peat in any case; and
 - 2 (1.7% of 118 total cores) probe depths were greater than 0.5m deep and were demonstrated to be overestimates based on coring results as follows:

- probe depth 1.5m, core verified peat depth 1.2m: location R-377619-C, southern edge of turbine 15 where peat was verified to 1.2m depth overlying clay; and
- probe depth 1.6m, core verified peat to 1.4m: location H-333021-C, southern edge of turbine 14 where peat was verified to 1.4m overlying grey clay.

These data appear to indicate the presence of some soft clay rather than peat at two of the coring locations at depths greater than 0.5m. The results would provide an overestimate of peat depth, of between 0.2m and 0.3m, however these appear to be uncommon and therefore do not justify any adjustment in the volumetric calculations.

Sections of the site were observed to have no distinctive acrotelm layer in peat deposits as the ground conditions had been repeatedly disturbed by forestry activities and the growth of a vegetative top layer is limited by the forestry canopy. In these locations a relatively bare soil with pine needle covering or recently worked ground was observed and any peat deposits were of catotelm type with no distinct layers, e.g. cores R-348579-C and Q-458809-C.

Based on the data collected an interpreted peat depth map (Figure 3) was produced to demonstrate the variation in peat across the site and at the various infrastructure locations. A comparison of the peat depth with the site infrastructure footprint is presented in Table 4:

Table 4 Peat Depth Distribution across Infrastructure (First Iteration Layout)

Depth Range (m)	Area of infrastructure footprint (m ²)	Area of infrastructure footprint (%)
0 to 0.5 (no peat)	135,718	66.1
>0.5 – 1.0	67,855	15.7
>1.0 – 1.5	10,893	6.5
>1.5 – 2.0	4,057	4.8
>2.0+	1,586	6.9
Total	220,108	100%

Note: These values also include the existing track so the area of the infrastructure footprint is about 19,500m² greater than the excavated area.

These data indicate that deep peat (>1.0m depth) is present across 18.2% of the proposed infrastructure and no peat (0 – 0.5m depth) is present across 66.1% of the proposed infrastructure.

Subsequently the layout was altered to further avoid areas of deeper peat, increase the size of the borrow pits to provide sufficient stone for the development, relocate the southern construction compound and the substation away from deep peat and use a more realistic turbine base area of 20m diameter rather than 12m sided square (Figure 4). This resulted in the peat distribution presented in Table 5 across the infrastructure.

Table 5 Peat Depth Distribution across Infrastructure (Final Layout)

Depth Range (m)	Area of infrastructure footprint (m ²)	Area of infrastructure footprint (%)
0 to 0.5 (no peat)	165,833	65.3

Depth Range (m)	Area of infrastructure footprint (m ²)	Area of infrastructure footprint (%)
>0.5 – 1.0	77,408	30.5
>1.0 – 1.5	9,811	3.9
>1.5 – 2.0	754	0.3
>2.0+	75	0.03
Total	253,881	100

These data indicate that deep peat (>1.0m depth) is now present across just 4.2% of the proposed infrastructure (a substantial reduction from the previous 18.2%).

4 Volume calculations

Volumetric calculations of the peat required to be excavated were undertaken on the layout provided (First Iteration Layout), and based on the following assumptions:

- The average depth of the acrotelm across the site is 6cm;
- The contour plot of the interpreted peat depth is based on sufficient data for an accurate peat depth map to be produced; and
- The infrastructure dimensions as presented in Table 6:

Table 6 Infrastructure dimensions First Iteration Layout

Infrastructure	Dimensions	Area (m ²)
Turbines 1 to 21	12m x 12m	3,024
Crane hardstanding 1 to 21	Irregular shape of 3,796m ²	79,716
Construction Compound 1	50m x 100m	5,000
Construction Compound 2	50m x 100m	5,000
Substation	50m x 100m	5,000
Met Mast and hardstanding 1	31m x 17m	527
Met Mast and hardstanding 2	31m x 17m	527
Met Mast and hardstanding 3	31m x 17m	527
Borrow Pit 1	75m x 40m	3,000
Borrow Pit 2	80m x 40m	3,200
Borrow Pit 3	80m x 40m	3,200
Borrow Pit 4	60m x 60m	3,600
New Track	Irregular shape	59,126
Existing track (widened)	Irregular shape (excludes existing track of 3m width)	29,182
Total		200,629

Using the interpreted peat depth contour map (Figure 3) produced from all of the probing and coring data from the 2013, 2014 and 2015 campaigns, the volumes of peat that would be excavated during construction were calculated based on the infrastructure dimensions (ArcGIS shapefiles) provided for the First Iteration Layout. These calculations produced the following volume estimates and are detailed in Table 7:

- A total volume of peat to be excavated of 70,700m³;
- A total volume of acrotelm to be excavated of 4,900m³;
- A total volume of catotelm to be excavated of 65,800m³; and
- A total volume of peaty/penetrable mineral soils to be excavated of 35,940m³.

Table 7 Excavated Peat Volumes (First Iteration Layout)

Infrastructure	Infrastructure area (m ²)	Average peat depth over infrastructure area (m)	Percentage of infrastructure with >0.5m depth of peat	Area of infrastructure with >0.5m depth of peat (m ²)	Average peat depth over area of infrastructure with >0.5m depth of peat (m)	Volume of peat excavated (m ³)	Volume of acrotelm peat excavated (m ³)	Volume of catotelm peat excavated (m ³)	Volume of peaty/penetrable mineral soils excavated (m ³)
Turbine 1	144	0.53	65.5	94	0.57	54	6	0	23
Turbine 2	144	0.30	0.0	0	0.00	0	0	72	43
Turbine 3	144	0.78	99.4	143	0.78	112	9	1	1
Turbine 4	144	0.27	0.0	0	0.00	0	0	0	39
Turbine 5	144	0.58	94.4	136	0.59	80	8	6	3
Turbine 6	144	0.23	1.9	3	0.50	1	0	0	32
Turbine 7	144	0.24	0.0	0	0.00	0	0	0	35
Turbine 8	144	0.23	7.1	10	0.62	6	1	0	27
Turbine 9	144	0.34	0.0	0	0.00	0	0	8	49
Turbine 10	144	0.14	0.0	0	0.00	0	0	29	20
Turbine 11	144	0.41	0.0	0	0.00	0	0	29	59
Turbine 12	144	0.45	12.3	18	0.53	9	1	215	55
Turbine 13	144	0.46	40.6	59	0.56	33	4	72	33
Turbine 14	144	0.51	40.7	59	0.56	33	4	3	41
Turbine 15	144	1.53	100.0	144	1.55	223	9	140	-3
Turbine 16	144	0.60	89.4	129	0.62	80	8	0	7
Turbine 17	144	0.33	4.0	6	0.60	3	0	121	44
Turbine 18	144	1.03	100.0	144	1.03	148	9	0	0
Turbine 19	144	0.39	0.0	0	0.00	0	0	0	56
Turbine 20	144	0.90	100.0	144	0.90	130	9	72	0

Infrastructure	Infrastructure area (m ²)	Average peat depth over infrastructure area (m)	Percentage of infrastructure with >0.5m depth of peat	Area of infrastructure with >0.5m depth of peat (m ²)	Average peat depth over area of infrastructure with >0.5m depth of peat (m)	Volume of peat excavated (m ³)	Volume of acrotelm peat excavated (m ³)	Volume of catotelm peat excavated (m ³)	Volume of peaty/penetrable mineral soils excavated (m ³)
Turbine 21	144	0.18	0.0	0	0.00	0	0	1	26
Crane hardstanding 1	3,796	0.48	42.1	1,597	0.66	1,054	96	958	768
Crane hardstanding 2	3,796	0.33	13.7	522	0.58	303	31	271	950
Crane hardstanding 3	3,796	0.38	19.7	746	0.62	463	45	418	980
Crane hardstanding 4	3,796	0.36	12.2	462	0.56	258	28	231	1,108
Crane hardstanding 5	3,796	0.65	61.5	2,336	0.79	1,845	140	1,705	622
Crane hardstanding 6	3,796	0.78	79.7	3,025	0.89	2,693	182	2,511	268
Crane hardstanding 7	3,796	0.57	54.5	2,070	0.78	1,615	124	1,491	549
Crane hardstanding 8	3,796	0.34	18.0	685	0.65	445	41	404	846
Crane hardstanding 9	3,796	0.42	18.5	702	0.56	393	42	351	1,201
Crane hardstanding 10	3,796	0.28	0.0	1	0.51	0	0	0	1,063
Crane hardstanding 11	3,796	0.50	40.9	1,553	0.70	1,087	93	994	811
Crane hardstanding 12	3,796	0.32	7.6	290	0.57	165	17	148	1,049
Crane hardstanding 13	3,796	0.39	25.0	949	0.62	588	57	531	892
Crane hardstanding 14	3,796	0.79	91.6	3,479	0.83	2,887	209	2,679	111
Crane hardstanding 15	3,796	0.95	86.2	3,273	1.04	3,404	196	3,208	202
Crane hardstanding 16	3,796	0.68	58.7	2,229	1.00	2,229	134	2,095	352
Crane hardstanding 17	3,796	0.78	87.5	3,320	0.85	2,822	199	2,623	139
Crane hardstanding 18	3,796	0.37	22.7	864	0.85	734	52	682	670
Crane hardstanding 19	3,796	0.69	77.1	2926	0.77	2,253	176	2,078	366
Crane hardstanding 20	3,796	0.57	47.2	1,790	0.78	1,396	107	1,289	768

Infrastructure	Infrastructure area (m ²)	Average peat depth over infrastructure area (m)	Percentage of infrastructure with >0.5m depth of peat	Area of infrastructure with >0.5m depth of peat (m ²)	Average peat depth over area of infrastructure with >0.5m depth of peat (m)	Volume of peat excavated (m ³)	Volume of acrotelm peat excavated (m ³)	Volume of catotelm peat excavated (m ³)	Volume of peaty/penetrable mineral soils excavated (m ³)
Crane hardstanding 21	3,796	0.50	37.6	1,428	0.71	1,014	86	928	884
Construction Compound 1	5,000	0.67	49.8	2,492	0.97	2,418	150	2,268	932
Construction Compound 2	5,000	0.23	0.0	0	0.00	0	0	0	1,150
Substation	5,000	1.38	99.7	4,987	1.38	6,883	299	6,583	17
Met Mast 1	527	0.36	17.3	91	0.36	52	5	46	138
Met Mast 2	527	0.63	66.5	350	0.63	266	21	245	66
Met Mast 3	527	0.48	45	237	0.48	130	14	116	122
Borrow Pit 1	3,000	1.50	0.0	0	0.00	0	0	0	4,500
Borrow Pit 2	3,200	0.20	7.0	223	0.71	159	13	145	481
Borrow Pit 3	3,200	0.57	51.8	1,659	0.86	1,426	100	1,327	398
Borrow Pit 4	3,600	0.11	0.0	0	0.00	0	0	0	396
New Track	59,126	0.60	52.9	31,268	0.87	27,203	1,876	25,327	8,273
Existing Track (widened)	29,182	0.27	10.6	5,150	0.70	3,605	309	3,296	4,274
Total						70,704	4,908	65,797	35,937

4.2 Final Iteration Layout

Volumetric calculations of the peat required to be excavated were subsequently undertaken on the Final Layout, and based on the following assumptions:

- The average depth of the acrotelm across the site is 6cm;
- The contour plot of the interpreted peat depth is based on sufficient data for an accurate peat depth map to be produced;
- The existing track on site that will be upgraded is an average of 3m wide;
- A number of sections of track have been realigned;
- The substation and southern construction compound have been relocated away from deep peat;
- The borrow pit areas have been redesigned;
- The turbine base areas have been increased; and
- The infrastructure dimensions for excavation are those presented in Table 8.

