# ARECLEOCH WINDFARM EXTENSION

## Phase 2 Peat Depth and Coring Survey

## Technical Appendix 10.7

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## 1. INTRODUCTION

MacArthur Green was commissioned by ScottishPower Renewables to undertake a peat depth and coring survey to gather data on the nature of peat deposit within the area of the proposed Arecleoch Windfarm Extension (hereafter referred to as the 'proposed Development'), which is located approximately 3 km south west of Barrhill, South Ayrshire.

This report has been produced by MacArthur Green in accordance with Scottish Environmental Protection Agency (SEPA) and Scottish Natural Heritage (SNH) guidelines. Those contributing to the preparation of the technical appendix have undergraduate and/or postgraduate degrees in relevant subjects, have professional experience, and hold professional memberships relating to their field of expertise (e.g. Chartered Institute of Ecology and Environmental Management (CIEEM) or Association of Geographic Information (AGI)).

Survey methods follow current guidance: Scottish Government *et al*. (2017), and Scottish Renewables and Scottish Environment Protection Agency (SEPA) (2012). Results of the Phase 1 peat surveys and blanket mire assessment are reported in Technical Appendix 10.6.

## 2. AIMS AND OBJECTIVES

The Phase 2 peat survey and this technical report have the following aims and objectives:

**Aim 1 Gather additional high-resolution peat depth data around proposed turbine and infrastructure locations.**

- Objective 1.1 Further inform the layout of the proposed Development's infrastructure to help reduce impacts associated with peatland habitats; and
- Objective 1.2 Provide peat depth data to inform the impact of the proposed Development on carbon losses arising from disturbance to peat-based habitats.

**Aim 2 Present data on the nature of peat deposits at key infrastructure locations.**

- Objective 2.1 Provide data to inform a Peat Management Plan (PMP).
- Objective 2.2 Assess the accuracy of peat depth probe samples.

## 3. THE PEAT STUDY AREA

The peat depth and coring study area ('peat study area') reaches an elevation of 229 metres (m) above sea level (a.s.l.), within an area of commercial forestry to the east of the existing Arecleoch Windfarm.

The majority of the peat study area is commercial conifer plantation; however, some areas of mire and heath are present within the Site along forest rides and watercourses (see Technical Appendix 8.1). For a full description of the Site, see Chapter 2: Site Description and Design Evolution.

## 4. METHODOLOGY

The Phase 2 peat study area was surveyed by MacArthur Green on the following dates:

- 11 to 15 February 2019 inclusive; and
- 17 February.

Surveys followed best practice guidance with regard to survey for developments on peatland (Scottish Government *et al*., 2017 and Scottish Renewables & SEPA, 2012).

Methods employed for peat depth probing and peat coring are detailed in Sections 4.1 and 4.2 below.

### 4.1 Peat Depth Analysis

The first phase of peat depth probing and analysis (Phase 1 peat survey) was carried out on a 100 m² systematic grid covering all areas within the Phase 1 peat study area (see Technical Appendix 10.6 and associated Figures). This peat depth data and other constraints were used to inform the layout of the proposed Development, including the turbine locations, substation, borrow pits, access track alignment and compounds.

The second phase of intensive peat probing (Phase 2 peat survey) supplements the original data and gathers further high-resolution data for the Site.

The following methods were employed:

1. Phase 2 peat depth probing locations are shown in Figure 10.7-1 within this Technical Appendix. The alignment of proposed new access tracks was sampled at 50 m intervals, with measurements taken on the access track centreline and points 10 m perpendicular to the centreline on either side of the proposed track. At proposed infrastructure locations (turbine bases, temporary construction compounds (TCC), substations and potential borrow pits), samples were taken at 10 m intervals along crosshairs from the central point of the infrastructure feature.
2. Geographic Information System (GIS) was used to generate the sampling locations.
3. 922 Phase 2 sample locations were generated in total; however, only 886 were probed due to some samples falling on existing tracks or existing borrow pits with no substrates present.
4. Sampling locations were downloaded on to hand-held Global Positioning System (GPS) units, which were used to locate sample points in the field.
5. A custom made collapsible solid steel peat depth probe was used at each sample point to establish peat depth. Full depth recordings were taken. (N.B. As this is a peat assessment, only peat depths were recorded; where the sample point fell on mineral soil/rock the probe depth was recorded as zero).
6. Peat depth data were modelled using 'Inverse Distance Weighted' interpolation in ArcMap 10.6©. This interpolation method is best suited to situations where the density of samples is great enough to capture the local surface variation needed for the analysis (Childs, 2004).
7. A depth model was generated using the following categories of peat depth:

   0, 0.01-0.50 m; 0.51-1.0 m, 1.01-2.00 m and 1 m intervals thereafter.

### 4.2 Peat Coring

Peat coring analysis methods follow those detailed within Hobbs (1986: see Hobbs Appendix A p.78-79) and Hodgson (1974).

1. Peat cores were taken at seven infrastructure locations, with coring sample locations determined from a review of the proposed locations of infrastructure within the peat study area and analysis of peat depths from the Phase 1 peat survey. Additionally, a peat depth probe was taken adjacent to the core sample. Coring locations are detailed in Table 4.2.1 below and shown in Figure 10.7-1 within this Technical Appendix.

2. A 'Russian Corer' (volume 0.5 litres (l)) was used to take peat cores.
3. At each core sample location, the full peat depth profile was sampled, which involved taking 50 cm length cores from the surface layer through to the basal layer (where peat meets the underlying substrata).
4. For each sample core, the following information was collected in the field:
    a. A photograph of each 50 cm core;
    b. Depth of the acrotelm;
    c. Degree of humification (as per Hodgson, 1974):
        i. Amorphous Peats - peats with fibre <1/3rd volume when not rubbed - reduces to <1/10 by rubbing, (optional - yields soluble dark humidified matter).
        ii. Fibrous Peats - peats with fibre >2/3rds volume when not rubbed - reduces to no less than >4/10 by rubbing, (optional - yields little soluble dark humidified matter).
        iii. 'Intermediate' if assessment falls between amorphous and fibrous.
    d. Degree of humification using the Von Post Scale (refer to Annex 2);
    e. Fine Fibre Content: F0 (none), F1, F2, F3 (very high);
    f. Coarse Fibre Content: R0 (none), R1, R2, R3 (very high);
    g. Water Content: B1 (dry) to B5 (very wet); and
    h. Type of substrate underlying the peat (where this could be determined).

**Table 4.2.1 Peat core sample numbers, locations and corresponding infrastructure**

| Sample Core ID | Number of 50 cm cores sampled | X | Y | Infrastructure |
|---|---|---|---|---|
| B055 | 1 | 220711 | 580590 | Substation |
| B093 | 1 | 219904 | 580841 | Borrow Pit 5 |
| T059 | 1 | 219038 | 579261 | Turbine 11 |
| T117 | 9 | 219985 | 580410 | Turbine 9 |
| T204 | 1 | 219774 | 581117 | Turbine 1 |
| T262 | 2 | 218078 | 581522 | Turbine 5 |
| T320 | 2 | 218758 | 581958 | Turbine 3 |

## 5. RESULTS

The results are presented as follows:

- Section 5.1 presents the results of the peat depth probing;
- Section 5.2 provides a comparison of probed and cored (true) peat depths; and
- Section 5.3 presents the results of each sample core. The raw data is presented in Annex 1 and core sample photographs are presented in Annex 3.

### 5.1 Peat Depth Analysis

Figure 10.7-2 within this Technical Appendix shows the specific peat depth class at each sample location and Figure 10.7-3 within this Technical Appendix illustrates the results of the updated peat depth modelling. The peat depth modelling figure is based upon 1768 sample peat probes (882 in Phase 1 and 886 in Phase 2). Figure 10.7-3 is based on GIS data interpolation and therefore the peat depth boundaries are to a degree indicative. As such, they cannot be taken as definite boundaries, as true peat depths 'in the field' may vary to a degree around these interpolated boundaries. During the Phase 2 peat survey, the greatest depth recorded was 6.15 m. The accuracy of peat depth probes is detailed in Section 5.2 below.

Following the Phase 2 surveys and based on the results of the peat depth interpolation in Figure 10.7-3 within this Technical Appendix some infrastructure elements were microsited relatively short distances to avoid areas of deep peat, therefore some Phase 2 probe locations appear offset in Figures 10.7-2, however the resolution of probes in these areas was deemed sufficient to meet the aims and objectives of the survey.

### 5.2 Accuracy of Peat Depth Probes

At each core sample location, a peat depth probe was taken adjacent to the core sample to compare the probed depth against the true depth determined by measuring the depth of material retained in the core sample. To ensure the full depth of peat is sampled, a core is extracted that confirms the peat/substratum boundary has been reached. This approach allows a relative assessment of the accuracy of the peat depth probing. Peat was present at all seven sample locations. The results are presented in Table 5.2.1 below.

**Table 5.2.1 Difference between probed and true (cored) depth**

| Sample Core ID | Probed Depth (cm) | Cored Depth (cm) | Difference (Probed - Cored) | Infrastructure |
|---|---|---|---|---|
| B055 | 25 | 25 | 0 | Substation |
| B093 | 42 | 36 | 6 | Borrow Pit 5 |
| T059 | 52 | 44 | 8 | Turbine 11 |
| T117 | 464 | 460 | 4 | Turbine 9 |
| T204 | 49 | 46 | 3 | Turbine 1 |
| T262 | 87 | 66 | 21 | Turbine 5 |
| T320 | 79 | 63 | 16 | Turbine 3 |

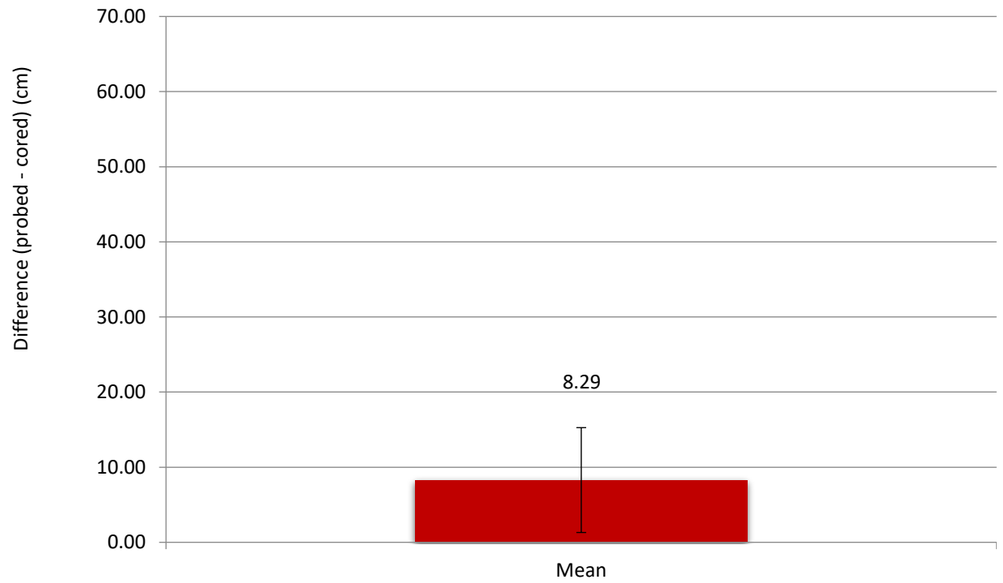


**Chart 5.2.1 Difference between probed and cored (true) peat depth**

**Table 5.2.2 Descriptive Statistics**

| Mean | Standard Error | 95% Confidence Interval | 95% CL Lower | 95% CL Upper | Precision |
|---|---|---|---|---|---|
| 8.29 | 2.85 | 6.98 | 1.31 | 15.26 | 84.20 |

Chart 5.2.1 above shows the mean difference between the probed and cored (true) peat depths from seven sample locations. Additional descriptive statistics from the combined seven locations are shown in Table 5.2.2. The following considerations are highlighted:

- Probed peat depths overestimated cored (true) peat depths by an average of 8.29 cm, with a confidence interval of 6.98 cm, indicating a slight bias with regards to overestimating the peat depths; and
- The sample point locations indicated a varying degree of difference between probed and cored depths. Substrates underlying the peat varied, and the composition of the underlying substrates generally affected the measure of deviation. Dense layers of peat or gravel/till (see Annexes 1 and 3) indicated the greatest difference between the probed and cored data. As the design of the peat probe is narrower than the Russian corer, penetrating beyond the peat layer into the gravel/till or into dense peat layers is easier for the probe. As there was a recorded mixture of underlaying substrates within the Site; it is assumed that the probed data will give the impression of deeper peat than exists in particular areas.

