

Technical Appendix 8.5: Peat Depth Survey Results

Technical Appendix 8.5: Peat Depth Survey Results

1.1 Introduction

- 1.1.1 Ramboll was commissioned by the Applicant to undertake peat depth and coring survey to aid the design process and to inform an assessment of the nature and condition of the peatland on the Site.
- 1.1.2 This Technical Appendix has been produced, in accordance with guidance published by the Scottish Environment Protection Agency (SEPA), NatureScot, and the Scottish Government, which is referenced in the following sections.
- 1.1.3 This Technical Appendix is supported by the following figures (**EIAR Volume 3a**):
- **Figure 1.1: Site Location;**
 - **Figure 8.3: Superficial Geology;**
 - **Figure 8.4: Bedrock Geology;**
 - **Figure 8.6: Peat Depths;** and
 - **Figure 8.7: SNH Carbon and Peatland Map 2016 Extract.**
- 1.1.4 The following annexes are included at the end of this Technical Appendix:
- **Annex 8.5.1: Peat Coring Data;** and
 - **Annex 8.5.2: Stage 2 Peat Survey Photographs.**

1.2 The Site and Study Area

- 1.2.1 The 'Site' (defined by the application boundary on **Figure 1.1 (EIAR Volume 3a)** covers an area of approximately 2,554.5 hectares (ha) and is located north of Leadhills village, south of Abington village and west of the A74(M) motorway.
- 1.2.2 The Site predominantly comprises open moorland, improved grassland and semi-improved grassland, with areas of forestry located in the valleys, predominantly to the east of the B797.
- 1.2.3 The Site terrain is undulating with multiple hills within the boundary such as Ravengill Dod (499 m AOD), Coom Dod (553 m AOD), Hunt Law (523 m AOD) and Brown Dod (489 m AOD). This landscape is typical of the wider location within the Southern Uplands.
- 1.2.4 There are multiple watercourses and waterbodies located within the Site, including tributaries of the River Clyde such as Glengonnar Water through the centre of the Site and Snar Water in the west. The River Clyde lies to the east (approximately 1 km distance at its closest point) and Elvan Water runs along the southern extent of the Site boundary.
- 1.2.5 There is one statutory site designated for nature conservation within the Site boundary; the Raven Gill Site of Special Scientific Interest (SSSI) which is designated for geology. No development is proposed with the SSSI.
- 1.2.6 The British Geological Survey's (BGS) 'Geology Viewer'¹, shows the superficial deposits beneath the Site to predominately be unmapped, with some areas of Till – Diamicton and smaller areas of peat, the latter being mapped predominately in the southeast of the Site, as shown in **Figure 8.3**.

- 1.2.7 The underlying bedrock of the Site comprises predominately of the Kirkcolm Formation (Wacke), with the Portpatrick Formation (Wacke) underlying the southeast portion of the Site. There are small areas of Crawford Group (Chert) which is faulted, shown crossing the Site in a northeast to south westerly direction, and this comprises lava, chert, tuff and mudstone succession. This is shown in **Figure 8.4**.

- 1.2.8 A review of the SNH Carbon and Peatland Map (2016)², an extract of which is shown on **Figure 8.10**, shows whilst a large proportion of the Site is not mapped as peatland, areas of Class 1, Class 3 and Class 5 peatland are present. Class 1 peatland, which is mapped as present in several discrete areas of the Site, is defined as 'nationally important carbon rich soils, deep peat and priority peatland habitat', and 'likely to be of high conservation value'. Class 3 peat is described by an area in which 'most soils are carbon-rich soils with some areas of deep peat' and where 'dominant vegetation cover is not priority peatland habitat but is associated with wet and acidic type'. Class 5 peat is defined as 'peat soil' that is absent of peatland vegetation and may include areas of bare peat soil.