Table 8 Infrastructure dimensions

Infrastructure	Dimensions	Area (m ²)
Turbines	20m diameter (but some overlap with hardstanding so reduced area of ~285m ² each)	5,423
Crane hardstanding (section closest to turbine base)	Irregular shape (2,402m ² each)	45,638
Crane hardstanding (section furthest from turbine base)	Irregular shape (1,394m ² each)	26,486
Construction Compound 1	50m x 100m	5,000
Construction Compound 2	50m x 100m	5,000
Substation	50m x 100m	5,000
Met Mast and hardstanding 1	31m x 17m	527
Met Mast and hardstanding 2	31m x 17m	527
Met Mast and hardstanding 3	31m x 17m	527
Borrow Pit 1	Irregular shape	1,658
Borrow Pit 2	Irregular shape	22,565
Borrow Pit 3	Irregular shape	18,883
Borrow Pit 4	Irregular shape	1,225
Borrow Pit 5	Irregular shape	4,985
Existing track to be widened	~6,187m x 4.5m (excludes existing track of 3m width)	28,085
New track (excavated)	~8,120m x 7.5m	60,889
New track (rockfill)	~365m x 7.5m	2,740
Total		235,158

Using the interpreted peat depth contour map (Figure 4) produced from all of the probing and coring data from the 2014 and 2015 campaigns, the volumes of peat that would be excavated during construction were calculated based on the infrastructure dimensions (ArcGIS shapefiles) provided for the Final Layout. These calculations produced the following volume estimates and are detailed in Table 9:

- A total volume of peat to be excavated of 66,400m³;
- A total volume of acrotelm to be excavated of 5,100m³;
- A total volume of catotelm to be excavated of 61,300m³; and
- A total volume of peaty/penetrable mineral soils to be excavated of 38,560m³.

Table 9 Excavated Peat Volumes

Infrastructure	Infrastructure area (m ²)	Average peat depth over infrastructure area (m)	Percentage of infrastructure with >0.5m depth of peat	Area of infrastructure with >0.5m depth of peat (m ²)	Average peat depth over area of infrastructure with >0.5m depth of peat (m)	Volume of peat excavated (m ³)	Volume of acrotelm peat excavated (m ³)	Volume of catotelm peat excavated (m ³)	Volume of peaty/penetrable mineral soils excavated (m ³)
Turbine 3	285	0.79	99.4	283.6	0.79	224	17	207	1
Turbine 4	285	0.27	0.0	0	0.00	0	0	0	77
Turbine 5	285	0.63	93.7	267.7	0.64	171	16	155	9
Turbine 6	285	0.29	12.9	36.9	0.62	23	2	21	60
Turbine 7	285	0.25	0.0	0	0.00	0	0	0	71
Turbine 8	285	0.31	18.2	52.1	0.74	39	3	35	49
Turbine 9	285	0.33	0.0	0	0.00	0	0	0	93
Turbine 10	285	0.13	0.0	0	0.00	0	0	0	38
Turbine 11	285	0.38	1.2	3.5	0.50	2	0	2	107
Turbine 12	285	0.42	18.6	53.3	0.60	32	3	29	89
Turbine 13	285	0.40	21.0	60	0.56	34	4	30	79
Turbine 14	285	0.52	48.9	139.6	0.59	82	8	74	67
Turbine 15	285	1.40	100.0	285.3	1.40	399	17	382	-1
Turbine 16	285	0.58	77.0	220	0.64	141	13	128	26
Turbine 17	285	0.32	8.0	22.9	0.59	14	1	12	79
Turbine 18	285	1.01	100.0	285.3	1.01	288	17	271	-1
Turbine 19	285	0.39	1.5	4.4	0.50	2	0	2	110
Turbine 20	285	0.89	98.4	280.6	0.89	250	17	233	3
Turbine 21	285	0.19	0.0	0	0.00	0	0	0	55
Crane hardstanding 3	3,796	0.38	19.7	746.1	0.62	463	45	418	980

Infrastructure	Infrastructure area (m ²)	Average peat depth over infrastructure area (m)	Percentage of infrastructure with >0.5m depth of peat	Area of infrastructure with >0.5m depth of peat (m ²)	Average peat depth over area of infrastructure with >0.5m depth of peat (m)	Volume of peat excavated (m ³)	Volume of acrotelm peat excavated (m ³)	Volume of catotelm peat excavated (m ³)	Volume of peaty/penetrable mineral soils excavated (m ³)
Crane hardstanding 4	3,796	0.36	12.2	461.6	0.56	258	28	231	1,108
Crane hardstanding 5	3,796	0.65	61.5	2,336	0.79	1,845	140	1,705	622
Crane hardstanding 6	3,796	0.78	79.7	3,025.3	0.89	2,693	182	2,511	268
Crane hardstanding 7	3,796	0.57	54.5	2,070.4	0.78	1,615	124	1,491	549
Crane hardstanding 8	3,796	0.34	18.0	684.5	0.65	445	41	404	846
Crane hardstanding 9	3,796	0.42	18.5	701.6	0.56	393	42	351	1,201
Crane hardstanding 10	3,796	0.28	0.0	0.6	0.51	0	0	0	1,063
Crane hardstanding 11	3,796	0.50	40.9	1,553.1	0.70	1,087	93	994	811
Crane hardstanding 12	3,796	0.32	7.6	290	0.57	165	17	148	1,049
Crane hardstanding 13	3,796	0.39	25.0	949	0.62	588	57	531	892
Crane hardstanding 14	3,796	0.79	91.6	3,478.9	0.83	2,887	209	2,679	111
Crane hardstanding 15	3,796	0.95	86.2	3,273.1	1.04	3,404	196	3,208	202
Crane hardstanding 16	3,796	0.68	58.7	2,229.1	1.00	2,229	134	2,095	352
Crane hardstanding 17	3,796	0.78	87.5	3,320.2	0.85	2,822	199	2,623	139
Crane hardstanding 18	3,796	0.37	22.7	863.6	0.85	734	52	682	670
Crane hardstanding 19	3,796	0.69	77.1	2,926.4	0.77	2,253	176	2,078	366
Crane hardstanding 20	3,796	0.57	47.2	1,790	0.78	1,396	107	1,289	768
Crane hardstanding 21	3,796	0.50	37.6	1,427.9	0.71	1,014	86	928	884
Construction Compound 1	5,000	0.48	50.6	2,531.1	0.58	1,468	152	1,316	932
Construction Compound 2	5,000	0.23	0.0	0	0.00	0	0	0	1,150
Substation	5,000	0.70	61.4	3,071.3	0.96	2,948	184	2,764	552

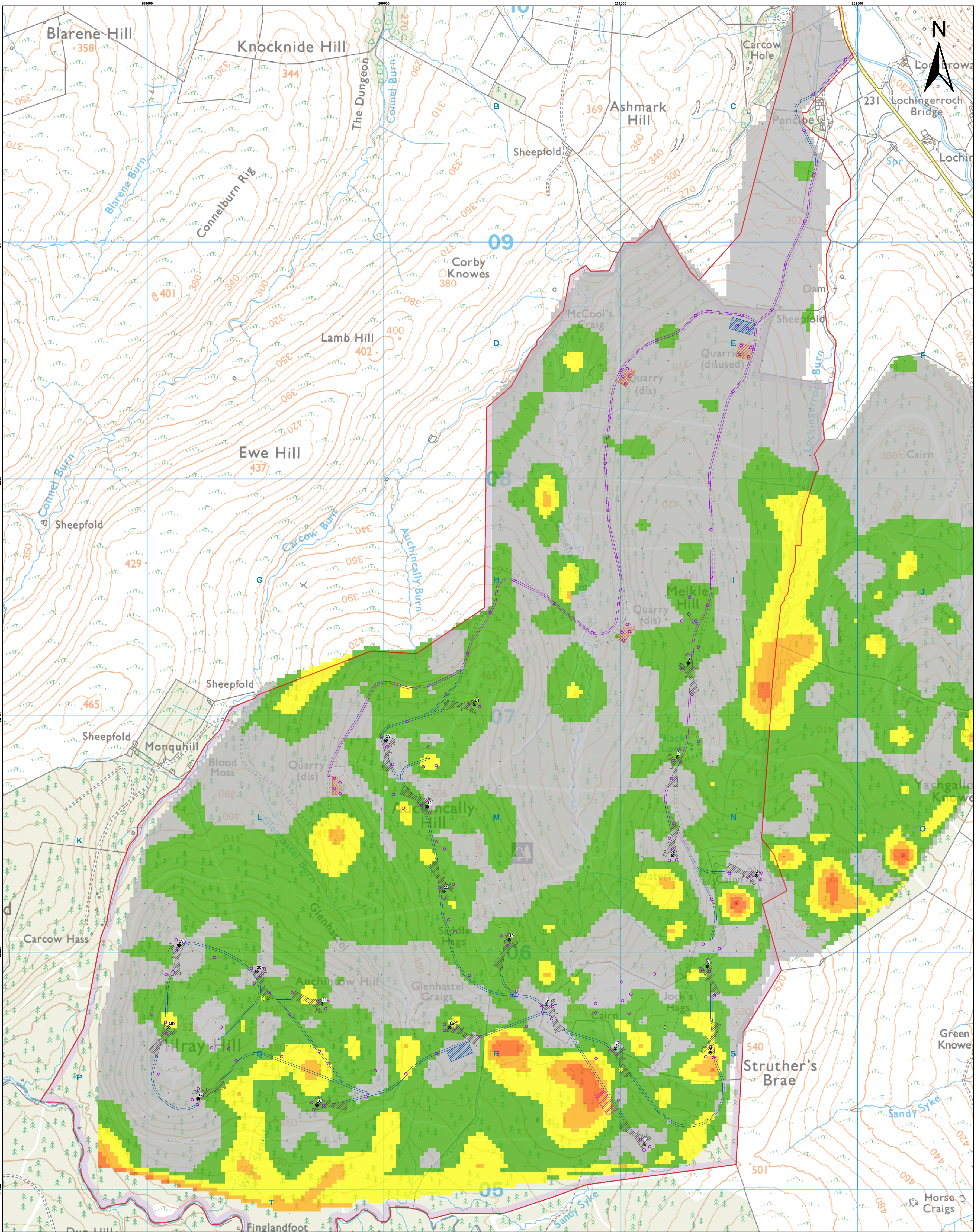
Infrastructure	Infrastructure area (m ²)	Average peat depth over infrastructure area (m)	Percentage of infrastructure with >0.5m depth of peat	Area of infrastructure with >0.5m depth of peat (m ²)	Average peat depth over area of infrastructure with >0.5m depth of peat (m)	Volume of peat excavated (m ³)	Volume of acrotelm peat excavated (m ³)	Volume of catotelm peat excavated (m ³)	Volume of peaty/penetrable mineral soils excavated (m ³)
Met Mast 1	527	0.36	17.3	91	0.57	52	5	46	138
Met Mast 2	527	0.63	66.5	350	0.76	266	21	245	66
Met Mast 3	527	0.48	45.0	237	0.55	130	14	116	122
Borrow Pit 1	1,658	0.02	0.0	0	0.00	0	0	0	33
Borrow Pit 2	22,565	0.18	0.0	0	0.00	0	0	0	4,062
Borrow Pit 3	18,883	0.48	42.7	8,055	0.72	5,800	483	5,316	3,264
Borrow Pit 4	1,225	0.09	0.0	0	0.00	0	0	0	110
Borrow Pit 5	4,985	0.09	0.0	0	0.00	0	0	0	449
New Track (excavated)	60,889	0.53	49.9	30,409	0.75	22,807	1,825	20,983	9,464
New Track (Rock Fill)	2,740	0.82	82.3	2,254	0.91	2,052	135	1,917	195
Existing Track (widened)	46,409	0.25	14.5	4,078	0.71	2,895	245	2,651	4,126
Total						66,413	5,113	61,300	38,556