## 5.3 Core Sample Results

Sections 5.3.1 to 5.3.12 below present the information of the key variables recorded on the nature of peat deposits within the peat study area from the coring survey. Annex 1 presents the results for each of the variables from all the core samples and Annex 3 presents the photographs of each subsample taken. The cores from all seven core sample locations were sent to the laboratory for further analysis; however, all the test variables could not be accurately determined by the laboratory from samples B055, B093, T262b and T320b. As such, these have been removed from the data analysis.

### *5.3.1 Depth of Acrotelm*

The catotelm and acrotelm represent two distinct layers within undisturbed peat that control the hydrological regime. The catotelm is the bottom layer of peat that is mostly below the water table. The acrotelm overlies the catotelm and is the 'living' layer in which most water table fluctuations occur. The thickness of the acrotelm usually varies up to around 50 cm, but it largely depends upon the habitat. Anaerobic and aerobic conditions alternate periodically with the fluctuation of the water table, favouring more rapid microbial activity than in the catotelm. The acrotelm consists of the living parts of mosses and dead and poorly decomposed plant material. It has a very loose structure that can contain and release large quantities of water in a manner that limits variations of the water table in peat bogs (Quinty & Rochefort, 2003).

Acrotelm was recorded at only one sample location, with the remaining six samples locations indicating no discernible acrotelm due to the expanse and effects of commercial conifer plantation. Sample T059 was recorded as having an acrotelm of just 1 cm, with further locations showing disturbed ground from tree felling or a conifer needle layer.

However, it is recommended that for the purposes of construction and subsequent reinstatement, that where a sufficient peat depth exists, the top 0.5 m of material should be treated as acrotelm. This approach would allow excavation of intact turves for reinstatement purposes where they are present, which would in turn facilitate quicker regeneration of disturbed areas. Even if little vegetation is present within this top layer it should still be treated as acrotelmic material as it will contain a seedbank, particularly in open habitats, which would aid re-vegetation of reinstatement areas.

### *5.3.2 Degree of Humification*

The degree of humification was recorded in the field, in accordance with the methods discussed in Section 4.2 above; with each 0.5 m subsample being categorised as either fibrous, intermediate, or amorphous peat. Five core samples that fell within conifer plantation indicated the effects of humification due to forestry i.e. disturbance and drainage from forestry practices causing aeration and aerobic decomposition of the upper peat horizon present. One sample (B055) had its entire peat profile, from the surface to the substratum, completely humified due to forestry. As a result of such forestry effects, B055 has been removed from the below analysis. Of the four sample cores indicating partial humification, layers beneath the humified layer were intact and lesser disturbed peats; these samples are included in the analysis below, as the various peat property tests could still be performed using the non-humified peat layers.

From the seven sample cores taken, there were a total of 17 separate 0.5 litre subsamples extracted and analysed; however, note, nine of these subsamples was from a single deep core at Turbine 9 and may create some bias in certain result parameters (sample T117, see Table 4.2.1). The results are summarised below.

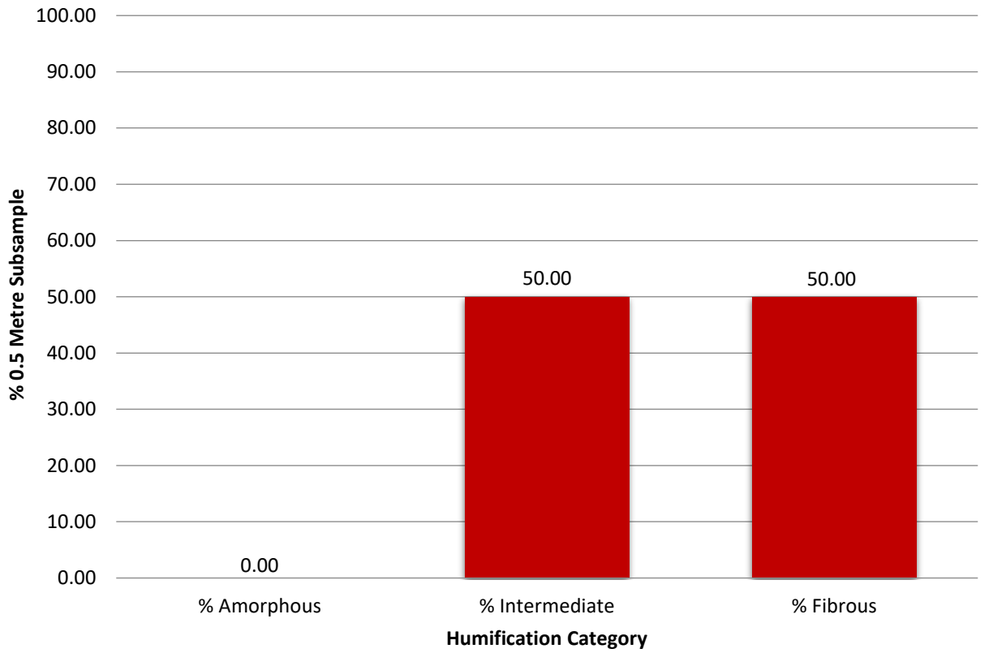


**Chart 5.3.2, Degree of humification: % of 0.5 metre subsamples**

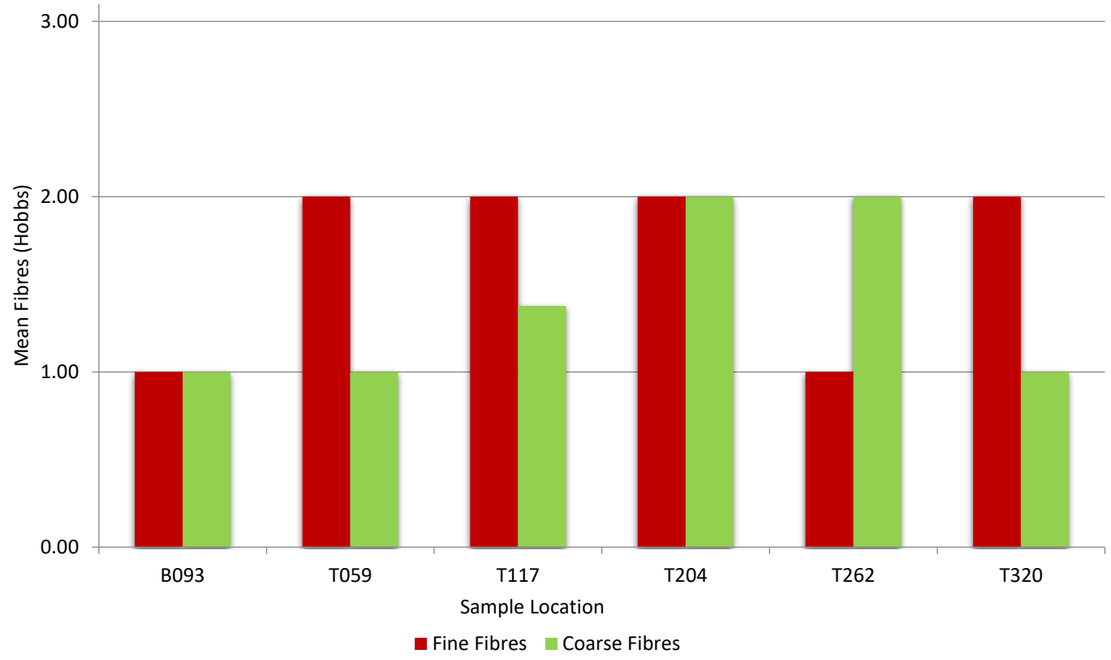


**Chart 5.3.3.1, Levels of Coarse & Fine Fibres: % 0.5 metre subsamples**

Chart 5.3.2 above shows the degree of humification, in percentage of 0.5 m subsamples, for six sample locations. The following considerations are highlighted:

- 0 % of peat from the 0.5 m subsamples was amorphous in nature;
- 50 % of the peat from the 0.5 m subsamples (n = 7) was intermediate in nature;
- 50 % of the peat within 0.5 m subsamples (n = 7) was fibrous in nature; and
- The above chart would indicate that the peat across the peat study area are equally fibrous and intermediate in nature. However, the data within Annex 1 confirms that only one sample location (T117) out of the six indicated intermediate properties, all other core locations recorded fibrous peat. In addition, not all of the sub-samples of T117 were intermediate, as the upper horizons were assessed as having fibrous properties. As such, interpretation of the data suggests that the peats across the peat study area are generally fibrous in nature and not well humified, however, intermediate peat indicates a probable degree of humification within deep peat areas.

### *5.3.3 Fibrous Content*

The levels of coarse and fine fibres within the peat were ascertained in the field according to the Hobbs scale (see Section 4.2). The results are presented below.

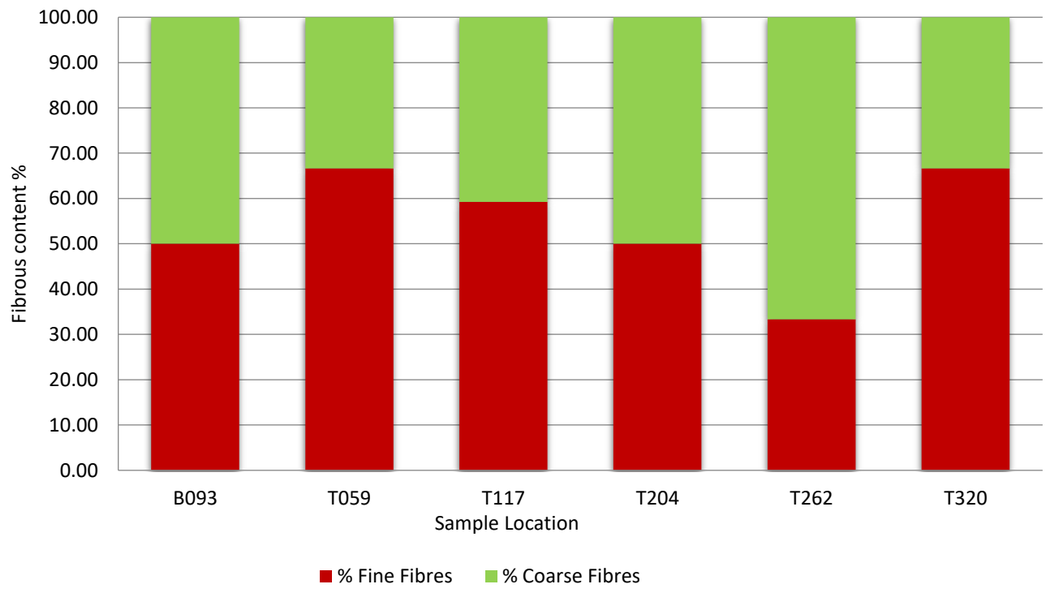


**Chart 5.3.3.2, Fibrous Content : % 0.5 metre subsamples**

Chart 5.3.3.1 above shows the level of coarse and fine fibres (using the Hobbs scale) present in seven core locations. Chart 5.3.3.2 above shows the percentage of fibrous content for fine and coarse fibres that were present in each of the six sample locations. The following considerations are highlighted:

- Four samples were assessed as having moderate fine fibre content (F2) according to the Hobbs scale, with two samples having a low fine fibre content (F1);
- Two samples were assessed as having moderate coarse fibre content (R2) according to the Hobbs scale. Sample T117 was scored as having a low to moderate fibre content (between R1 and R2), according to the Hobbs scale. The remaining three samples were recorded as having a low coarse fibre content (R1); and
- Overall, the 0.5 m subsamples had a relatively even split of fine and coarse fibres.