5 Summary

The following summary arises from the results of the peat survey campaign and subsequent peat depth contouring and excavated volume calculations:

- The various peat survey campaigns have provided a wide coverage of peat occurrence and depth across the proposed Pencloe Windfarm site with higher frequency probing undertaken in the areas of proposed infrastructure.
- Peat has been determined to be present up to a depth of 3.3m based on 2,455 depth of penetration probes and 289 cores.
- The data collected has been used to produce an interpreted maximum depth of peat contour map using ArcGIS;
- The mapping indicates that the presence of peat at the site is not continuous and much of the site shows a complete absence of peat.
- The additional peat probing campaign at infrastructure locations has informed a review of the windfarm layout, and allowed areas of deep peat to be almost entirely avoided.
- The changes to the infrastructure layout included an increase in the size of the borrow pits to provide sufficient stone for the development, relocation of the southern construction compound and the substation away from deep peat, realignment of sections of track to avoid deep peat and use of a more realistic turbine base area of 20m diameter rather than 12m sided square.
- Based on the infrastructure Final Layout, deep peat (>1m depth) was present across only 4.2% of the footprint a substantial reduction from the 18% of infrastructure in the First Iteration layout.
- There is no peat (0 – 0.5m depth) at 65% of infrastructure.
- The total volume of peat that is required to be excavated based on the Final Layout has been calculated using ArcGIS spatial analysis and is estimated at 66,400m³ which is comprised of about 5,100m³ of acrotelm and 61,300m³ of catotelm. The total volume of peat to be excavated has been reduced by about 12% from the previous total of 70,700m³ even though there has been an increase in the infrastructure footprint from 200,629m² to 235,158m² (17% increase). This has been achieved by the detailed probing obtaining a greater understanding of peat depth and occurrence across the site and the subsequent redesign of the layout to improve avoidance of deep peat.

Figures



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KEY:

Site Boundary

Probe Locations by Jacobs

- 0 - 0.5 m
- > 0.5 - 1 m
- > 1 - 1.5 m
- > 1.5 - 2 m
- > 2 - 3 m
- > 3 - 4 m
- > 4 m
- Core Locations by Jacobs

Location Code Grid

- Turbine
- Existing Track
- New Track
- Existing Anemometry Mast
- Anemometry Mast
- Crane Handstanding
- Construction Compound
- Substation
- Borrow Pit

Interpreted Peat Depth (m) by Jacobs

- 0 - 0.5 m
- > 0.5 - 1 m
- > 1 - 1.5 m
- > 1.5 - 2 m
- > 2 - 3 m
- > 3 - 4 m
- > 4 m

PROJECT

PENCLOE WINDFARM

SCALE

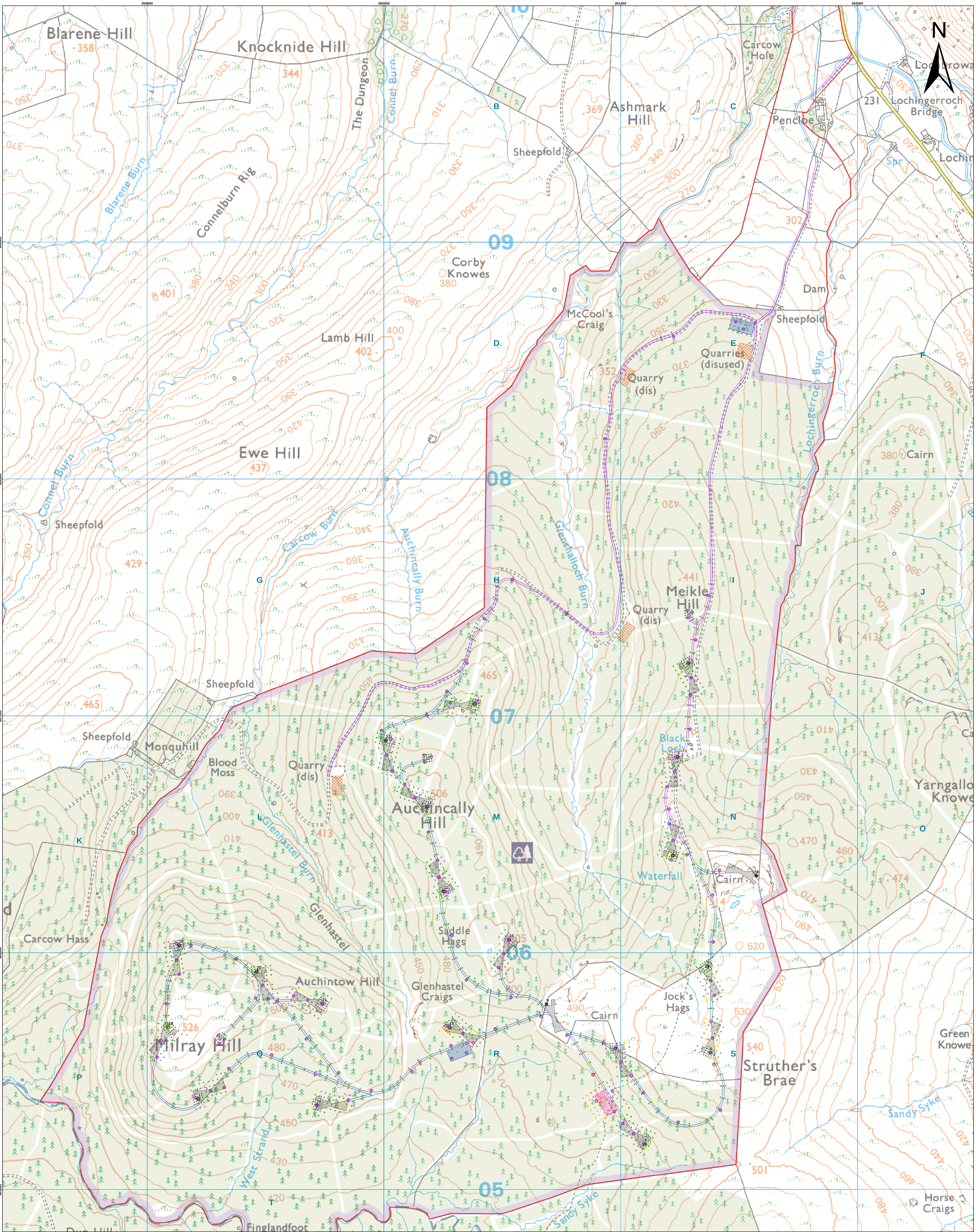
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0 100 200 300 400 500 m

FIGURE 1

Previous Probing and Coring Locations By SKM/Jacobs With Interpreted Peat Depth First Iteration Layout





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KEY:

Site Boundary	Location Code Grid
Probe Locations	Turbine
0 - 0.5 m	Existing Track
> 0.5 - 1 m	New Track
> 1 - 1.5 m	Existing Anemometry Mast
> 1.5 - 2 m	Anemometry Mast
> 2 - 3 m	Crane Hardstanding
> 3 - 4 m	Construction Compound
> 4 m	Substation
Core Locations	Borrow Pit

PROJECT

PENCLOE WINDFARM

SCALE

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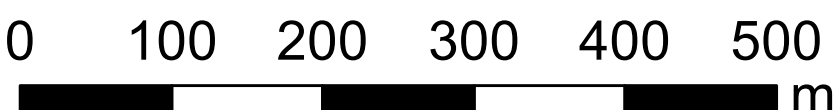
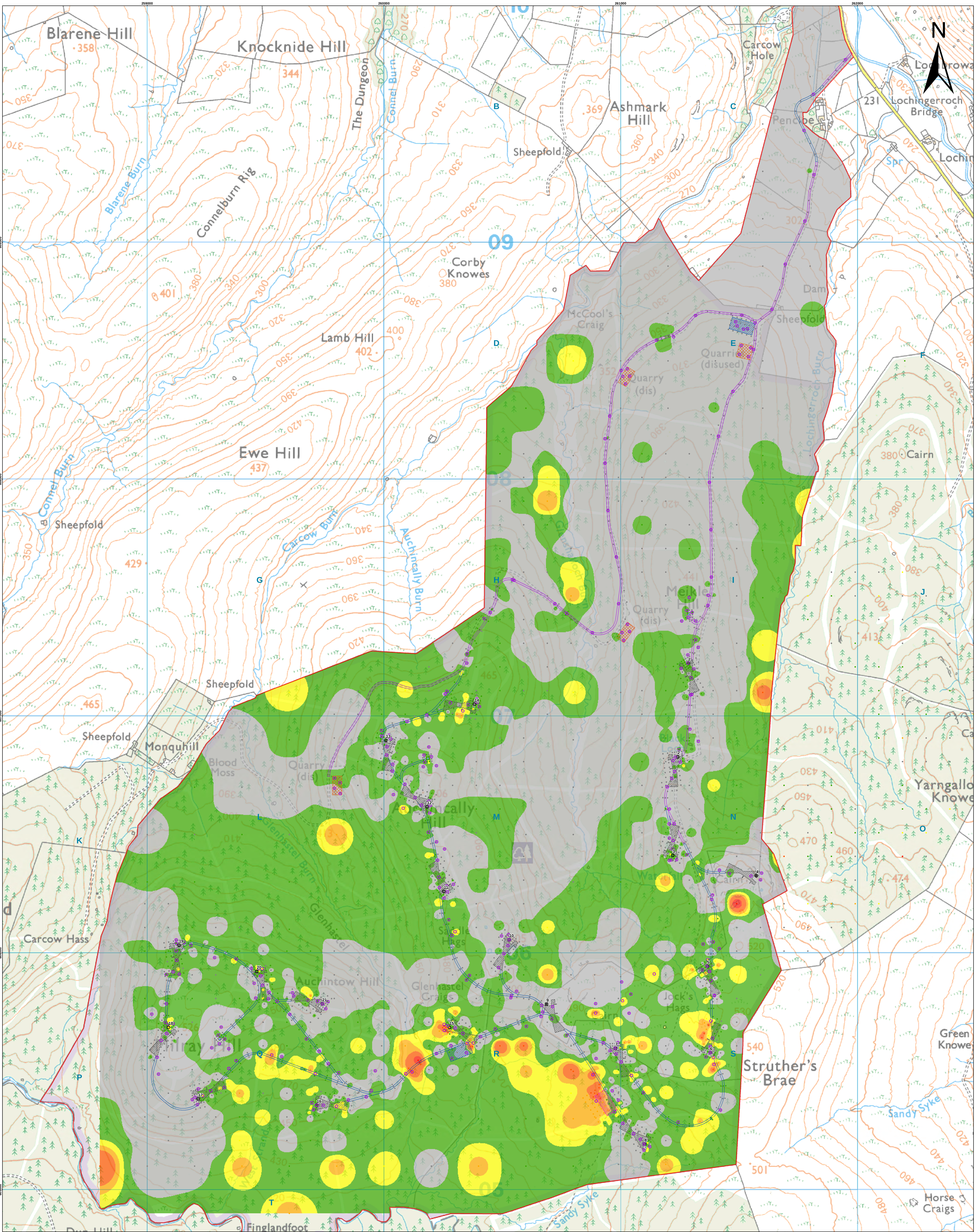


FIGURE 2

Probing and Coring Locations by FLUID
First Iteration Layout





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KEY:

Site Boundary

Probe Locations

0 - 0.5 m

> 0.5 - 1 m

> 1 - 1.5 m

> 1.5 - 2 m

> 2 - 3 m

> 3 - 4 m

> 4 m

Core Locations

Location Code Grid

Turbine

Existing Track

New Track

Existing Anemometry Mast

Anemometry Mast

Crane Hardstanding

Construction Compound

Substation

Borrow Pit

Interpreted Peat Depth (m)