### *5.3.4 Humified due to Forestry*

As described in section 5.3.2, five samples that fell within conifer planation were fully or partially humified due to forestry (samples that fell on rides within the forestry were treated as unforested samples).

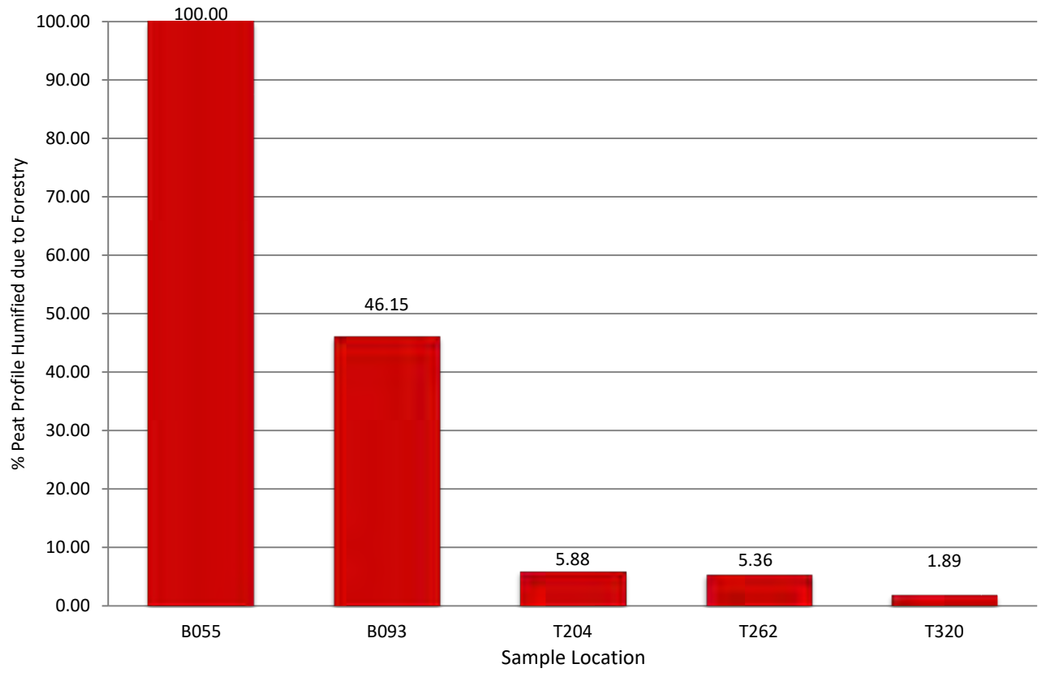


**Chart 5.3.4, % of Peat Profile Humified due to Forestry**

- Six of the seven sample locations were within forestry plantation. Five core samples from the six plantation samples locations have been humified to some degree in the surface horizon as a consequence of aerobic conditions introduced by the effects of forestry; and
- Three core samples had a relatively small degree of humification due to forestry. One sample had nearly 50% of its whole sample humified; and B055 was completely humified due to forestry operations (see Chart 5.3.4).

### *5.3.5 Water Content*

As described above, the water content of subsamples was determined in the field using the Hobbs scale (B1 Dry – B5 Very Wet). The chart below provides a summary mean for each core location.

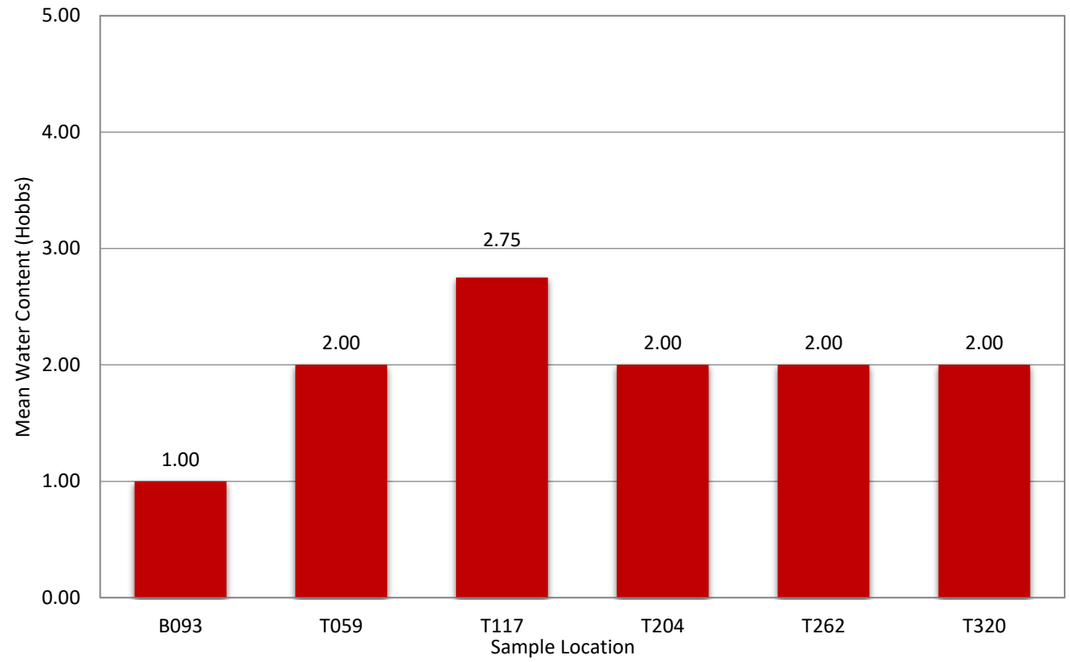


**Chart 5.3.5, Mean Water Content: Core Location Summary.**

- The vertical axes in Chart 5.3.5 above refers to the water content of the peat in seven core sample locations; 1=dry to 5=very wet;
- For the purpose of this analysis, a mean water content was estimated for cores that had more than one 0.5 m subsample;
- One sample was recorded as B1 on the Hobbs scale, i.e. dry peat;
- Five samples were recorded between B2 and B3 on the Hobbs scale, i.e. semi-dry peats with some moisture;
- No peats were recorded as wet or very wet (B4 or B5); and
- The relative dryness within the peats is likely from the effects of the drainage associated with the commercial plantation within the peat study area; with the unplanted sample (T117) indicating the most moisture.

### *5.3.6 Von Post (Degree of humification)*

An estimate of the degree of humification according to the Von Post scale (see Annex 2) was carried out on samples at all core locations, see **Error! Reference source not found.**.

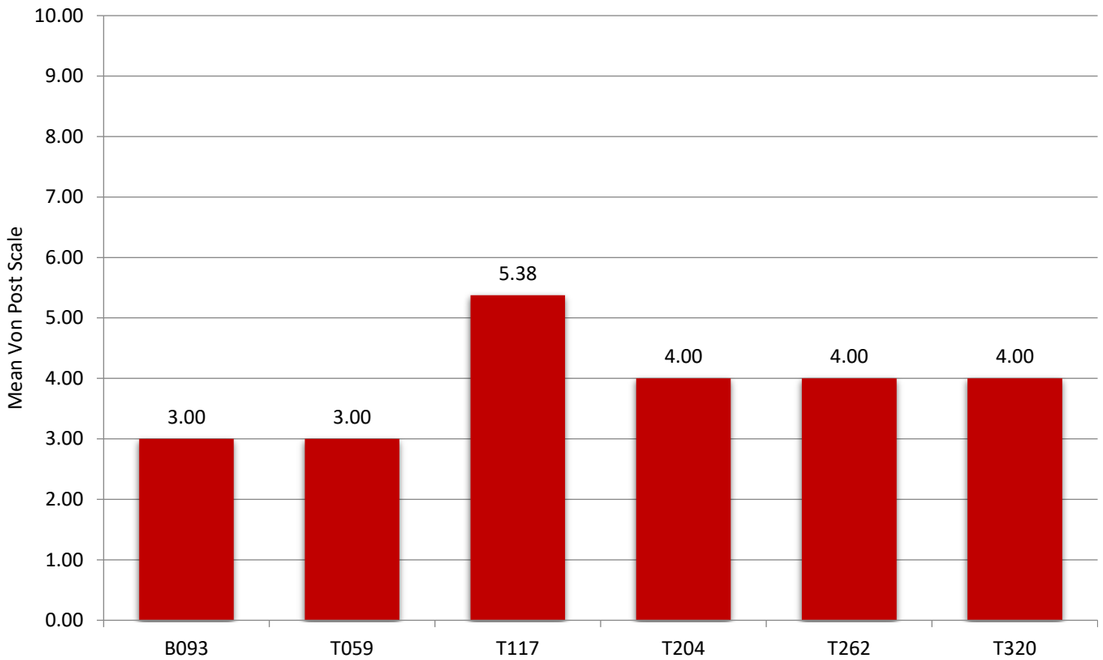


**Chart 5.3.6, Mean Von Post**

- The vertical axis in Chart 5.3.6, above refers to the Von Post Scale of Peat Decomposition (H1 to H10, see Annex 2 for details);
- For the purpose of this analysis, a mean degree of humification was estimated for cores that had more than one 0.5 m subsample;
- Five samples scored relatively low on the Von Post scale (H3 to H4), indicating relatively weak decomposition; and
- One sample scored moderate on the Von Post scale (between H5 and H6), indicating intermediate decomposition.

### *5.3.7 pH of Peat Samples*

13 x 0.5 l peat subsamples from five sample core locations were sent to the laboratory for analysis. Sample B093, and subsamples T262b and T320b were removed from the below assessment as the samples were too small for the laboratory to accurately analyse. The pH values determined are provided below.

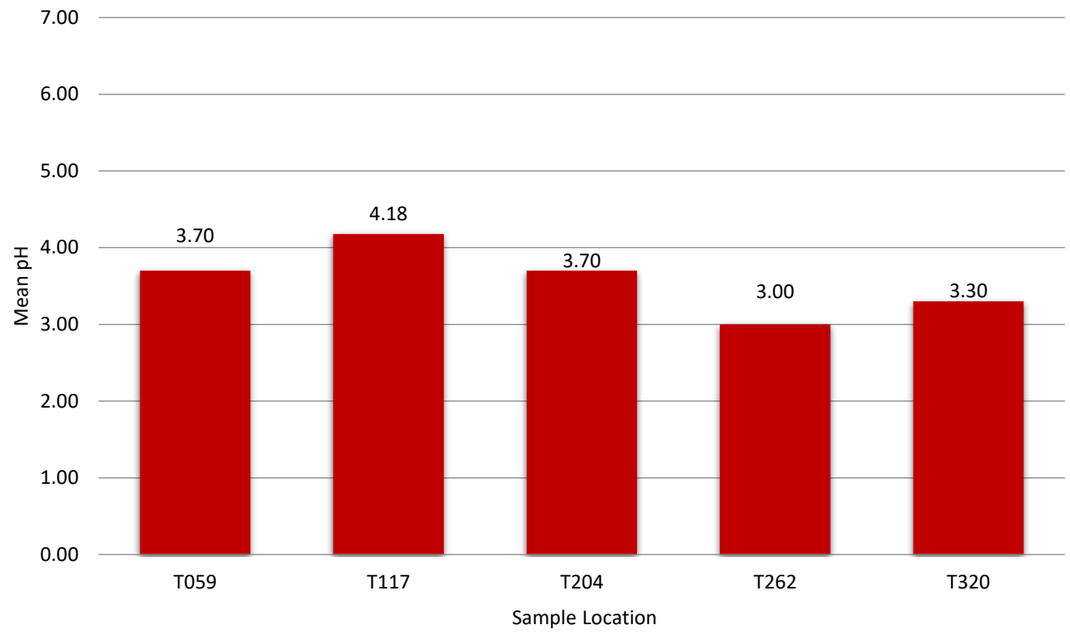


**Chart 5.3.7, mean pH.**

- The mean pH value of the 17 subsamples was 3.58, with a range from 3.00 to 4.18 (see Annex 1); and
- Chart 5.3.7 provides the mean pH for each core location and indicates that all subsamples were acidic in nature, as would be expected from the environment present within the peat study area.

### *5.3.8 Dry Matter (%)*

Oven dry matter (%) was calculated for 13 subsamples sent to the laboratory. Sample B093, and subsamples T262b and T320b were removed from the below assessment as the samples were too small for the laboratory to accurately analyse. Means were calculated for each core location.

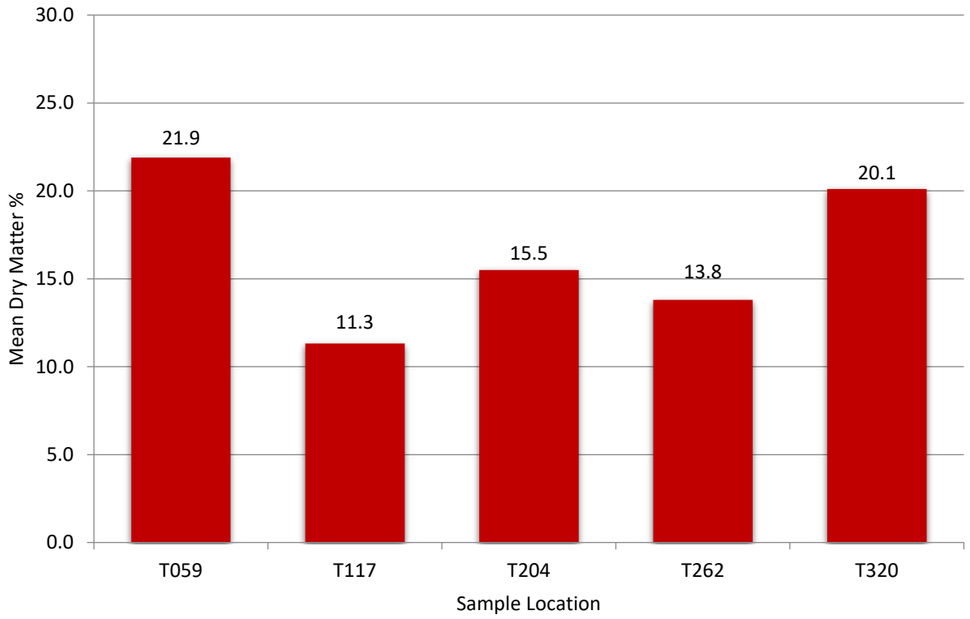


**Chart 5.3.8.1, Core Mean Dry Matter (%).**

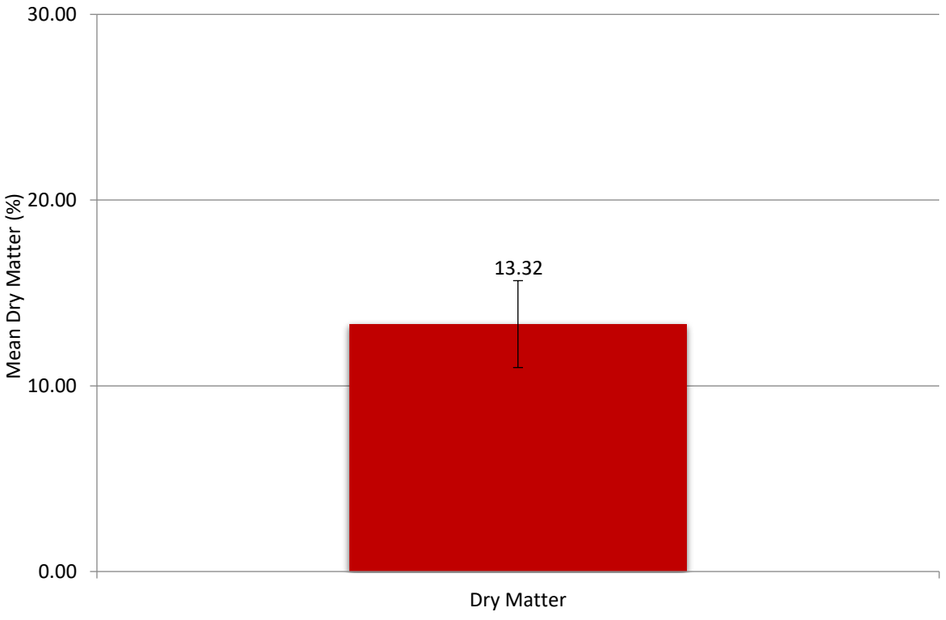


**Chart 5.3.8.2, Subsample Mean Dry Matter (%).**

**Table 5.3.8, Descriptive Statistics**

| Mean | Standard Error | 95% Confidence Interval | 95% CL Lower | 95% CL Upper | Precision |
|---|---|---|---|---|---|
| 13.32 | 1.07 | 2.34 | 10.98 | 15.66 | 17.58 |

Chart 5.3.8.2 and Table 5.3.8 show the dry matter mean and summary statistics for the 13 subsamples analysed. The following considerations are highlighted:

- For the purpose of the analysis in Chart 5.3.8.1, a mean dry matter content was estimated for cores that had more than one 0.5 m subsample; and
- The mean dry matter percentage from the cores is 13.32 %; with maximum and minimum values of 21.9 % and 11.3 % respectively (see Annex 1).

### *5.3.9 Wet Bulk Density (g/l)*

Wet Bulk Density (g/l) was calculated from 13 subsamples sent to the laboratory. Sample B093, and subsamples T262b and T320b were removed from the below assessment as the samples were too small for the laboratory to accurately analyse. Means calculated for each core location.

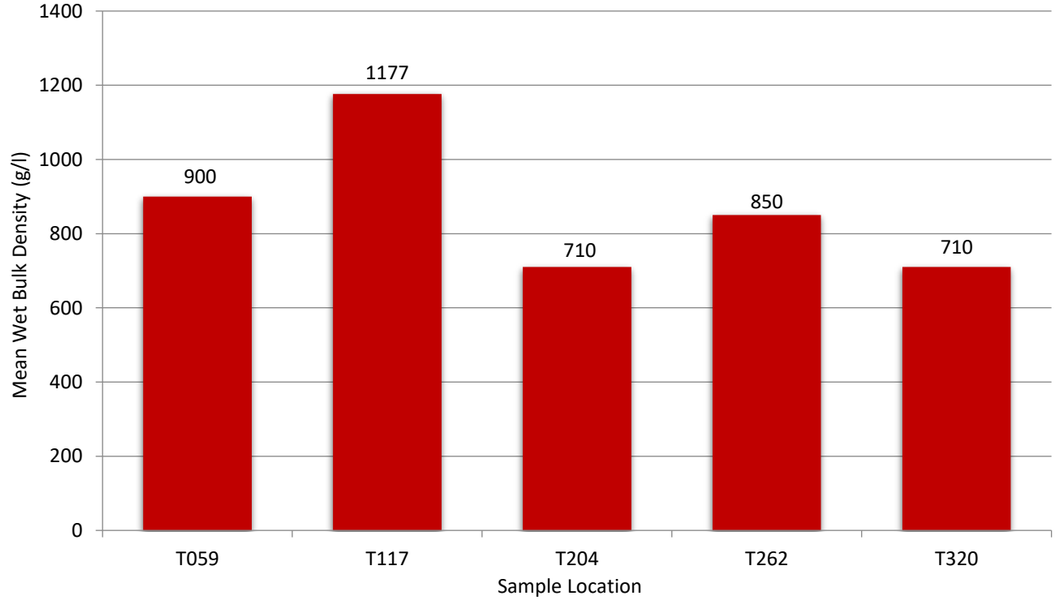


**Chart 5.3.9.1, Core Mean Wet Bulk Density (g/l).**

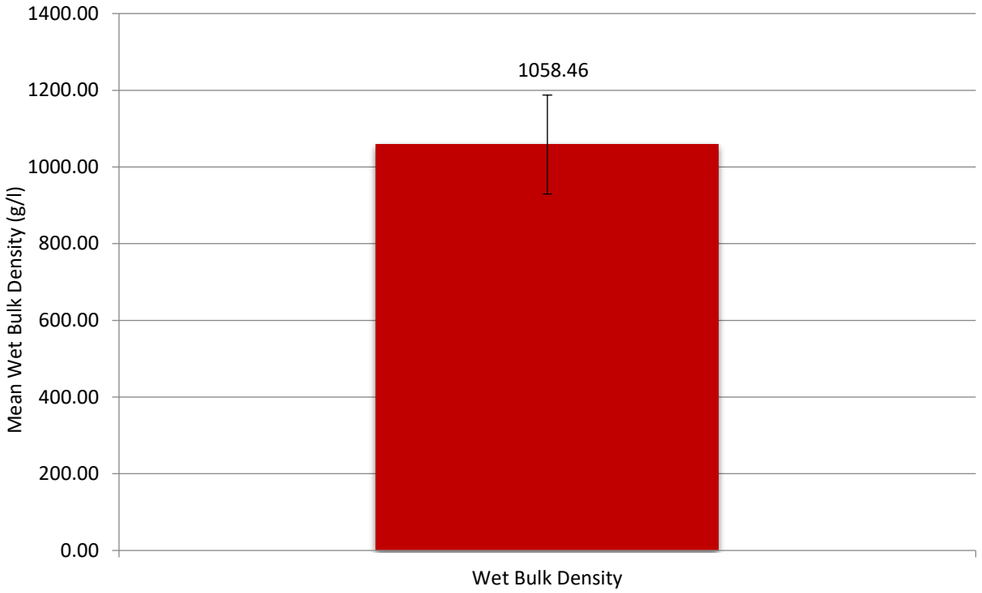


**Chart 5.3.9.2, Subsample Mean Wet Bulk Density (g/l).**

**Table 5.3.9, Descriptive Statistics**

| Mean | Standard Error | 95% Confidence Interval | 95% CL Lower | 95% CL Upper | Precision |
|---|---|---|---|---|---|
| 1058.46 | 59.23 | 129.07 | 929.39 | 1187.53 | 12.19 |

Chart 5.3.9.2 and Table  show the wet bulk density mean and summary statistics for the 13 subsamples analysed. The following considerations are highlighted:

- For the purpose of the analysis in Chart 5.3.9.1, a mean wet bulk density was estimated for cores that had more than one 0.5 m subsample; and
- The mean wet bulk density from the cores is 1058.46 g/l; with maximum and minimum values of 1177 g/l and 710 g/l respectively (see Annex 1).

### *5.3.10 Dry Bulk Density (g/cm³)*

Dry Bulk Density (g/cm³) was calculated for 13 subsamples sent to the laboratory. Sample B093, and subsamples T262b and T320b were removed from the below assessment as the samples were too small for the laboratory to accurately analyse. Means calculated for each core location.