0 - 0.5 m

> 0.5 - 1 m

> 1 - 1.5 m

> 1.5 - 2 m

> 2 - 3 m

> 3 - 4 m

> 4 m

PROJECT

PENCLOE WINDFARM

SCALE

1:5,000 @ A0

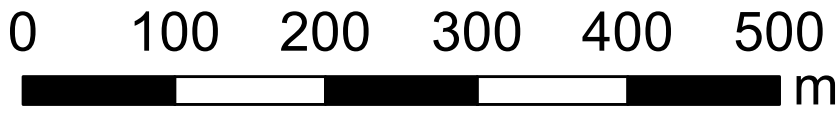
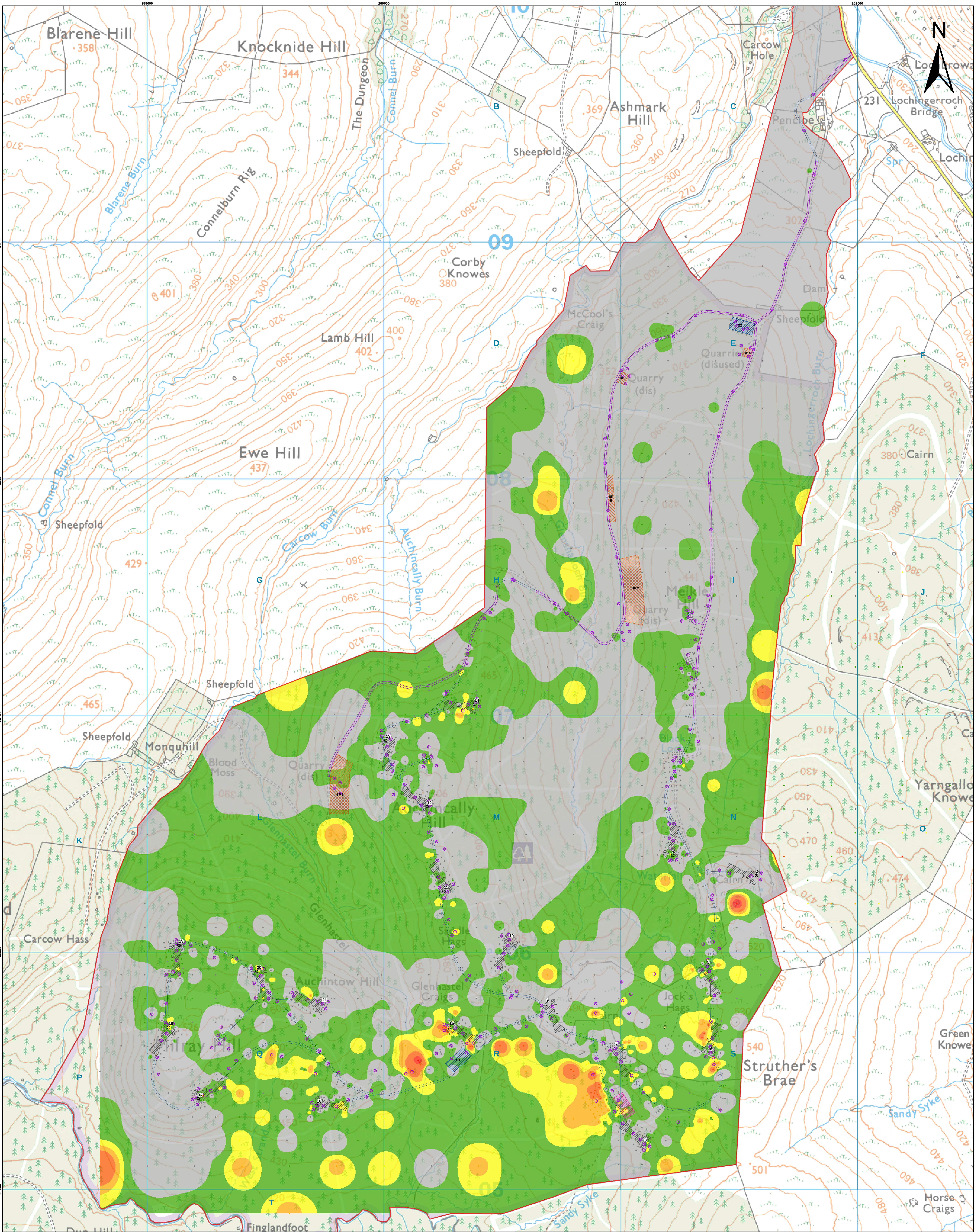


FIGURE 3

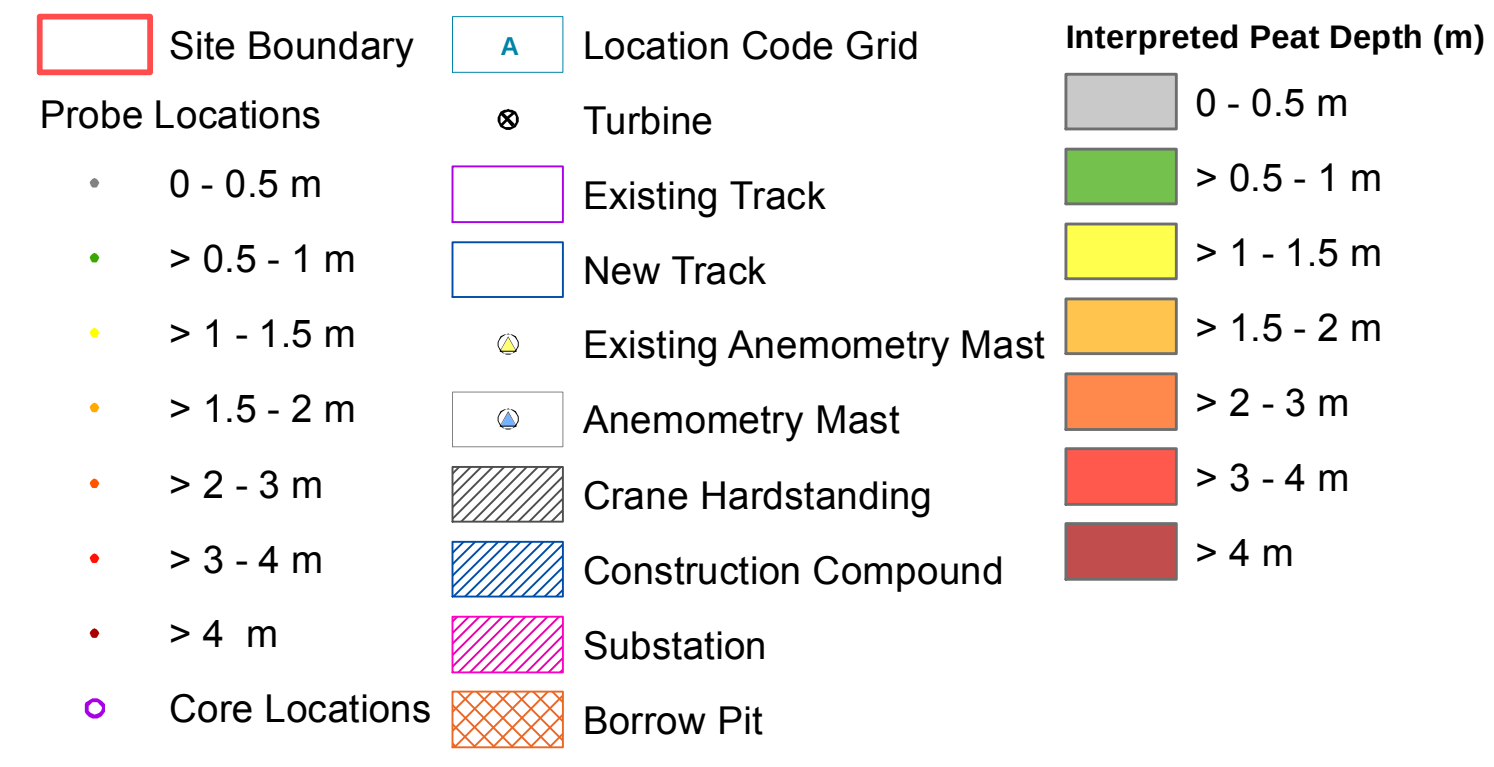
Interpreted Peat Depth
First Iteration Layout





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KEY:



PROJECT

PENCLOE WINDFARM

SCALE

1:5,000 @ A0

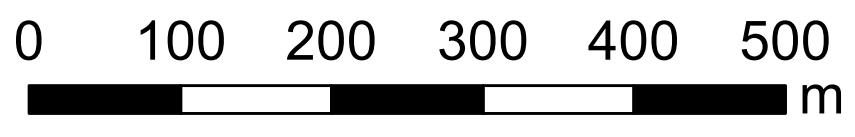


FIGURE 4

Interpreted Peat Depth
Final Iteration Layout



Appendices

Appendix I Example Photographs of Typical Ground Conditions



Photo 1 Example of peat probe and core showing a very small thickness of acrotelm in ground below forest canopy.



Photo 2 Example of mineral soil in core rather than peat.



Photo 3 Example of forestry on site



Photo 4 Example of a clearing in forestry on site



Photo 5 Example of open moorland with areas of exposed bedrock on site.

Appendix II Peat Probing Depth Data

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
D - 933171 - C	D	260936	608167	0	Resistance
D - 942168 - P	D	260942	608168	0	Bedrock
D - 952166 - P	D	260952	608166	50	Bedrock
E - 168603 - P	E	261168	608603	90	Resistance
E - 172594 - P	E	261172	608594	0	Bedrock
E - 175584 - P	E	261175	608584	90	Resistance
E - 214620 - P	E	261214	608620	70	Resistance
E - 219611 - P	E	261219	608611	0	Bedrock
E - 223602 - C	E	261226	608598	40	Resistance
E - 454632 - P	E	261454	608632	30	Bedrock
E - 460651 - P	E	261460	608651	25	Grit
E - 466670 - P	E	261466	608670	25	Bedrock
E - 472689 - P	E	261472	608689	10	Bedrock
E - 474626 - P	E	261474	608626	25	Bedrock
E - 479645 - P	E	261479	608645	30	Bedrock
E - 485664 - C	E	261488	608661	20	Grit
E - 491684 - P	E	261491	608684	20	Resistance
E - 493620 - P	E	261493	608620	25	Bedrock
E - 499640 - P	E	261499	608640	25	Bedrock
E - 504659 - P	E	261504	608659	30	Bedrock
E - 510678 - P	E	261510	608678	30	Resistance
E - 512615 - P	E	261512	608615	30	Bedrock
E - 518634 - C	E	261521	608630	25	Bedrock
E - 523653 - P	E	261523	608653	25	Bedrock
E - 529672 - P	E	261529	608672	20	Bedrock
E - 531609 - P	E	261531	608609	25	Grit
E - 537628 - P	E	261537	608628	25	Bedrock
E - 543647 - P	E	261543	608647	25	Bedrock
E - 548666 - P	E	261548	608666	20	Bedrock
E - 550603 - P	E	261550	608603	30	Grit
E - 556622 - P	E	261556	608622	30	Bedrock
E - 562641 - P	E	261562	608641	30	Bedrock
E - 568660 - C	E	261570	608657	10	Grit
H - 178014 - P	H	260178	607014	80	Grit
H - 181004 - C	H	260184	607001	40	Grit
H - 224028 - P	H	260224	607028	80	Resistance
H - 227018 - P	H	260227	607018	100	Resistance
H - 230009 - P	H	260230	607009	90	Resistance
H - 231027 - P	H	260231	607027	45	Resistance
H - 236047 - P	H	260236	607047	60	Resistance