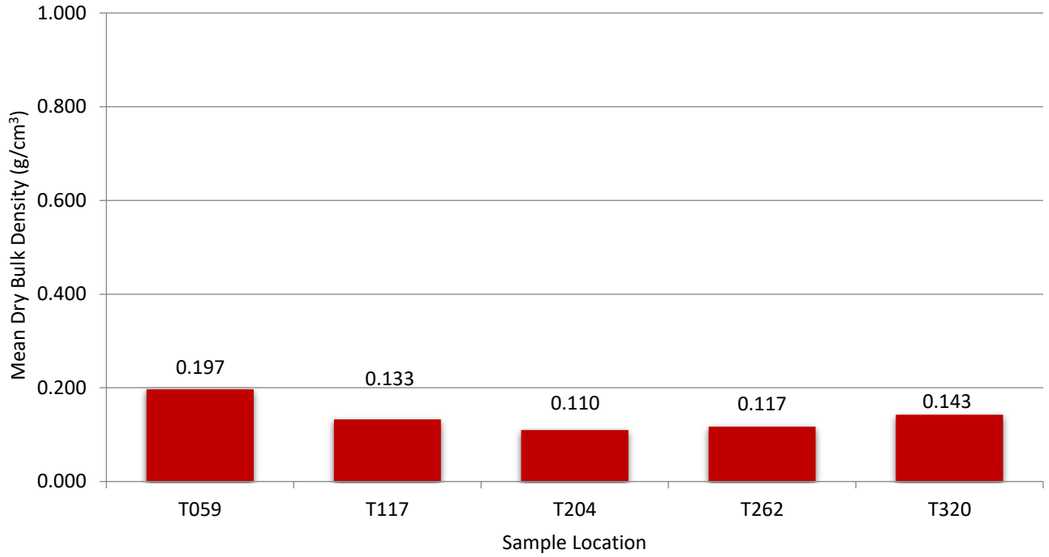


**Chart 5.3.10.1, Core Mean Dry Bulk Density (g/cm³).**

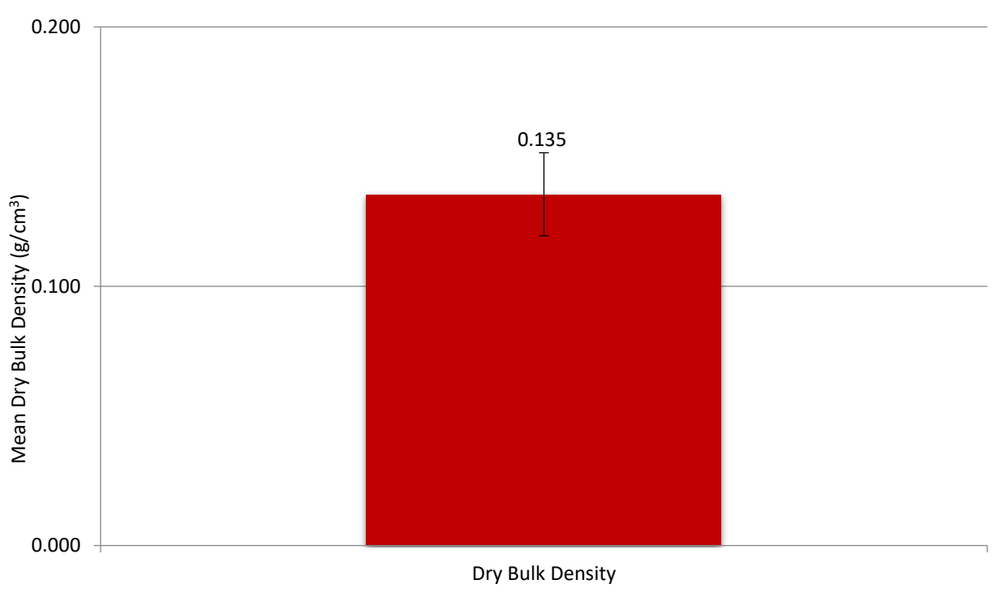


**Chart 5.3.10.2, Subsample Mean Dry Bulk Density (g/cm³).**

**Table 5.3.10, Descriptive Statistics**

| Mean | Standard Error | 95% Confidence Interval | 95% CL Lower | 95% CL Upper | Precision |
|---|---|---|---|---|---|
| 0.135 | 0.007 | 0.016 | 0.120 | 0.151 | 11.521 |

Chart 5.3.10.2 and Table 5.3.10 show the dry bulk density mean and summary statistics for the 13 subsamples analysed. The following considerations are highlighted:

- For the purpose of the analysis in Chart 5.3.10.1, a mean dry bulk density was estimated for cores that had more than one 0.5 m subsample; and
- The mean dry bulk density from the cores is 0.135 g/cm$^3$; with maximum and minimum values of 0.197 g/cm$^3$ and 0.110 g/cm$^3$ respectively (see Annex 1).

### *5.3.11 Total Carbon (%)*

Total Carbon content (% dry weight) was calculated for 13 subsamples sent to the laboratory. Sample B093, and subsamples T262b and T320b were removed from the below assessment as the samples were too small for the laboratory to accurately analyse. Means calculated for each core location.

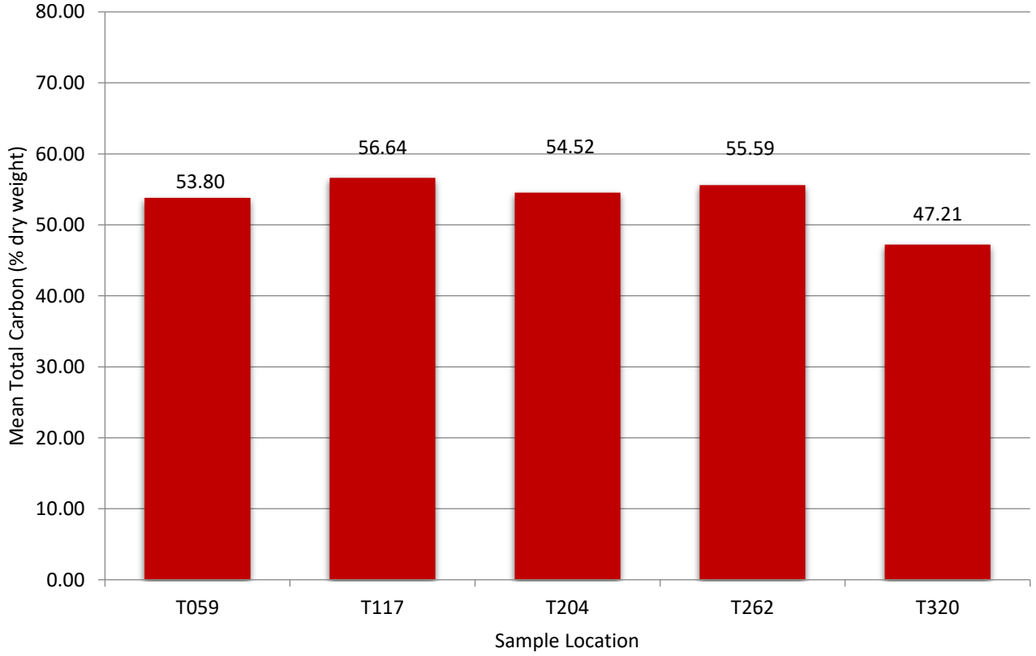


**Chart 5.3.11.1, Core Mean Total Carbon (% weight).**

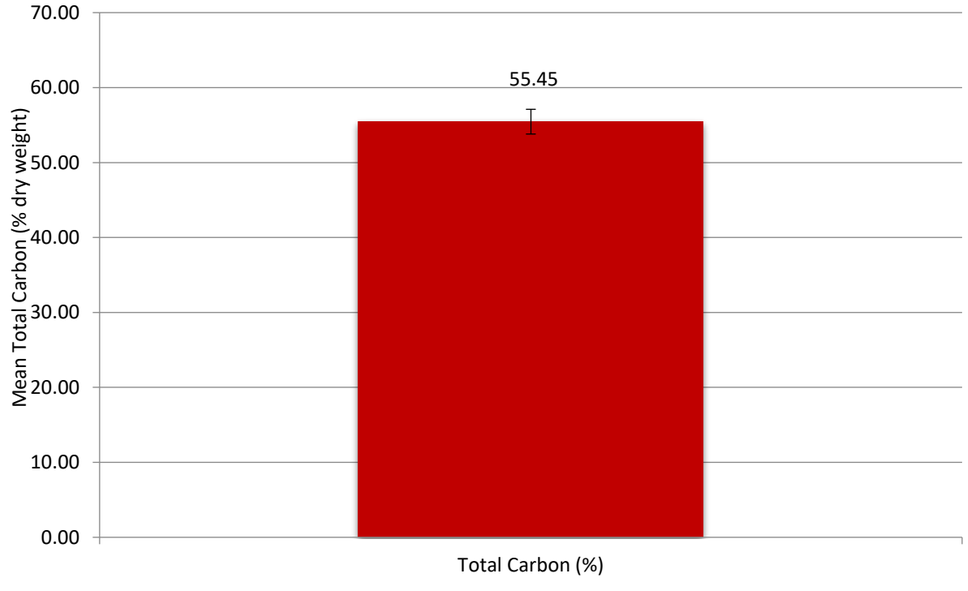


**Chart 5.3.11.2, Subsample Mean Dry Bulk Density (g/cm$^3$).**

**Table 5.3.11, Descriptive Statistics**

| Mean | Standard Error | 95% Confidence Interval | 95% CL Lower | 95% CL Upper | Precision |
|---|---|---|---|---|---|
| 55.45 | 2.74 | 1.65 | 53.80 | 57.11 | 2.98 |

Chart 5.3.11.2 and Table 5.3.11 show the total carbon mean and summary statistics for the 13 subsamples analysed. The following considerations are highlighted:

- For the purpose of the analysis in Chart 5.3.11.1, a mean was estimated for cores that had more than one 0.5 m subsample; and
- The mean total carbon (%) from the cores is 55.45 %; with maximum and minimum values of 56.64 % and 47.21 % respectively (see Annex 1).

### *5.3.12 Underlying Substrates*

At each sample location, where possible, a broad characterisation was made of the underlying substrate below the peat horizon. The raw data is provided in Annex 1 of this report and it appears that there is a variety of underlying substrates; such as bedrock, gravel/granular and till. Sample location T320 indicated a gravely/granular layer, which the peat probe could penetrate beyond this layer until terminating on solid substrate. However, the survey method was unable to identify this final substrate. Additionally, sample location T262 had the largest deviation between

probed and cored depth, due to a thick, dense peat layer that the Russian corer was unable to penetrate; unlike the peat probe. As a result of this dense peat layer, the terminating underlying substrate was unable to be categorised.

## 6. SUMMARY

The results of the Phase 2 peat surveys undertaken on the peat deposits within the peat study area are summarised as follows:

- Overall the peat depths within the Phase 2 peat study area are relatively deep (>0.5 m), with pockets of much deeper peat located within the peat study area, but generally localised to the south west of the Site (up to 9.24 m; see Technical Appendix 10.6). As seen in Figure 10.7-3 within this Technical Appendix, the infrastructure has been located, where practical, away from these deeper peat locations;
- The depth of the acrotelm from the sample locations are shallow, mainly as a result of the conifer planation; with six of the seven sample locations devoid of acrotelm;
- The peat across the peat study area is generally fibrous in nature. Only one sample location was assessed as being intermediate, and skewed the data due to the multiple subsamples that were assessed as intermediate. Overall, it is expected that only the very deep areas of peat would be intermediate and fibrous peats are found elsewhere. The peat generally contains moderate levels of both coarse and fine fibres;
- The mean water content of the peat at sample locations appears to be consistent with semi dry peats that contain some moisture; with one sample recorded to have dry peat (B093);
- Five samples analysed in the field to the Von Post scale were scored low (between H3 and H4) and one sample as moderate (between H5 and H6), indicating an overall low level of decomposition;
- The samples were acidic, pH ranging from 3.00 - 4.18; and
- Dry matter, wet bulk density, dry bulk density and total carbon content statistics were calculated from 13 subsamples sent to the laboratory from five core sample locations.

Overall, the peats sampled across the peat study area were relatively deep (particularly in isolated pockets), relatively dry and fibrous in nature, and exhibited low levels of decomposition.

## 7. REFERENCES

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## ANNEX 1 PEAT CORING DATA

| Sample No. | Infrastructure | X | Y | Planted / Unplanted | Sub-sample | Probed depth (cm) | Cored Depth (cm) | Depth of Acrotelm (cm) | Photo 0 = No, 1 = Yes | Colour | Depth of Sub Sample | Amorphous 0= No, 1 = Yes | Intermediate 0 = No, 1 = Yes | Fibrous 0 = No, 1 = Yes | Fine Fibres + | Coarse Fibres + | Water Content + | Von Post Scale # | Wet Bulk Density g/l | Dry Bulk Density g/l | Dry Bulk Density g/cm$^3$ | Dry Matter % | Moisture % | pH | Total Carbon (fresh) mg/l | Total Carbon, dry matter mg/kg | Total Carbon % dry weight | Substrate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B055 | Substation | 220711 | 580590 | Planted | B055a | 25 | 25 | 0 | 1 | Very dark brown | 0-15 | 0.00 | 0.00 | 1.00 | 2.00 | 0.00 | 2.00 | 3.00 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Clay/soil |
| B093 | Borrow Pit 5 | 219904 | 580841 | Planted | B093a | 42 | 36 | 0 | 1 | Dark brown | 0-26 | 0.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 3.00 | N/A | N/A | N/A | 16.70 | 83.30 | 3.90 | N/A | 544200 | 54.42 | Rock |
| T059 | Turbine 11 | 219038 | 579261 | Planted | T059a | 52 | 44 | 1 | 1 | Medium to dark brown | 0-34 | 0.00 | 0.00 | 1.00 | 2.00 | 1.00 | 2.00 | 3.00 | 900 | 197.10 | 0.20 | 21.90 | 78.10 | 3.70 | 105895 | 538000 | 53.80 | Rock |
| T177 | Turbine 9 | 219985 | 580410 | Unplanted | T177a | 464 | 460 | 0 | 1 | Medium brown - orange tinge | 0-50 | 0.00 | 0.00 | 1.00 | 3.00 | 3.00 | 3.00 | 4.00 | 890 | 112.14 | 0.11 | 12.60 | 87.40 | 3.20 | 64001 | 573000 | 57.30 | Rock |
| T117 | Turbine 9 | 219985 | 580410 | Unplanted | T117b | 464 | 460 | - | 1 | Medium brown | 50-100 | 0.00 | 0.00 | 1.00 | 3.00 | 3.00 | 3.00 | 4.00 | 1260 | 120.96 | 0.12 | 9.60 | 90.40 | 3.40 | 67108 | 557700 | 55.77 | Rock |
| T117 | Turbine 9 | 219985 | 580410 | Unplanted | T117c | 464 | 460 | - | 1 | Medium brown | 100-150 | 0.00 | 1.00 | 0.00 | 3.00 | 2.00 | 3.00 | 5.00 | 1200 | 124.80 | 0.12 | 10.40 | 89.70 | 3.60 | 71378 | 574700 | 57.47 | Rock |
| T117 | Turbine 9 | 219985 | 580410 | Unplanted | T117d | 464 | 460 | - | 1 | Medium brown | 150-200 | 0.00 | 1.00 | 0.00 | 2.00 | 2.00 | 3.00 | 5.00 | 1140 | 118.56 | 0.12 | 10.40 | 98.60 | 4.00 | 68004 | 575800 | 57.58 | Rock |
| T117 | Turbine 9 | 219985 | 580410 | Unplanted | T117e | 464 | 460 | - | 1 | Medium brown | 200-250 | 0.00 | 1.00 | 0.00 | 2.00 | 2.00 | 3.00 | 5.00 | 1220 | 118.34 | 0.12 | 9.70 | 90.30 | 4.20 | 68457 | 576100 | 57.61 | Rock |
| T117 | Turbine 9 | 219985 | 580410 | Unplanted | T117f | 464 | 460 | - | 1 | Medium brown | 250-300 | 0.00 | 1.00 | 0.00 | 2.00 | 1.00 | 3.00 | 6.00 | 1270 | 142.24 | 0.14 | 11.20 | 88.80 | 4.30 | 79541 | 559200 | 55.92 | Rock |
| T117 | Turbine 9 | 219985 | 580410 | Unplanted | T117g | 464 | 460 | - | 1 | Medium brown | 300-350 | 0.00 | 1.00 | 0.00 | 2.00 | 1.00 | 3.00 | 6.00 | 1220 | 131.76 | 0.13 | 10.80 | 89.30 | 4.80 | 74034 | 564500 | 56.45 | Rock |
| T117 | Turbine 9 | 219985 | 580410 | Unplanted | T117h | 464 | 460 | - | 1 | Medium brown | 350-400 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 2.00 | 6.00 | 1140 | 152.76 | 0.15 | 13.40 | 86.60 | 4.90 | 85458 | 561100 | 56.11 | Rock |
| T117 | Turbine 9 | 219985 | 580410 | Unplanted | T117i | 464 | 460 | - | 1 | Medium and dark brown | 400-450 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 2.00 | 6.00 | 1250 | 172.50 | 0.17 | 13.80 | 86.20 | 5.20 | 95598 | 555400 | 55.54 | Rock |
| T204 | Turbine 1 | 219774 | 581117 | Planted | T204a | 49 | 46 | 0 | 1 | Medium brown | 0-36 | 0.00 | 0.00 | 1.00 | 2.00 | 2.00 | 2.00 | 4.00 | 710 | 110.05 | 0.11 | 15.50 | 84.50 | 3.70 | 59961 | 545200 | 54.52 | Gravel to Rock |
| T262 | Turbine 5 | 218078 | 581522 | Planted | T262a | 87 | 66 | 0 | 1 | Medium brown | 0-50 | 0.00 | 0.00 | 1.00 | 1.00 | 2.00 | 2.00 | 4.00 | 850 | 117.30 | 0.12 | 13.80 | 86.20 | 3.00 | 65160 | 555900 | 55.59 | Thick/dense peat layer |
| T262 | Turbine 5 | 218078 | 581522 | Planted | T262b | 87 | 66 | 0 | 1 | Dark brown | 50-56 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 23.90 | 76.10 | 3.90 | N/A | 592100 | 59.21 | Thick/dense peat layer |
| T320 | Turbine 3 | 218758 | 581958 | Planted | T320a | 79 | 63 | 0 | 1 | Medium brown | 0-50 | 0.00 | 0.00 | 1.00 | 2.00 | 1.00 | 2.00 | 4.00 | 710 | 142.71 | 0.14 | 20.10 | 79.90 | 3.30 | 67508 | 472100 | 47.21 | Gravel/till |
| T320 | Turbine 3 | 218758 | 581958 | Planted | T320b | 79 | 63 | 0 | 1 | Medium brown | 50-53 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 33.40 | 66.60 | 3.80 | N/A | 274800 | 27.48 | Gravel/till |

## ANNEX 2 VON POST SCALE OF HUMIFICATION

| Degree of Decomposition | Nature of Squeezed Liquid | Proportion of Peat Extruded | Nature of Plant Residues | Description |
|---|---|---|---|---|
| H1 | Clear, Colourless | None | Plant structure unaltered. Fibrous, elastic | Undecomposed |
| H2 | Almost clear, yellow-brown | None | Plant structure distinct, almost unaltered. | Almost undecomposed |
| H3 | Slightly turbid, brown | None | Plant structures distinct, most remains easily identifiable | Very weakly decomposed |
| H4 | Strongly turbid, brown | None | Plant structure distinct, most remains identifiable | Weakly decomposed |
| H5 | Strongly turbid, contains a little peat in suspension | Very little | Plant structure clear but indistinct and difficult to identify | Moderately decomposed |
| H6 | Muddy, much peat in suspension | One third | Plant structure indistinct but clearer in residue, most remains undefinable | Well decomposed |
| H7 | Strongly muddy | One half | Plant structure indistinct | Strongly decomposed |
| H8 | Thick mud, little free water | Two thirds | Plant structure very indistinct – only resistant material such as roots | Very strongly decomposed |
| H9 | No free water | Nearly all | Plant structure almost unrecognisable | Almost completely decomposed |
| H10 | No free water | All | Plant structure not recognisable, amorphous | Completely decomposed |

## ANNEX 3 PHOTOGRAPHS OF CORE SAMPLES

**Core sample B055a – Substation**


**Core Sample B093a – Borrow Pit 5**

**Core Sample 059a – Turbine 11**


**Core Sample T117a – Turbine 9**


**Core Sample T117b – Turbine 9**


**Core Sample T117c – Turbine 9**

**Core Sample T117d – Turbine 9**


**Core Sample T117e – Turbine 9**


**Core Sample T117f – Turbine 9**


**Core Sample T117g – Turbine 9**

**Core Sample T117h – Turbine 9**


**Core Sample T117i – Turbine 9**


**Core Sample T204a – Turbine 1**


**Core Sample T262a – Turbine 5**

**Core Sample T262b - Turbine 5**


**Core Sample T320b - Turbine 5**


**Core Sample T320a - Turbine 5**

220000

580000

# Legend

- Application Boundary
- Turbine
- Peat Study Area
- Infrastructure

**Peat Depth Sample**

- Phase 1 Peat
- Phase 2 Peat
- Core Sample Location

**Peat Class (SNH)**

- Class 1
- Class 2

N

Arecleoch Forest

Arecleoch Wind Farm

Barrhill

220000

| Rev | Date | By | Comment |
|---|---|---|---|
| B | 01/05/19 | ATA | Second Issue. |
| A | 09/04/19 | ATA | First Issue. |

SCOTTISHPOWER RENEWABLES

1:35,000 Scale @ A3

0 0.75 1.5 Km



# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Site Location, Sample Locations and Carbon/Peatland Class

| | |
|---|---|
| Drg No | P_EIAR_Fig.10.7.1_P2_SL_SL_CPC_ARE |
| Rev | B |
| Date | 01/05/19 |
| Figure | 10.7-1 |

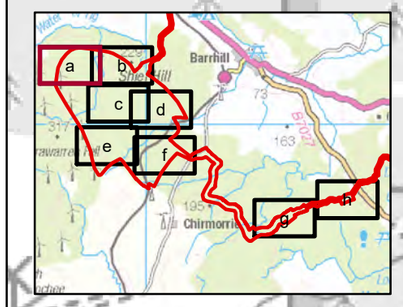
Datum: OSGB36
Projection: OSNG

## Legend

- Application Boundary
- Turbine
- Infrastructure
- Peat Study Area

**Peat Depth Class**

- No Peat
- ≤ 0.50 m
- 0.51 - 1.00 m
- 1.01 - 2.00 m
- 2.01 - 3.00 m
- 3.01 - 4.00 m
- 4.01 - 5.00 m
- 5.01 - 6.00 m
- 6.01 - 7.00 m
- 7.01 - 7.58 m
- Core Location

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Standing Stone

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|---|---|---|---|
| B | 01/05/19 | ATA | Second Issue. |
| A | 09/04/19 | ATA | First Issue. |

1:5,000 Scale @ A3

0 0.125 0.25 Km



# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Peat Depth Sample Locations

| | |
|---|---|
| Drg No | P_EIAR_Fig.10.7.2_P2_PDepth_ARE |
| Rev | B |
| Date | 01/05/19 |
| Figure | 10.7-2a |

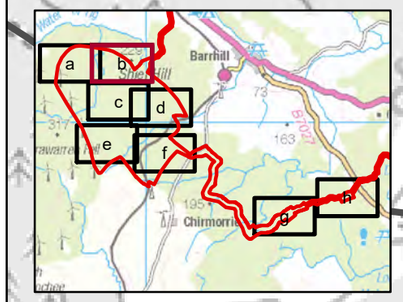
Datum: OSGB36
Projection: OSNG

# Legend

- Application Boundary
- Turbine
- Infrastructure
- Peat Study Area

**Peat Depth Class**

- No Peat
- ≤ 0.50 m
- 0.51 - 1.00 m
- 1.01 - 2.00 m
- 2.01 - 3.00 m
- 3.01 - 4.00 m
- 4.01 - 5.00 m
- 5.01 - 6.00 m
- 6.01 - 7.00 m
- 7.01 - 7.58 m
- Core Location

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Shiel Hill
Sheepfold
Quarry
Quarries
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| Rev | Date | By | Comment |
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| B | 01/05/19 | ATA | Second Issue. |
| A | 09/04/19 | ATA | First Issue. |