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
H - 241066 - P	H	260241	607066	60	Bedrock
H - 245003 - P	H	260245	607003	150	Grit
H - 250022 - P	H	260250	607022	100	Resistance
H - 255041 - P	H	260255	607041	55	Resistance
H - 260061 - P	H	260260	607061	60	Bedrock
H - 265080 - P	H	260265	607080	60	Bedrock
H - 265104 - C	H	260268	607101	70	Bedrock
H - 270017 - P	H	260270	607017	40	Bedrock
H - 274099 - P	H	260274	607099	50	Bedrock
H - 275036 - P	H	260275	607036	80	Bedrock
H - 280056 - C	H	260283	607052	90	Bedrock
H - 283092 - P	H	260283	607092	80	Bedrock
H - 285075 - P	H	260285	607075	80	Bedrock
H - 289012 - P	H	260289	607012	50	Bedrock
H - 294031 - P	H	260294	607031	60	Bedrock
H - 297142 - P	H	260297	607142	70	Bedrock
H - 299051 - P	H	260299	607051	50	Grit
H - 304070 - P	H	260304	607070	60	Clay
H - 306137 - P	H	260306	607137	50	Bedrock
H - 308007 - P	H	260308	607007	170	Grit
H - 313026 - P	H	260313	607026	110	Grit
H - 315130 - P	H	260315	607130	60	Bedrock
H - 318045 - P	H	260318	607045	25	Bedrock
H - 318187 - P	H	260318	607187	90	Grit
H - 323065 - P	H	260323	607065	70	Bedrock
H - 327182 - P	H	260327	607182	120	Grit
H - 328002 - P	H	260328	607002	180	Bedrock
H - 332235 - P	H	260332	607235	30	Bedrock
H - 333021 - C	H	260336	607018	140	Resistance
H - 336175 - P	H	260336	607175	80	Bedrock
H - 338040 - P	H	260338	607040	150	Grit
H - 341230 - P	H	260341	607230	40	Grit
H - 343060 - P	H	260343	607060	110	Bedrock
H - 347283 - P	H	260347	607283	5	Bedrock
H - 348079 - P	H	260348	607079	140	Bedrock
H - 350223 - C	H	260353	607220	40	Bedrock
H - 352016 - P	H	260352	607016	145	Bedrock
H - 355278 - P	H	260355	607278	5	Bedrock
H - 357035 - P	H	260357	607035	80	Bedrock
H - 360045 - P	H	260360	607045	100	Resistance
H - 362054 - P	H	260362	607054	100	Resistance

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
H - 364271 - P	H	260364	607271	60	Bedrock
H - 365064 - P	H	260365	607064	100	Grit
H - 366329 - P	H	260366	607329	80	Grit
H - 367033 - P	H	260367	607033	60	Resistance
H - 367074 - P	H	260367	607074	90	Bedrock
H - 369042 - P	H	260369	607042	80	Bedrock
H - 371011 - P	H	260371	607011	90	Grit
H - 372052 - P	H	260372	607052	70	Bedrock
H - 372093 - P	H	260372	607093	60	Bedrock
H - 374062 - P	H	260374	607062	60	Grit
H - 375323 - P	H	260375	607323	85	Grit
H - 377030 - P	H	260377	607030	120	Bedrock
H - 377071 - P	H	260377	607071	60	Resistance
H - 379040 - P	H	260379	607040	40	Grit
H - 382049 - P	H	260382	607049	45	Bedrock
H - 384059 - P	H	260384	607059	40	Bedrock
H - 384317 - P	H	260384	607317	90	Bedrock
H - 386028 - P	H	260386	607028	70	Bedrock
H - 386069 - P	H	260386	607069	60	Bedrock
H - 389037 - P	H	260389	607037	80	Bedrock
H - 391006 - P	H	260391	607006	65	Bedrock
H - 391047 - P	H	260391	607047	60	Bedrock
H - 392088 - P	H	260392	607088	50	Bedrock
H - 394057 - C	H	260397	607053	50	Bedrock
H - 395370 - P	H	260395	607370	70	Bedrock
H - 396025 - P	H	260396	607025	50	Bedrock
H - 396066 - P	H	260396	607066	50	Bedrock
H - 398035 - P	H	260398	607035	70	Bedrock
H - 401045 - P	H	260401	607045	100	Grit
H - 403054 - P	H	260403	607054	80	Bedrock
H - 404364 - P	H	260404	607364	70	Bedrock
H - 406064 - P	H	260406	607064	90	Bedrock
H - 411083 - P	H	260411	607083	80	Resistance
H - 413358 - P	H	260413	607358	50	Bedrock
H - 423411 - C	H	260426	607408	60	Bedrock
H - 432406 - P	H	260432	607406	60	Bedrock
H - 441399 - P	H	260441	607399	80	Bedrock
H - 446455 - P	H	260446	607455	0	Bedrock
H - 455450 - P	H	260455	607450	60	Grit
H - 462502 - P	H	260462	607502	50	Bedrock
H - 464443 - P	H	260464	607443	30	Bedrock

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
H - 470552 - P	H	260470	607552	50	Bedrock
H - 471497 - P	H	260471	607497	10	Bedrock
H - 479546 - P	H	260479	607546	55	Grit
H - 480490 - P	H	260480	607490	40	Bedrock
H - 488540 - P	H	260488	607540	60	Grit
H - 539566 - P	H	260539	607566	40	Grit
H - 542576 - C	H	260545	607572	25	Grit
H - 545585 - P	H	260545	607585	40	Resistance
H - 726457 - P	H	260726	607457	60	Grit
H - 732465 - P	H	260732	607465	0	Bedrock
H - 738473 - P	H	260738	607473	5	Bedrock
H - 765426 - P	H	260765	607426	60	Resistance
H - 771434 - C	H	260774	607430	70	Bedrock
H - 777441 - P	H	260777	607441	70	Resistance
I - 222209 - P	I	261222	607209	60	Bedrock
I - 232192 - P	I	261232	607192	80	Grit
I - 239220 - P	I	261239	607220	70	Resistance
I - 243175 - P	I	261243	607175	60	Grit
I - 249203 - P	I	261249	607203	70	Bedrock
I - 253158 - P	I	261253	607158	90	Resistance
I - 256230 - P	I	261256	607230	80	Grit
I - 260185 - P	I	261260	607185	45	Resistance
I - 261222 - P	I	261261	607222	80	Bedrock
I - 264141 - P	I	261264	607141	70	Bedrock
I - 265235 - P	I	261265	607235	55	Resistance
I - 266213 - P	I	261266	607213	75	Resistance
I - 268096 - P	I	261268	607096	50	Grit
I - 270168 - P	I	261270	607168	50	Bedrock
I - 270227 - P	I	261270	607227	65	Bedrock
I - 270444 - P	I	261270	607444	50	Resistance
I - 272205 - P	I	261272	607205	80	Grit
I - 272434 - P	I	261272	607434	50	Grit
I - 273241 - P	I	261273	607241	40	Resistance
I - 273424 - P	I	261273	607424	50	Bedrock
I - 274124 - P	I	261274	607124	70	Bedrock
I - 274414 - P	I	261274	607414	60	Resistance
I - 275218 - P	I	261275	607218	80	Grit
I - 277196 - P	I	261277	607196	90	Bedrock
I - 278079 - P	I	261278	607079	60	Grit
I - 278232 - P	I	261278	607232	25	Bedrock
I - 279046 - P	I	261279	607046	45	Clay

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
I - 280210 - P	I	261280	607210	70	Grit
I - 280445 - C	I	261283	607442	55	Resistance
I - 281151 - P	I	261281	607151	60	Resistance
I - 281435 - P	I	261281	607435	60	Bedrock
I - 282246 - P	I	261282	607246	25	Resistance
I - 283425 - P	I	261283	607425	50	Bedrock
I - 284223 - C	I	261286	607220	55	Resistance
I - 284415 - C	I	261287	607412	50	Bedrock
I - 285107 - P	I	261285	607107	50	Grit
I - 285201 - P	I	261285	607201	80	Bedrock
I - 287179 - P	I	261287	607179	40	Resistance
I - 287237 - P	I	261287	607237	50	Resistance
I - 289045 - P	I	261289	607045	40	Bedrock
I - 289215 - P	I	261289	607215	60	Resistance
I - 290251 - P	I	261290	607251	45	Resistance
I - 290446 - P	I	261290	607446	50	Resistance
I - 291134 - P	I	261291	607134	40	Bedrock
I - 291400 - P	I	261291	607400	35	Resistance
I - 291436 - P	I	261291	607436	30	Bedrock
I - 292229 - P	I	261292	607229	30	Resistance
I - 292268 - P	I	261292	607268	40	Resistance
I - 293426 - P	I	261293	607426	40	Bedrock
I - 294206 - P	I	261294	607206	60	Grit
I - 294416 - P	I	261294	607416	30	Bedrock
I - 295090 - C	I	261298	607086	35	Grit
I - 295242 - P	I	261295	607242	40	Resistance
I - 296323 - P	I	261296	607323	50	Resistance
I - 297220 - P	I	261297	607220	25	Resistance
I - 298162 - C	I	261301	607158	55	Resistance
I - 299045 - P	I	261299	607045	20	Resistance
I - 300405 - P	I	261300	607405	40	Resistance
I - 300447 - P	I	261300	607447	40	Bedrock
I - 301234 - P	I	261301	607234	30	Resistance
I - 301437 - C	I	261304	607434	55	Bedrock
I - 302117 - P	I	261302	607117	30	Resistance
I - 302212 - P	I	261302	607212	30	Grit
I - 302267 - P	I	261302	607267	40	Resistance
I - 302428 - P	I	261302	607428	40	Bedrock
I - 304189 - P	I	261304	607189	80	Grit
I - 304418 - P	I	261304	607418	50	Bedrock
I - 306073 - P	I	261306	607073	10	Resistance

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
I - 306225 - P	I	261306	607225	30	Bedrock
I - 306322 - P	I	261306	607322	55	Resistance
I - 307262 - P	I	261307	607262	30	Grit
I - 308145 - P	I	261308	607145	50	Bedrock
I - 309409 - P	I	261309	607409	50	Resistance
I - 310374 - P	I	261310	607374	40	Resistance
I - 311217 - P	I	261311	607217	25	Bedrock
I - 312100 - P	I	261312	607100	20	Bedrock
I - 312266 - P	I	261312	607266	35	Bedrock
I - 315172 - P	I	261315	607172	80	Resistance
I - 316321 - C	I	261319	607318	55	Resistance
I - 318244 - P	I	261318	607244	50	Bedrock
I - 319128 - P	I	261319	607128	30	Bedrock
I - 320370 - P	I	261320	607370	40	Bedrock
I - 322200 - P	I	261322	607200	40	Grit
I - 323083 - P	I	261323	607083	5	Bedrock
I - 325155 - P	I	261325	607155	10	Bedrock
I - 328227 - P	I	261328	607227	5	Bedrock
I - 329111 - P	I	261329	607111	5	Bedrock
I - 329366 - P	I	261329	607366	35	Resistance
I - 335419 - P	I	261335	607419	40	Resistance
I - 336138 - P	I	261336	607138	15	Bedrock
I - 340094 - P	I	261340	607094	60	Resistance
I - 344414 - P	I	261344	607414	40	Resistance
I - 346121 - P	I	261346	607121	25	Bedrock
I - 352409 - P	I	261352	607409	35	Resistance
I - 355463 - P	I	261355	607463	30	Bedrock
I - 364459 - P	I	261364	607459	5	Bedrock
I - 368509 - C	I	261371	607506	35	Grit
I - 372557 - P	I	261372	607557	60	Resistance
I - 374456 - P	I	261374	607456	0	Bedrock
I - 377507 - P	I	261377	607507	35	Resistance
I - 382557 - P	I	261382	607557	35	Resistance
I - 387506 - P	I	261387	607506	0	Bedrock
I - 392557 - P	I	261392	607557	5	Bedrock
L - 071042 - P	L	259071	606042	10	Resistance
L - 074022 - P	L	259074	606022	20	Grit
L - 078002 - P	L	259078	606002	90	Bedrock
L - 091045 - P	L	259091	606045	20	Bedrock
L - 094026 - P	L	259094	606026	15	Bedrock
L - 098006 - P	L	259098	606006	80	Grit

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
L - 110049 - P	L	259110	606049	50	Bedrock
L - 112039 - P	L	259112	606039	50	Bedrock
L - 114029 - P	L	259114	606029	50	Bedrock
L - 115019 - P	L	259115	606019	50	Bedrock
L - 117009 - P	L	259117	606009	70	Grit
L - 120051 - P	L	259120	606051	40	Bedrock
L - 122041 - C	L	259125	606037	60	Bedrock
L - 124031 - P	L	259124	606031	40	Bedrock
L - 125021 - P	L	259125	606021	30	Bedrock
L - 127011 - P	L	259127	606011	80	Bedrock
L - 130052 - P	L	259130	606052	30	Bedrock
L - 132042 - P	L	259132	606042	40	Bedrock
L - 134032 - P	L	259134	606032	40	Resistance
L - 135023 - P	L	259135	606023	25	Bedrock
L - 137013 - P	L	259137	606013	60	Bedrock
L - 140054 - P	L	259140	606054	30	Bedrock
L - 142044 - P	L	259142	606044	30	Bedrock
L - 143034 - P	L	259143	606034	40	Bedrock
L - 145024 - P	L	259145	606024	25	Bedrock
L - 147014 - P	L	259147	606014	35	Bedrock
L - 150056 - P	L	259150	606056	90	Bedrock
L - 152046 - P	L	259152	606046	70	Bedrock
L - 153036 - P	L	259153	606036	35	Bedrock
L - 155026 - P	L	259155	606026	60	Bedrock
L - 157016 - P	L	259157	606016	50	Bedrock
L - 169059 - P	L	259169	606059	150	Bedrock
L - 173039 - P	L	259173	606039	75	Bedrock
L - 176020 - P	L	259176	606020	50	Bedrock
L - 183051 - P	L	259183	606051	80	Bedrock
L - 184031 - C	L	259187	606028	70	Bedrock
L - 184041 - P	L	259184	606041	40	Bedrock
L - 229021 - P	L	259229	606021	70	Grit
L - 236030 - P	L	259236	606030	95	Grit
L - 243038 - P	L	259243	606038	40	Bedrock
L - 277008 - P	L	259277	606008	40	Grit
L - 284016 - P	L	259284	606016	40	Bedrock
L - 291025 - P	L	259291	606025	60	Grit
L - 338007 - P	L	259338	606007	70	Grit
L - 962889 - P	L	259962	606889	50	Grit
L - 967908 - P	L	259967	606908	80	Resistance
L - 972928 - P	L	259972	606928	90	Resistance

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
L - 976782 - P	L	259976	606782	80	Resistance
L - 977865 - P	L	259977	606865	50	Bedrock
L - 981801 - P	L	259981	606801	70	Resistance
L - 982884 - P	L	259982	606884	40	Bedrock
L - 984893 - P	L	259984	606893	80	Bedrock
L - 986821 - P	L	259986	606821	35	Bedrock
L - 987903 - P	L	259987	606903	60	Bedrock
L - 989913 - P	L	259989	606913	60	Bedrock
L - 989940 - C	L	259992	606936	85	Resistance
L - 991758 - P	L	259991	606758	40	Bedrock
L - 991840 - P	L	259991	606840	30	Bedrock
L - 991881 - P	L	259991	606881	40	Bedrock
L - 991923 - P	L	259991	606923	70	Bedrock
L - 994891 - P	L	259994	606891	30	Bedrock
L - 996777 - P	L	259996	606777	60	Bedrock
L - 996860 - P	L	259996	606860	40	Resistance
L - 996901 - P	L	259996	606901	35	Bedrock
L - 997934 - P	L	259997	606934	70	Bedrock
L - 999910 - P	L	259999	606910	60	Bedrock
M - 001796 - P	M	260001	606796	70	Grit
M - 001879 - P	M	260001	606879	55	Bedrock
M - 001920 - P	M	260001	606920	50	Bedrock
M - 004889 - P	M	260004	606889	40	Bedrock
M - 005928 - P	M	260005	606928	50	Resistance
M - 006816 - P	M	260006	606816	70	Resistance
M - 006898 - P	M	260006	606898	60	Bedrock
M - 008908 - P	M	260008	606908	30	Bedrock
M - 010753 - P	M	260010	606753	40	Bedrock
M - 010835 - C	M	260013	606832	25	Grit
M - 011877 - P	M	260011	606877	40	Bedrock
M - 011918 - P	M	260011	606918	25	Bedrock
M - 013886 - P	M	260013	606886	20	Bedrock
M - 015772 - P	M	260015	606772	15	Grit
M - 015855 - P	M	260015	606855	40	Resistance
M - 016896 - P	M	260016	606896	25	Bedrock
M - 018906 - P	M	260018	606906	25	Bedrock
M - 020792 - P	M	260020	606792	25	Grit
M - 020915 - P	M	260020	606915	20	Grit
M - 021874 - P	M	260021	606874	20	Bedrock
M - 023884 - P	M	260023	606884	20	Bedrock
M - 025811 - P	M	260025	606811	50	Bedrock

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
M - 025894 - P	M	260025	606894	15	Bedrock
M - 028903 - C	M	260031	606900	25	Grit
M - 029748 - P	M	260029	606748	40	Bedrock
M - 030830 - P	M	260030	606830	50	Grit
M - 030913 - P	M	260030	606913	20	Bedrock
M - 034767 - C	M	260037	606764	20	Grit
M - 035850 - P	M	260035	606850	45	Grit
M - 035970 - P	M	260035	606970	20	Bedrock
M - 038960 - P	M	260038	606960	20	Bedrock
M - 039787 - P	M	260039	606787	35	Bedrock
M - 040869 - P	M	260040	606869	50	Bedrock
M - 042951 - P	M	260042	606951	30	Bedrock
M - 044806 - P	M	260044	606806	40	Bedrock
M - 045888 - P	M	260045	606888	35	Grit
M - 048737 - P	M	260048	606737	70	Resistance
M - 049825 - P	M	260049	606825	70	Bedrock
M - 050908 - P	M	260050	606908	10	Bedrock
M - 054762 - P	M	260054	606762	60	Bedrock
M - 054845 - P	M	260054	606845	50	Bedrock
M - 056681 - P	M	260056	606681	50	Resistance
M - 057742 - P	M	260057	606742	90	Grit
M - 059782 - P	M	260059	606782	70	Bedrock
M - 059864 - P	M	260059	606864	65	Bedrock
M - 062700 - P	M	260062	606700	80	Bedrock
M - 064883 - P	M	260064	606883	80	Bedrock
M - 065748 - P	M	260065	606748	80	Bedrock
M - 068656 - P	M	260068	606656	60	Resistance
M - 069719 - P	M	260069	606719	60	Resistance
M - 069903 - P	M	260069	606903	50	Bedrock
M - 071774 - P	M	260071	606774	50	Resistance
M - 075675 - P	M	260075	606675	60	Bedrock
M - 079769 - P	M	260079	606769	100	Bedrock
M - 081694 - P	M	260081	606694	25	Grit
M - 081984 - P	M	260081	606984	45	Bedrock
M - 086975 - P	M	260086	606975	55	Bedrock
M - 087649 - P	M	260087	606649	80	Resistance
M - 088713 - C	M	260091	606709	30	Bedrock
M - 088764 - P	M	260088	606764	50	Grit
M - 091964 - P	M	260091	606964	100	Grit
M - 094668 - P	M	260094	606668	25	Bedrock
M - 094731 - P	M	260094	606731	25	Grit

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
M - 100687 - P	M	260100	606687	10	Bedrock
M - 106643 - P	M	260106	606643	20	Grit
M - 107706 - P	M	260107	606706	50	Resistance
M - 112662 - P	M	260112	606662	20	Grit
M - 113725 - P	M	260113	606725	50	Bedrock
M - 117806 - P	M	260117	606806	60	Bedrock
M - 119681 - P	M	260119	606681	65	Resistance
M - 120796 - P	M	260120	606796	50	Bedrock
M - 124787 - P	M	260124	606787	90	Bedrock
M - 125636 - P	M	260125	606636	30	Bedrock
M - 126699 - P	M	260126	606699	100	Resistance
M - 130999 - P	M	260130	606999	50	Grit
M - 131655 - C	M	260134	606652	45	Resistance
M - 134990 - P	M	260134	606990	120	Grit
M - 137611 - P	M	260137	606611	60	Resistance
M - 137980 - P	M	260137	606980	140	Grit
M - 138674 - P	M	260138	606674	40	Resistance
M - 144630 - P	M	260144	606630	50	Bedrock
M - 145693 - P	M	260145	606693	50	Bedrock
M - 149585 - P	M	260149	606585	10	Bedrock
M - 150649 - P	M	260150	606649	5	Bedrock
M - 156604 - P	M	260156	606604	60	Bedrock
M - 157667 - P	M	260157	606667	15	Grit
M - 159614 - P	M	260159	606614	50	Resistance
M - 163623 - P	M	260163	606623	40	Grit
M - 163686 - P	M	260163	606686	25	Bedrock
M - 163823 - P	M	260163	606823	30	Bedrock
M - 165601 - P	M	260165	606601	25	Bedrock
M - 166633 - P	M	260166	606633	30	Grit
M - 167814 - P	M	260167	606814	70	Bedrock
M - 168579 - P	M	260168	606579	40	Bedrock
M - 169610 - P	M	260169	606610	10	Bedrock
M - 169642 - P	M	260169	606642	25	Grit
M - 169835 - C	M	260172	606832	50	Bedrock
M - 170804 - P	M	260170	606804	80	Bedrock
M - 170825 - P	M	260170	606825	40	Bedrock
M - 171815 - P	M	260171	606815	35	Bedrock
M - 172620 - P	M	260172	606620	40	Resistance
M - 172805 - C	M	260175	606802	60	Bedrock
M - 175558 - P	M	260175	606558	60	Grit
M - 175598 - P	M	260175	606598	50	Grit

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
M - 175629 - P	M	260175	606629	40	Bedrock
M - 176661 - P	M	260176	606661	30	Bedrock
M - 178607 - P	M	260178	606607	70	Grit
M - 179354 - P	M	260179	606354	70	Bedrock
M - 179639 - P	M	260179	606639	40	Bedrock
M - 179836 - P	M	260179	606836	60	Bedrock
M - 180826 - P	M	260180	606826	60	Bedrock
M - 181817 - P	M	260181	606817	75	Bedrock
M - 182382 - P	M	260182	606382	55	Bedrock
M - 182616 - P	M	260182	606616	50	Grit
M - 182680 - P	M	260182	606680	30	Bedrock
M - 182807 - P	M	260182	606807	90	Bedrock
M - 184594 - P	M	260184	606594	80	Grit
M - 185560 - P	M	260185	606560	90	Grit
M - 185626 - P	M	260185	606626	20	Bedrock
M - 185995 - P	M	260185	606995	25	Bedrock
M - 187510 - C	M	260190	606506	90	Bedrock
M - 187572 - P	M	260187	606572	90	Bedrock
M - 188604 - P	M	260188	606604	50	Grit
M - 188635 - P	M	260188	606635	30	Bedrock
M - 189838 - P	M	260189	606838	50	Bedrock
M - 190828 - P	M	260190	606828	75	Bedrock
M - 191338 - P	M	260191	606338	100	Bedrock
M - 191613 - P	M	260191	606613	30	Resistance
M - 191818 - P	M	260191	606818	100	Bedrock
M - 192808 - P	M	260192	606808	90	Bedrock
M - 194562 - P	M	260194	606562	80	Bedrock
M - 194591 - P	M	260194	606591	25	Bedrock
M - 194623 - C	M	260197	606619	25	Grit
M - 195366 - P	M	260195	606366	100	Bedrock
M - 195654 - P	M	260195	606654	60	Bedrock
M - 196512 - P	M	260196	606512	50	Bedrock
M - 197461 - P	M	260197	606461	35	Bedrock
M - 197600 - P	M	260197	606600	80	Bedrock
M - 198395 - P	M	260198	606395	70	Grit
M - 198632 - P	M	260198	606632	50	Resistance
M - 199839 - P	M	260199	606839	40	Grit
M - 200610 - P	M	260200	606610	60	Bedrock
M - 200829 - C	M	260203	606825	35	Bedrock
M - 201673 - P	M	260201	606673	70	Resistance
M - 201819 - P	M	260201	606819	30	Bedrock