1:5,000 Scale @ A3

0 0.125 0.25 Km



# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Peat Depth Sample Locations

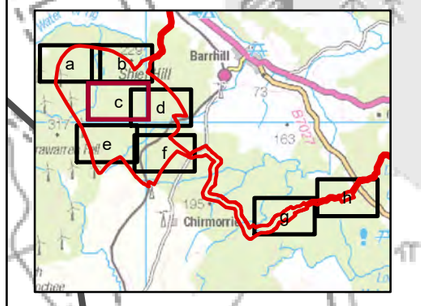
| | | |
|---|---|---|
| Drg No | P_EIAR_Fig.10.7.2_P2_PDepth_ARE | |
| Rev | B | Datum: OSGB36 Projection: OSNG |
| Date | 01/05/19 | |
| Figure | 10.7-2b | |

# Legend

- Application Boundary
- Turbine
- Infrastructure
- Peat Study Area

**Peat Depth Class**

- No Peat
- ≤ 0.50 m
- 0.51 - 1.00 m
- 1.01 - 2.00 m
- 2.01 - 3.00 m
- 3.01 - 4.00 m
- 4.01 - 5.00 m
- 5.01 - 6.00 m
- 6.01 - 7.00 m
- 7.01 - 7.58 m
- Core Location

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| Rev | Date | By | Comment |
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1:5,000 Scale @ A3

0 0.125 0.25 Km



# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Peat Depth Sample Locations

| | |
|---|---|
| Drg No | P_EIAR_Fig.10.7.2_P2_PDepth_ARE |
| Rev | B |
| Date | 01/05/19 |
| Figure | 10.7-2c |

Datum: OSGB36
Projection: OSNG

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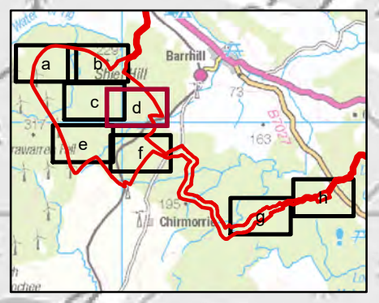
N

## Legend

- Application Boundary
- Turbine
- Infrastructure
- Peat Study Area

**Peat Depth Class**

- No Peat
- ≤ 0.50 m
- 0.51 - 1.00 m
- 1.01 - 2.00 m
- 2.01 - 3.00 m
- 3.01 - 4.00 m
- 4.01 - 5.00 m
- 5.01 - 6.00 m
- 6.01 - 7.00 m
- 7.01 - 7.58 m
- Core Location

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| Rev | Date | By | Comment |
|---|---|---|---|
| B | 01/05/19 | ATA | Second Issue. |
| A | 09/04/19 | ATA | First Issue. |

1:5,000 Scale @ A3

0 0.125 0.25 Km



# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Peat Depth Sample Locations

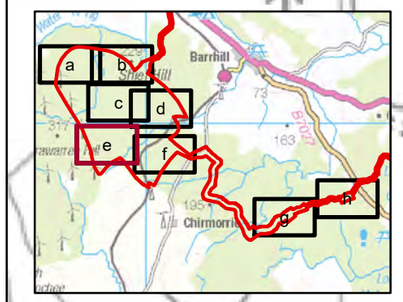
| | | |
|---|---|---|
| Drg No | P_EIAR_Fig.10.7.2_P2_PDepth_ARE | |
| Rev | B | Datum: OSGB36 |
| Date | 01/05/19 | Projection: OSNG |
| Figure | 10.7-2d | |

## Legend

- Application Boundary
- Turbine
- Infrastructure
- Peat Study Area

**Peat Depth Class**

- No Peat
- ≤ 0.50 m
- 0.51 - 1.00 m
- 1.01 - 2.00 m
- 2.01 - 3.00 m
- 3.01 - 4.00 m
- 4.01 - 5.00 m
- 5.01 - 6.00 m
- 6.01 - 7.00 m
- 7.01 - 7.58 m
- Core Location

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220 210 220 230 240 250 211 . 206 .198 . 258 Chambered Cairn Wee Fell

SCOTTISHPOWER RENEWABLES

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| B | 01/05/19 | ATA | Second Issue. |
| A | 09/04/19 | ATA | First Issue. |

1:5,000 Scale @ A3

0 0.125 0.25 Km



# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Peat Depth Sample Locations

| | | | |
|---|---|---|---|
| Drg No | P_EIAR_Fig.10.7.2_P2_PDepth_ARE | | |
| Rev | B | Datum: OSGB36 Projection: OSNG | |
| Date | 01/05/19 | | |
| Figure | 10.7-2e | | |

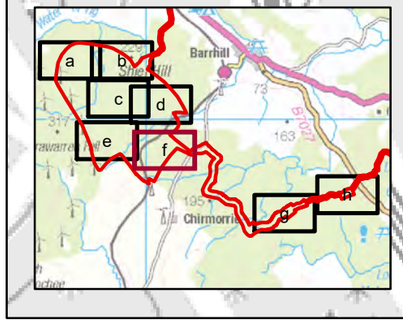
220000

## Legend

- Application Boundary
- Turbine
- Infrastructure
- Peat Study Area

**Peat Depth Class**

- No Peat
- ≤ 0.50 m
- 0.51 - 1.00 m
- 1.01 - 2.00 m
- 2.01 - 3.00 m
- 3.01 - 4.00 m
- 4.01 - 5.00 m
- 5.01 - 6.00 m
- 6.01 - 7.00 m
- 7.01 - 7.58 m
- Core Location




N

White Loch

193

79

210

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SCOTTISHPOWER RENEWABLES

| Rev | Date | By | Comment |
|---|---|---|---|
| B | 01/05/19 | ATA | Second Issue. |
| A | 09/04/19 | ATA | First Issue. |

1:5,000 Scale @ A3

0 0.125 0.25 Km



# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Peat Depth Sample Locations

| | |
|---|---|
| Drg No | P_EIAR_Fig.10.7.2_P2_PDepth_ARE |
| Rev | B |
| Date | 01/05/19 |
| Figure | 10.7-2f |

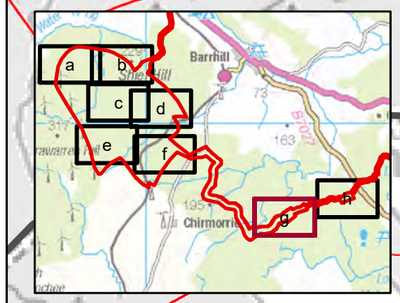
Datum: OSGB36
Projection: OSNG

## Legend

- Application Boundary
- Turbine
- Infrastructure
- Peat Study Area

**Peat Depth Class**

- No Peat
- ≤ 0.50 m
- 0.51 - 1.00 m
- 1.01 - 2.00 m
- 2.01 - 3.00 m
- 3.01 - 4.00 m
- 4.01 - 5.00 m
- 5.01 - 6.00 m
- 6.01 - 7.00 m
- 7.01 - 7.58 m
- Core Location




N

Burn
Cairn
145
170
170
Cow Loch
173
180
175
Craigie Loch
Boat House

SCOTTISHPOWER RENEWABLES

| Rev | Date | By | Comment |
|---|---|---|---|
| B | 01/05/19 | ATA | Second Issue. |
| A | 09/04/19 | ATA | First Issue. |

1:5,000 Scale @ A3

0 0.125 0.25 Km



# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Peat Depth Sample Locations

| | |
|---|---|
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| Rev | B |
| Date | 01/05/19 |
| Figure | 10.7-2g |

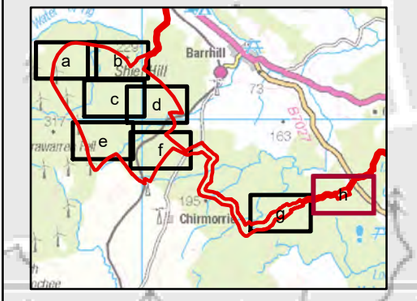
Datum: OSGB36
Projection: OSNG

## Legend

- Application Boundary
- Turbine
- Infrastructure
- Peat Study Area

**Peat Depth Class**

- No Peat
- ≤ 0.50 m
- 0.51 - 1.00 m
- 1.01 - 2.00 m
- 2.01 - 3.00 m
- 3.01 - 4.00 m
- 4.01 - 5.00 m
- 5.01 - 6.00 m
- 6.01 - 7.00 m
- 7.01 - 7.58 m
- Core Location




N

Loch Mabrennie
Knockmaclu Wood
Pit (disused)
Knockylaight
Cairns

| Rev | Date | By | Comment |
|---|---|---|---|
| B | 01/05/19 | ATA | Second Issue. |
| A | 09/04/19 | ATA | First Issue. |

1:5,000 Scale @ A3

0 0.125 0.25 Km



# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Peat Depth Sample Locations

| | |
|---|---|
| Drg No | P_EIAR_Fig.10.7.2_P2_PDepth_ARE |
| Rev | B |
| Date | 01/05/19 |
| Figure | 10.7-2h |

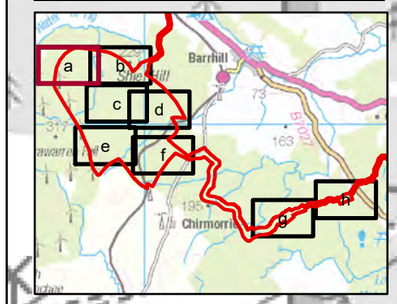
Datum: OSGB36
Projection: OSNG

## Legend

- Application Boundary
- Turbine
- Infrastructure
- Peat Study Area

**Peat Depth Class**

- No Peat
- ≤ 0.50 m
- 0.51 - 1.00 m
- 1.01 - 2.00 m
- 2.01 - 3.00 m
- 3.01 - 4.00 m
- 4.01 - 5.00 m
- 5.01 - 6.00 m
- 6.01 - 7.00 m
- 7.01 - 8.00 m
- 8.01 - 9.00 m
- 9.01 - 10.00 m







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|---|---|---|---|
| B | 01/05/19 | ATA | Second Issue. |
| A | 09/04/19 | ATA | First Issue. |

1:5,000 Scale @ A3

0 0.125 0.25 Km



# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Interpolated Peat Depth

| | |
|---|---|
| Drg No | P_EIAR_Fig.10.7.3_P2_IDW_ARE |
| Rev | B |
| Date | 01/05/19 |
| Figure | 10.7-3a |

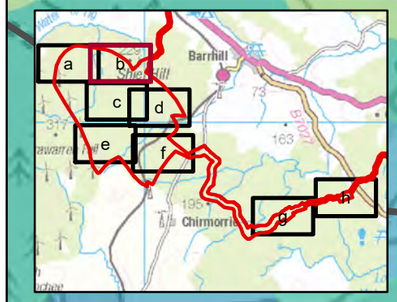
Datum: OSGB36
Projection: OSNG

# Legend

- Application Boundary
- Turbine
- Infrastructure
- Peat Study Area

**Peat Depth Class**

- No Peat
- ≤ 0.50 m
- 0.51 - 1.00 m
- 1.01 - 2.00 m
- 2.01 - 3.00 m
- 3.01 - 4.00 m
- 4.01 - 5.00 m
- 5.01 - 6.00 m
- 6.01 - 7.00 m
- 7.01 - 8.00 m
- 8.01 - 9.00 m
- 9.01 - 10.00 m







SCOTTISHPOWER RENEWABLES

| Rev | Date | By | Comment |
|---|---|---|---|
| B | 01/05/19 | ATA | Second Issue. |
| A | 09/04/19 | ATA | First Issue. |