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
M - 202809 - P	M	260202	606809	30	Bedrock
M - 203323 - P	M	260203	606323	40	Bedrock
M - 204619 - P	M	260204	606619	50	Bedrock
M - 206514 - P	M	260206	606514	30	Bedrock
M - 207351 - P	M	260207	606351	20	Grit
M - 207463 - P	M	260207	606463	20	Bedrock
M - 207629 - P	M	260207	606629	50	Resistance
M - 208412 - P	M	260208	606412	120	Bedrock
M - 209251 - P	M	260209	606251	60	Bedrock
M - 210379 - P	M	260210	606379	50	Bedrock
M - 212279 - P	M	260212	606279	30	Bedrock
M - 214407 - P	M	260214	606407	60	Grit
M - 214648 - P	M	260214	606648	25	Bedrock
M - 216307 - P	M	260216	606307	40	Bedrock
M - 217465 - P	M	260217	606465	20	Bedrock
M - 218414 - P	M	260218	606414	60	Bedrock
M - 219335 - P	M	260219	606335	70	Bedrock
M - 220667 - P	M	260220	606667	30	Bedrock
M - 221235 - P	M	260221	606235	90	Bedrock
M - 223363 - P	M	260223	606363	40	Bedrock
M - 224263 - P	M	260224	606263	60	Bedrock
M - 226391 - C	M	260229	606388	30	Grit
M - 227416 - P	M	260227	606416	15	Bedrock
M - 228291 - P	M	260228	606291	70	Bedrock
M - 231216 - P	M	260231	606216	150	Grit
M - 231255 - P	M	260231	606255	70	Bedrock
M - 231319 - C	M	260234	606316	85	Bedrock
M - 232269 - P	M	260232	606269	40	Bedrock
M - 233219 - P	M	260233	606219	135	Grit
M - 235347 - P	M	260235	606347	40	Bedrock
M - 236166 - P	M	260236	606166	40	Bedrock
M - 237247 - P	M	260237	606247	90	Bedrock
M - 238261 - P	M	260238	606261	30	Bedrock
M - 238375 - P	M	260238	606375	20	Bedrock
M - 240275 - P	M	260240	606275	50	Bedrock
M - 241217 - P	M	260241	606217	135	Bedrock
M - 242403 - P	M	260242	606403	50	Grit
M - 243239 - P	M	260243	606239	70	Resistance
M - 244303 - P	M	260244	606303	70	Bedrock
M - 245253 - P	M	260245	606253	40	Bedrock
M - 246167 - P	M	260246	606167	15	Grit

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
M - 246267 - P	M	260246	606267	40	Bedrock
M - 247331 - P	M	260247	606331	70	Bedrock
M - 248281 - P	M	260248	606281	30	Bedrock
M - 249231 - P	M	260249	606231	30	Bedrock
M - 251218 - P	M	260251	606218	70	Bedrock
M - 251245 - P	M	260251	606245	60	Bedrock
M - 251359 - P	M	260251	606359	30	Bedrock
M - 252119 - P	M	260252	606119	50	Bedrock
M - 253259 - P	M	260253	606259	45	Bedrock
M - 254274 - P	M	260254	606274	25	Bedrock
M - 254388 - P	M	260254	606388	50	Resistance
M - 256168 - P	M	260256	606168	80	Grit
M - 256288 - P	M	260256	606288	45	Bedrock
M - 257238 - P	M	260257	606238	20	Bedrock
M - 259252 - P	M	260259	606252	40	Grit
M - 260266 - P	M	260260	606266	20	Bedrock
M - 260316 - P	M	260260	606316	50	Bedrock
M - 262280 - P	M	260262	606280	20	Bedrock
M - 263120 - P	M	260263	606120	80	Bedrock
M - 263344 - P	M	260263	606344	25	Bedrock
M - 264998 - P	M	260264	606998	90	Grit
M - 265244 - P	M	260265	606244	5	Bedrock
M - 267071 - P	M	260267	606071	50	Bedrock
M - 267258 - C	M	260270	606254	15	Resistance
M - 268272 - P	M	260268	606272	30	Bedrock
M - 272300 - P	M	260272	606300	50	Bedrock
M - 273121 - P	M	260273	606121	70	Bedrock
M - 273250 - P	M	260273	606250	10	Bedrock
M - 274022 - P	M	260274	606022	70	Bedrock
M - 274264 - P	M	260274	606264	20	Bedrock
M - 275328 - P	M	260275	606328	40	Bedrock
M - 277072 - P	M	260277	606072	80	Bedrock
M - 281256 - P	M	260281	606256	40	Bedrock
M - 284023 - P	M	260284	606023	40	Bedrock
M - 284284 - P	M	260284	606284	30	Grit
M - 287074 - C	M	260290	606070	100	Bedrock
M - 288312 - P	M	260288	606312	15	Bedrock
M - 294024 - P	M	260294	606024	50	Grit
M - 296268 - P	M	260296	606268	50	Bedrock
M - 300296 - P	M	260300	606296	20	Bedrock
M - 312281 - P	M	260312	606281	20	Bedrock

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
M - 347997 - P	M	260347	606997	50	Bedrock
M - 366991 - P	M	260366	606991	50	Bedrock
M - 386986 - P	M	260386	606986	50	Bedrock
M - 485066 - P	M	260485	606066	25	Bedrock
M - 487038 - P	M	260487	606038	50	Bedrock
M - 490009 - P	M	260490	606009	60	Grit
M - 497081 - P	M	260497	606081	10	Grit
M - 500053 - P	M	260500	606053	10	Grit
M - 503025 - P	M	260503	606025	10	Bedrock
M - 506060 - P	M	260506	606060	15	Bedrock
M - 508046 - P	M	260508	606046	5	Bedrock
M - 510097 - P	M	260510	606097	50	Bedrock
M - 513068 - P	M	260513	606068	10	Bedrock
M - 514054 - P	M	260514	606054	5	Grit
M - 516040 - P	M	260516	606040	10	Grit
M - 518012 - P	M	260518	606012	5	Grit
M - 519076 - P	M	260519	606076	20	Bedrock
M - 521062 - P	M	260521	606062	5	Grit
M - 522048 - P	M	260522	606048	10	Bedrock
M - 523034 - P	M	260523	606034	10	Grit
M - 525084 - P	M	260525	606084	10	Grit
M - 527070 - P	M	260527	606070	10	Bedrock
M - 528056 - C	M	260531	606052	15	Bedrock
M - 530042 - P	M	260530	606042	15	Bedrock
M - 531028 - P	M	260531	606028	20	Bedrock
M - 533078 - P	M	260533	606078	20	Bedrock
M - 535063 - P	M	260535	606063	20	Bedrock
M - 536049 - P	M	260536	606049	10	Grit
M - 538035 - P	M	260538	606035	10	Bedrock
M - 541071 - P	M	260541	606071	20	Bedrock
M - 542057 - P	M	260542	606057	25	Bedrock
M - 544043 - P	M	260544	606043	20	Bedrock
M - 546015 - P	M	260546	606015	20	Grit
M - 549065 - P	M	260549	606065	30	Bedrock
M - 550051 - P	M	260550	606051	35	Bedrock
M - 556059 - P	M	260556	606059	50	Bedrock
M - 559030 - P	M	260559	606030	20	Bedrock
M - 562002 - P	M	260562	606002	100	Grit
M - 572046 - P	M	260572	606046	50	Bedrock
M - 575018 - P	M	260575	606018	100	Grit
M - 587033 - P	M	260587	606033	40	Bedrock

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
N - 155414 - P	N	261155	606414	30	Bedrock
N - 162432 - P	N	261162	606432	10	Bedrock
N - 169451 - P	N	261169	606451	10	Bedrock
N - 172719 - P	N	261172	606719	50	Bedrock
N - 174407 - P	N	261174	606407	60	Bedrock
N - 175699 - P	N	261175	606699	50	Bedrock
N - 176470 - P	N	261176	606470	5	Bedrock
N - 177655 - P	N	261177	606655	30	Bedrock
N - 178840 - P	N	261178	606840	40	Bedrock
N - 179533 - P	N	261179	606533	50	Grit
N - 180820 - P	N	261180	606820	20	Bedrock
N - 181426 - P	N	261181	606426	40	Bedrock
N - 182800 - P	N	261182	606800	10	Bedrock
N - 183489 - P	N	261183	606489	30	Grit
N - 185780 - P	N	261185	606780	40	Bedrock
N - 186552 - P	N	261186	606552	75	Bedrock
N - 186602 - P	N	261186	606602	40	Bedrock
N - 187654 - P	N	261187	606654	30	Bedrock
N - 187761 - P	N	261187	606761	30	Bedrock
N - 188444 - P	N	261188	606444	30	Bedrock
N - 190507 - P	N	261190	606507	60	Grit
N - 190741 - P	N	261190	606741	30	Grit
N - 192721 - P	N	261192	606721	25	Bedrock
N - 193400 - P	N	261193	606400	70	Bedrock
N - 195463 - P	N	261195	606463	40	Grit
N - 195605 - P	N	261195	606605	5	Bedrock
N - 195701 - C	N	261198	606698	30	Bedrock
N - 196409 - P	N	261196	606409	60	Bedrock
N - 197526 - P	N	261197	606526	60	Bedrock
N - 197654 - P	N	261197	606654	30	Bedrock
N - 197681 - P	N	261197	606681	30	Grit
N - 197842 - P	N	261197	606842	30	Bedrock
N - 200418 - P	N	261200	606418	40	Bedrock
N - 200823 - P	N	261200	606823	30	Bedrock
N - 202396 - P	N	261202	606396	90	Bedrock
N - 202482 - P	N	261202	606482	20	Bedrock
N - 202803 - P	N	261202	606803	20	Bedrock
N - 203428 - P	N	261203	606428	80	Bedrock
N - 204545 - C	N	261207	606541	40	Bedrock
N - 205607 - C	N	261208	606604	20	Bedrock
N - 205783 - P	N	261205	606783	40	Bedrock

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
N - 206406 - P	N	261206	606406	70	Grit
N - 207437 - P	N	261207	606437	40	Bedrock
N - 207763 - P	N	261207	606763	40	Bedrock
N - 209415 - P	N	261209	606415	120	Grit
N - 209500 - P	N	261209	606500	50	Grit
N - 210743 - P	N	261210	606743	35	Bedrock
N - 211564 - P	N	261211	606564	30	Bedrock
N - 212393 - C	N	261215	606389	50	Bedrock
N - 212723 - P	N	261212	606723	30	Bedrock
N - 213424 - P	N	261213	606424	80	Grit
N - 214456 - P	N	261214	606456	30	Bedrock
N - 214704 - P	N	261214	606704	20	Bedrock
N - 215402 - P	N	261215	606402	80	Grit
N - 216434 - P	N	261216	606434	40	Bedrock
N - 216519 - P	N	261216	606519	30	Grit
N - 217684 - P	N	261217	606684	30	Bedrock
N - 217845 - P	N	261217	606845	20	Bedrock
N - 218411 - P	N	261218	606411	80	Resistance
N - 219835 - P	N	261219	606835	10	Bedrock
N - 220825 - P	N	261220	606825	10	Bedrock
N - 221389 - P	N	261221	606389	50	Grit
N - 221475 - C	N	261224	606471	20	Bedrock
N - 221815 - P	N	261221	606815	20	Bedrock
N - 222421 - P	N	261222	606421	60	Bedrock
N - 222805 - P	N	261222	606805	10	Bedrock
N - 223538 - P	N	261223	606538	10	Bedrock
N - 224399 - P	N	261224	606399	80	Bedrock
N - 225430 - P	N	261225	606430	70	Bedrock
N - 225785 - P	N	261225	606785	60	Grit
N - 227766 - C	N	261230	606762	40	Grit
N - 227846 - P	N	261227	606846	20	Bedrock
N - 228408 - P	N	261228	606408	60	Grit
N - 228493 - P	N	261228	606493	30	Grit
N - 228836 - P	N	261228	606836	30	Bedrock
N - 229746 - P	N	261229	606746	60	Bedrock
N - 230386 - P	N	261230	606386	35	Grit
N - 230557 - P	N	261230	606557	30	Bedrock
N - 230826 - C	N	261233	606823	30	Bedrock
N - 231417 - P	N	261231	606417	30	Bedrock
N - 231816 - P	N	261231	606816	15	Bedrock
N - 232726 - P	N	261232	606726	30	Bedrock

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
N - 232807 - P	N	261232	606807	40	Bedrock
N - 233449 - P	N	261233	606449	70	Bedrock
N - 234395 - P	N	261234	606395	20	Bedrock
N - 234706 - P	N	261234	606706	30	Bedrock
N - 235427 - P	N	261235	606427	50	Grit
N - 235512 - P	N	261235	606512	20	Bedrock
N - 237405 - P	N	261237	606405	50	Bedrock
N - 237686 - P	N	261237	606686	40	Bedrock
N - 237847 - P	N	261237	606847	40	Bedrock
N - 238837 - P	N	261238	606837	40	Bedrock
N - 240468 - P	N	261240	606468	20	Bedrock
N - 240828 - P	N	261240	606828	30	Bedrock
N - 241414 - P	N	261241	606414	50	Bedrock
N - 241818 - P	N	261241	606818	20	Bedrock
N - 242531 - P	N	261242	606531	30	Bedrock
N - 242808 - P	N	261242	606808	30	Bedrock
N - 244423 - P	N	261244	606423	25	Bedrock
N - 244788 - P	N	261244	606788	55	Bedrock
N - 246486 - P	N	261246	606486	25	Grit
N - 247768 - P	N	261247	606768	30	Bedrock
N - 247848 - P	N	261247	606848	40	Bedrock
N - 248839 - P	N	261248	606839	40	Bedrock
N - 249379 - P	N	261249	606379	30	Bedrock
N - 249550 - P	N	261249	606550	40	Grit
N - 249748 - P	N	261249	606748	40	Bedrock
N - 249829 - P	N	261249	606829	35	Bedrock
N - 251442 - P	N	261251	606442	40	Grit
N - 251819 - P	N	261251	606819	10	Bedrock
N - 252728 - P	N	261252	606728	20	Grit
N - 252809 - P	N	261252	606809	15	Bedrock
N - 253505 - P	N	261253	606505	30	Bedrock
N - 254708 - P	N	261254	606708	40	Grit
N - 256398 - P	N	261256	606398	30	Grit
N - 257459 - P	N	261257	606459	60	Grit
N - 257850 - P	N	261257	606850	20	Bedrock
N - 258840 - P	N	261258	606840	35	Bedrock
N - 259830 - P	N	261259	606830	50	Bedrock
N - 260524 - P	N	261260	606524	25	Bedrock
N - 260820 - P	N	261260	606820	60	Bedrock
N - 262810 - P	N	261262	606810	60	Bedrock
N - 263416 - P	N	261263	606416	70	Bedrock

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
N - 264790 - P	N	261264	606790	110	Bedrock
N - 266464 - P	N	261266	606464	30	Bedrock
N - 269896 - P	N	261269	606896	50	Resistance
N - 272946 - P	N	261272	606946	50	Resistance
N - 275468 - P	N	261275	606468	40	Bedrock
N - 276996 - P	N	261276	606996	40	Resistance
N - 277852 - P	N	261277	606852	100	Bedrock
N - 279415 - C	N	261282	606411	55	Bedrock
N - 279832 - P	N	261279	606832	20	Bedrock
N - 279896 - P	N	261279	606896	80	Resistance
N - 282813 - P	N	261282	606813	30	Bedrock
N - 282945 - P	N	261282	606945	70	Resistance
N - 286995 - P	N	261286	606995	40	Resistance
N - 288419 - P	N	261288	606419	25	Grit
N - 289895 - P	N	261289	606895	90	Resistance
N - 292945 - C	N	261295	606941	10	Resistance
N - 296995 - P	N	261296	606995	20	Bedrock
N - 297424 - P	N	261297	606424	30	Grit
N - 302370 - P	N	261302	606370	70	Resistance
N - 311374 - P	N	261311	606374	80	Resistance
N - 320379 - P	N	261320	606379	110	Grit
N - 324325 - P	N	261324	606325	70	Bedrock
N - 333330 - P	N	261333	606330	110	Bedrock
N - 342334 - P	N	261342	606334	80	Bedrock
N - 347281 - P	N	261347	606281	40	Bedrock
N - 356285 - P	N	261356	606285	40	Bedrock
N - 364332 - P	N	261364	606332	20	Bedrock
N - 365290 - P	N	261365	606290	10	Bedrock
N - 366342 - P	N	261366	606342	50	Bedrock
N - 369236 - P	N	261369	606236	0	Bedrock
N - 369352 - P	N	261369	606352	40	Bedrock
N - 370046 - P	N	261370	606046	40	Grit
N - 378240 - P	N	261378	606240	0	Bedrock
N - 380046 - P	N	261380	606046	50	Bedrock
N - 382097 - P	N	261382	606097	50	Bedrock
N - 385191 - P	N	261385	606191	10	Bedrock
N - 387245 - C	N	261390	606241	20	Bedrock
N - 390046 - C	N	261393	606043	55	Bedrock
N - 390143 - P	N	261390	606143	120	Bedrock
N - 392095 - P	N	261392	606095	60	Bedrock
N - 395193 - P	N	261395	606193	5	Bedrock

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
N - 400144 - P	N	261400	606144	110	Bedrock
N - 401093 - P	N	261401	606093	50	Bedrock
N - 405196 - P	N	261405	606196	10	Bedrock
N - 410144 - P	N	261410	606144	100	Bedrock
N - 416349 - C	N	261419	606346	0	Bedrock
N - 417329 - P	N	261417	606329	0	Bedrock
N - 417339 - P	N	261417	606339	0	Bedrock
Q - 000576 - P	Q	259000	605576	10	Bedrock
Q - 002604 - P	Q	259002	605604	10	Bedrock
Q - 014561 - P	Q	259014	605561	60	Bedrock
Q - 015589 - P	Q	259015	605589	10	Bedrock
Q - 016617 - P	Q	259016	605617	10	Bedrock
Q - 028546 - P	Q	259028	605546	20	Bedrock
Q - 029575 - P	Q	259029	605575	25	Bedrock
Q - 030603 - P	Q	259030	605603	20	Bedrock
Q - 031631 - P	Q	259031	605631	30	Bedrock
Q - 042560 - C	Q	259045	605556	20	Resistance
Q - 043588 - P	Q	259043	605588	30	Grit
Q - 044616 - P	Q	259044	605616	20	Bedrock
Q - 046645 - P	Q	259046	605645	15	Bedrock
Q - 047673 - P	Q	259047	605673	40	Bedrock
Q - 048701 - P	Q	259048	605701	70	Bedrock
Q - 056545 - P	Q	259056	605545	40	Bedrock
Q - 057574 - P	Q	259057	605574	30	Bedrock
Q - 058602 - P	Q	259058	605602	35	Grit
Q - 059630 - C	Q	259062	605627	30	Bedrock
Q - 060658 - P	Q	259060	605658	30	Bedrock
Q - 061686 - P	Q	259061	605686	100	Bedrock
Q - 062715 - P	Q	259062	605715	35	Bedrock
Q - 068679 - P	Q	259068	605679	40	Bedrock
Q - 068693 - P	Q	259068	605693	55	Bedrock
Q - 070736 - P	Q	259070	605736	25	Bedrock
Q - 071559 - P	Q	259071	605559	25	Bedrock
Q - 071786 - P	Q	259071	605786	40	Bedrock
Q - 072587 - P	Q	259072	605587	40	Bedrock
Q - 072920 - P	Q	259072	605920	40	Bedrock
Q - 073615 - P	Q	259073	605615	40	Bedrock
Q - 073836 - P	Q	259073	605836	30	Grit
Q - 074644 - P	Q	259074	605644	70	Bedrock
Q - 075672 - P	Q	259075	605672	70	Bedrock
Q - 075686 - P	Q	259075	605686	70	Bedrock

Probe ID	Map Grid	Easting	Northing	Depth (cm)	Substrate
Q - 076700 - P	Q	259076	605700	70	Bedrock
Q - 076900 - P	Q	259076	605900	40	Bedrock
Q - 077728 - P	Q	259077	605728	60	Bedrock
Q - 080735 - P	Q	259080	605735	90	Grit
Q - 081785 - C	Q	259084	605782	50	Bedrock
Q - 081884 - P	Q	259081	605884	15	Grit
Q - 081983 - P	Q	259081	605983	80	Resistance
Q - 082664 - P	Q	259082	605664	30	Resistance
Q - 082679 - P	Q	259082	605679	80	Bedrock
Q - 083693 - P	Q	259083	605693	60	Bedrock
Q - 083707 - P	Q	259083	605707	80	Bedrock
Q - 083835 - P	Q	259083	605835	50	Bedrock
Q - 085963 - P	Q	259085	605963	50	Resistance
Q - 086601 - P	Q	259086	605601	40	Bedrock
Q - 087629 - P	Q	259087	605629	40	Bedrock
Q - 088943 - P	Q	259088	605943	90	Bedrock
Q - 089657 - P	Q	259089	605657	25	Bedrock
Q - 089671 - P	Q	259089	605671	90	Bedrock
Q - 090686 - P	Q	259090	605686	110	Resistance
Q - 090700 - C	Q	259093	605696	75	Bedrock
Q - 090714 - P	Q	259090	605714	150	Bedrock
Q - 090735 - P	Q	259090	605735	90	Grit
Q - 091785 - P	Q	259091	605785	90	Bedrock
Q - 091881 - P	Q	259091	605881	35	Grit
Q - 092924 - P	Q	259092	605924	30	Bedrock
Q - 093835 - P	Q	259093	605835	40	Grit
Q - 095904 - P	Q	259095	605904	70	Bedrock
Q - 096664 - P	Q	259096	605664	55	Grit
Q - 096678 - P	Q	259096	605678	135	Bedrock
Q - 097692 - P	Q	259097	605692	120	Grit
Q - 097707 - P	Q	259097	605707	150	Resistance
Q - 099884 - P	Q	259099	605884	40	Grit
Q - 101614 - P	Q	259101	605614	30	Bedrock
Q - 101879 - P	Q	259101	605879	40	Bedrock
Q - 101986 - P	Q	259101	605986	80	Bedrock
Q - 102643 - P	Q	259102	605643	30	Bedrock
Q - 103671 - P	Q	259103	605671	40	Grit
Q - 104685 - P	Q	259104	605685	90	Bedrock
Q - 104699 - P	Q	259104	605699	110	Bedrock
Q - 105966 - P	Q	259105	605966	75	Bedrock
Q - 108947 - P	Q	259108	605947	90	Grit