1:5,000
Scale @ A3

0 0.125 0.25 Km



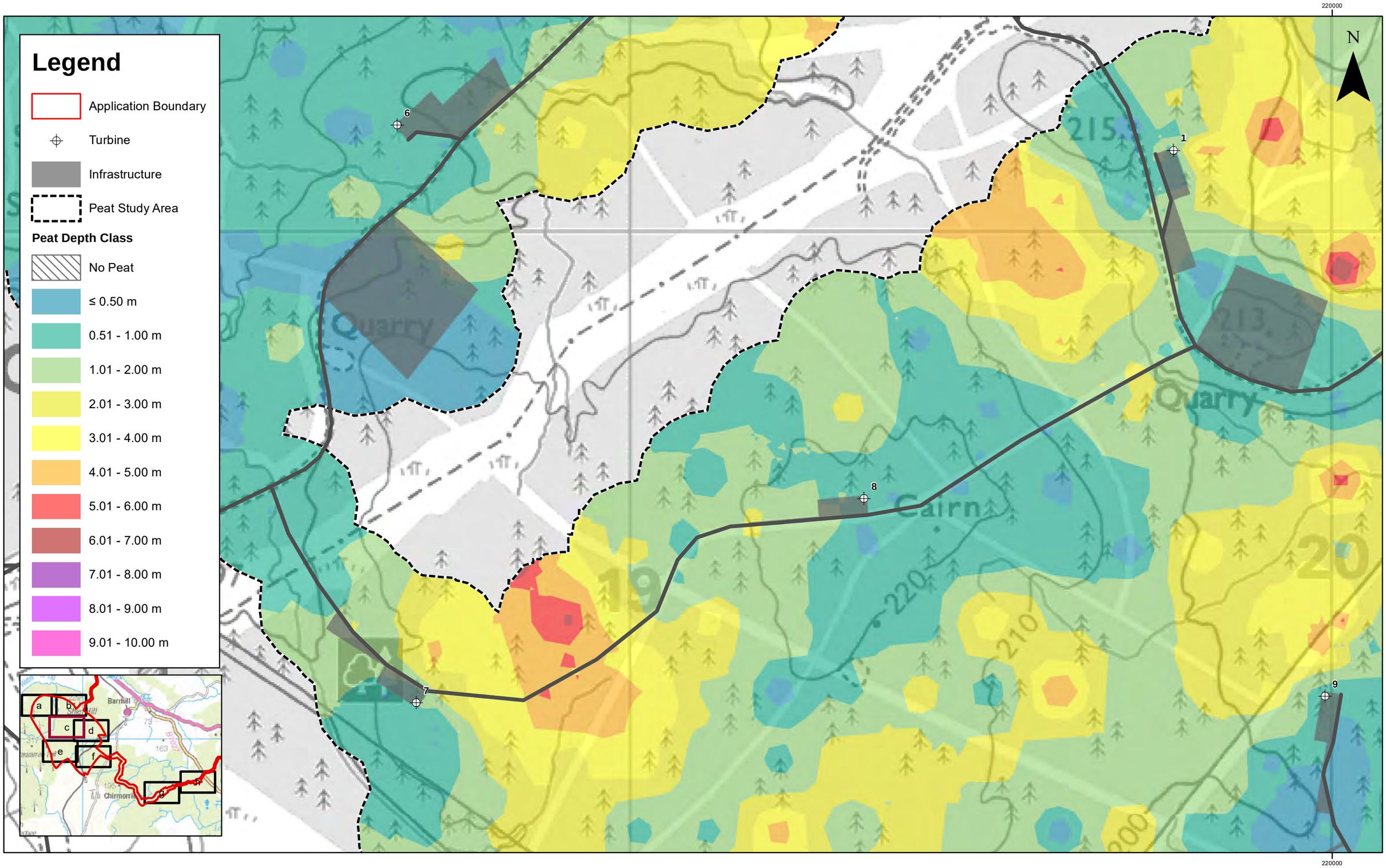
# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Interpolated Peat Depth

| | |
|---|---|
| Drg No | P_EIAR_Fig.10.7.3_P2_IDW_ARE |
| Rev | B |
| Date | 01/05/19 |
| Figure | 10.7-3b |

Datum: OSGB36
Projection: OSNG




| Rev | Date | By | Comment |
|---|---|---|---|
| B | 01/05/19 | ATA | Second Issue. |
| A | 09/04/19 | ATA | First Issue. |

SCOTTISHPOWER RENEWABLES

1:5,000 Scale @ A3

0 0.125 0.25 Km



# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Interpolated Peat Depth

| | |
|---|---|
| Drg No | P_EIAR_Fig.10.7.3_P2_IDW_ARE |
| Rev | B |
| Date | 01/05/19 |
| Figure | 10.7-3c |

Datum: OSGB36
Projection: OSNG

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580000

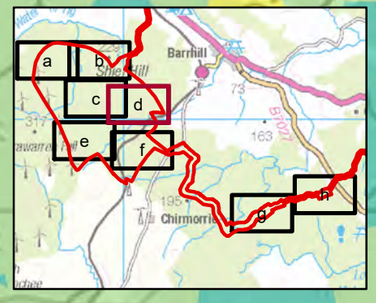
N

## Legend

- Application Boundary
- Turbine
- Infrastructure
- Peat Study Area

**Peat Depth Class**

- No Peat
- ≤ 0.50 m
- 0.51 - 1.00 m
- 1.01 - 2.00 m
- 2.01 - 3.00 m
- 3.01 - 4.00 m
- 4.01 - 5.00 m
- 5.01 - 6.00 m
- 6.01 - 7.00 m
- 7.01 - 8.00 m
- 8.01 - 9.00 m
- 9.01 - 10.00 m




| Rev | Date | By | Comment |
|---|---|---|---|
| B | 01/05/19 | ATA | Second Issue. |
| A | 09/04/19 | ATA | First Issue. |

1:5,000 Scale @ A3

0 0.125 0.25 Km



# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Interpolated Peat Depth

| | |
|---|---|
| Drg No | P_EIAR_Fig.10.7.3_P2_IDW_ARE |
| Rev | B |
| Date | 01/05/19 |
| Figure | 10.7-3d |

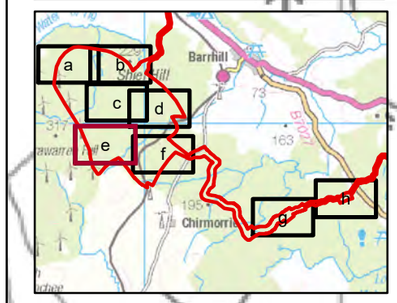
Datum: OSGB36
Projection: OSNG

## Legend

- Application Boundary
- Turbine
- Infrastructure
- Peat Study Area

**Peat Depth Class**

- No Peat
- ≤ 0.50 m
- 0.51 - 1.00 m
- 1.01 - 2.00 m
- 2.01 - 3.00 m
- 3.01 - 4.00 m
- 4.01 - 5.00 m
- 5.01 - 6.00 m
- 6.01 - 7.00 m
- 7.01 - 8.00 m
- 8.01 - 9.00 m
- 9.01 - 10.00 m







| | | | | | | |
|---|---|---|---|---|---|---|
| SCOTTISHPOWER RENEWABLES | | | | | 1:5,000 Scale @ A3 | 0 0.125 0.25 Km |
| | B | 01/05/19 | ATA | Second Issue. | | |
| | A | 09/04/19 | ATA | First Issue. | | |
| | Rev | Date | By | Comment | | |



# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Interpolated Peat Depth

| | | |
|---|---|---|
| Drg No | P_EIAR_Fig.10.7.3_P2_IDW_ARE | |
| Rev | B | Datum: OSGB36 Projection: OSNG |
| Date | 01/05/19 | |
| Figure | 10.7-3e | |

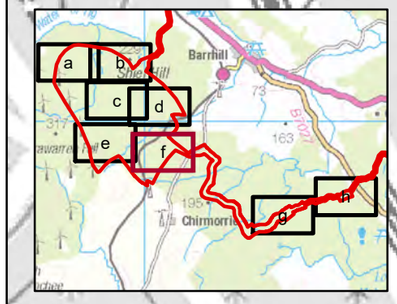
220000

## Legend

- Application Boundary
- Turbine
- Infrastructure
- Peat Study Area

**Peat Depth Class**

- No Peat
- ≤ 0.50 m
- 0.51 - 1.00 m
- 1.01 - 2.00 m
- 2.01 - 3.00 m
- 3.01 - 4.00 m
- 4.01 - 5.00 m
- 5.01 - 6.00 m
- 6.01 - 7.00 m
- 7.01 - 8.00 m
- 8.01 - 9.00 m
- 9.01 - 10.00 m

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13

White Loch

193

79

210

200

180

220000

| Rev | Date | By | Comment |
|---|---|---|---|
| B | 01/05/19 | ATA | Second Issue. |
| A | 09/04/19 | ATA | First Issue. |

SCOTTISHPOWER RENEWABLES

1:5,000 Scale @ A3

0 0.125 0.25 Km



# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Interpolated Peat Depth

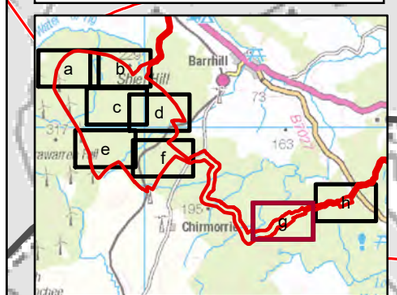
| | | |
|---|---|---|
| Drg No | P_EIAR_Fig.10.7.3_P2_IDW_ARE | |
| Rev | B | Datum: OSGB36 Projection: OSNG |
| Date | 01/05/19 | |
| Figure | 10.7-3f | |

## Legend

- Application Boundary
- Turbine
- Infrastructure
- Peat Study Area

**Peat Depth Class**

- No Peat
- ≤ 0.50 m
- 0.51 - 1.00 m
- 1.01 - 2.00 m
- 2.01 - 3.00 m
- 3.01 - 4.00 m
- 4.01 - 5.00 m
- 5.01 - 6.00 m
- 6.01 - 7.00 m
- 7.01 - 8.00 m
- 8.01 - 9.00 m
- 9.01 - 10.00 m







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|---|---|---|---|
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| A | 09/04/19 | ATA | First Issue. |

1:5,000 Scale @ A3

0 0.125 0.25 Km



# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Interpolated Peat Depth

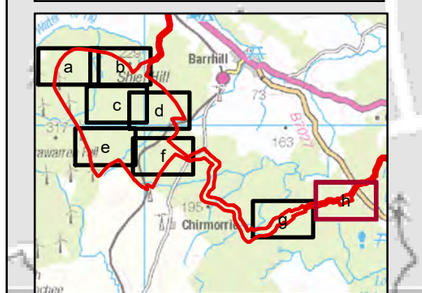
| | | | |
|---|---|---|---|
| Drg No | P_EIAR_Fig.10.7.3_P2_IDW_ARE | | |
| Rev | B | Datum: | OSGB36 |
| Date | 01/05/19 | Projection: | OSNG |
| Figure | 10.7-3g | | |

## Legend

- Application Boundary
- Turbine
- Infrastructure
- Peat Study Area

**Peat Depth Class**

- No Peat
- ≤ 0.50 m
- 0.51 - 1.00 m
- 1.01 - 2.00 m
- 2.01 - 3.00 m
- 3.01 - 4.00 m
- 4.01 - 5.00 m
- 5.01 - 6.00 m
- 6.01 - 7.00 m
- 7.01 - 8.00 m
- 8.01 - 9.00 m
- 9.01 - 10.00 m






SCOTTISHPOWER RENEWABLES

| Rev | Date | By | Comment |
|---|---|---|---|
| B | 01/05/19 | ATA | Second Issue. |
| A | 09/04/19 | ATA | First Issue. |

1:5,000 Scale @ A3

0 0.125 0.25 Km



# Arecleoch Windfarm Extension

TA 10.7 Phase 2 Peat Depth and Coring Report

Phase 2 Interpolated Peat Depth

| | |
|---|---|
| Drg No | P_EIAR_Fig.10.7.3_P2_IDW_ARE |
| Rev | B |
| Date | 01/05/19 |
| Figure | 10.7-3h |

Datum: OSGB36
Projection: OSNG