1.3 Methodology

- 1.3.1 Peat surveys were undertaken at the Site to understand the baseline peat conditions and potential constraints, and to inform the design of the Proposed Development in order to minimise, as far as practicable, the potential direct and indirect effects on peat and carbon rich soils.
- 1.3.2 The following surveys were undertaken:
- Stage 1 peat probing undertaken by Ramboll in December 2024 and by Fluid Environmental Consulting Limited in January 2025; and
 - Stage 2 peat probing and coring undertaken by Fluid Environmental Consulting in November 2025 and February 2026.
- 1.3.3 Historical publicly available peat probing data³ from a survey conducted in 2018 that covered a wider area outside of the Site was also used.
- 1.3.4 Peat probing and coring followed relevant guidance on peatland surveys^{4,5}. The methods employed for peat depth probing and peat coring are detailed further below.

Stage 1 Peat Probing

- 1.3.5 The Stage 1 survey is a preliminary, low-density survey and was carried out on a 100 m grid within areas of likely peatland. The probing was carried out using collapsible avalanche probes, allowing for probing in excess of 6 m. This peat depth data along with other environmental and engineering constraints were used to inform the layout of the Proposed Development.
- 1.3.6 The survey points and field data were collected using a handheld Trimble GPS unit. Peat depth data was modelled using Inverse Distance Weighted (IDW) interpolation in GIS software, and a depth model generated using incremented peat depth categories.

Stage 2 Peat Probing and Coring

- 1.3.7 The high-density probing during the Stage 2 surveys was carried out along the access tracks, and in the planned locations for other permanent and temporary infrastructure associated with the Proposed Development. The sampling pattern comprised:

¹ British Geological Survey Online Viewer (<https://geologyviewer.bgs.ac.uk/>)

² Scottish Natural Heritage. (2016). Carbon and Peatland 2016 Map (http://map.environment.gov.scot/soil_maps/)

³ Data was taken from the Harryburn wind farm consent application, which was submitted in 2018. Available online: <https://www.energyconsents.scot/ApplicationDetails.aspx?cr=EC00005277>, access 26.03.2026

⁴ Scottish Government, Scottish Natural Heritage, SEPA. (2017). Peatland Survey. Guidance on Developments on Peatland. Available at: <https://www.gov.scot/publications/peatland-survey-guidance/>

⁵ Scottish Renewables and SEPA (2012). Development on Peatlands. Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and the Minimisation of Waste.

- Proposed new access tracks: the alignment was probed at 50 m intervals along the track and at points every 10 m perpendicular to the centreline on either side of the proposed track; and
 - Other infrastructure (turbines, turbine hardstanding areas, borrow pit search areas, substation, BESS compound and temporary construction compounds): peat probing was carried out on a 10 m grid to cover the area of the proposed footprint and outside of this within an approximate 30 m study area.
- 1.3.8 Again, this was carried out using collapsible avalanche probes, allowing for probing in excess of 6 m, and data collected using a handheld Trimble GPS unit.
- 1.3.9 The peat probe locations are shown in **Figure 8.6 (EIAR Volume 3a)**.
- 1.3.10 Peat cores were taken using a Russian auger, with a sample volume of 0.5 litre (l), and a number of field tests and observations were undertaken. The peat core probing results are included in **Annex 8.4.1** of this Technical Appendix, and records taken include:
- Depth of acrotelm;
 - Degree of humification using the Von Post classification;
 - Fine fibre content, based on scale of F0 (none) to F3 (very high);
 - Coarse fibre content, based on scale of R0 (none) to R3 (very high);
 - Water content, based on scale of B1 (dry) to B5 (very wet); and
 - Substrate underlying the peat where this was possible.
- 1.3.11 A peat depth probe was taken adjacent to the core location, and cores were photographed.
- 1.3.12 Peat coring locations were selected based on where key infrastructure was proposed and to achieve a spread of peat core locations across the Site in order to provide useful information on the condition of the peat that would potentially be affected by the Proposed Development.
- 1.3.13 During the Stage 2 peat probing and coring survey, observations were made on aspects of the peatland such as its condition and the presence of drainage features. Photographs were taken of notable features and are included with **Annex 8.4.2** of this Technical Appendix.

1.4 Limitations

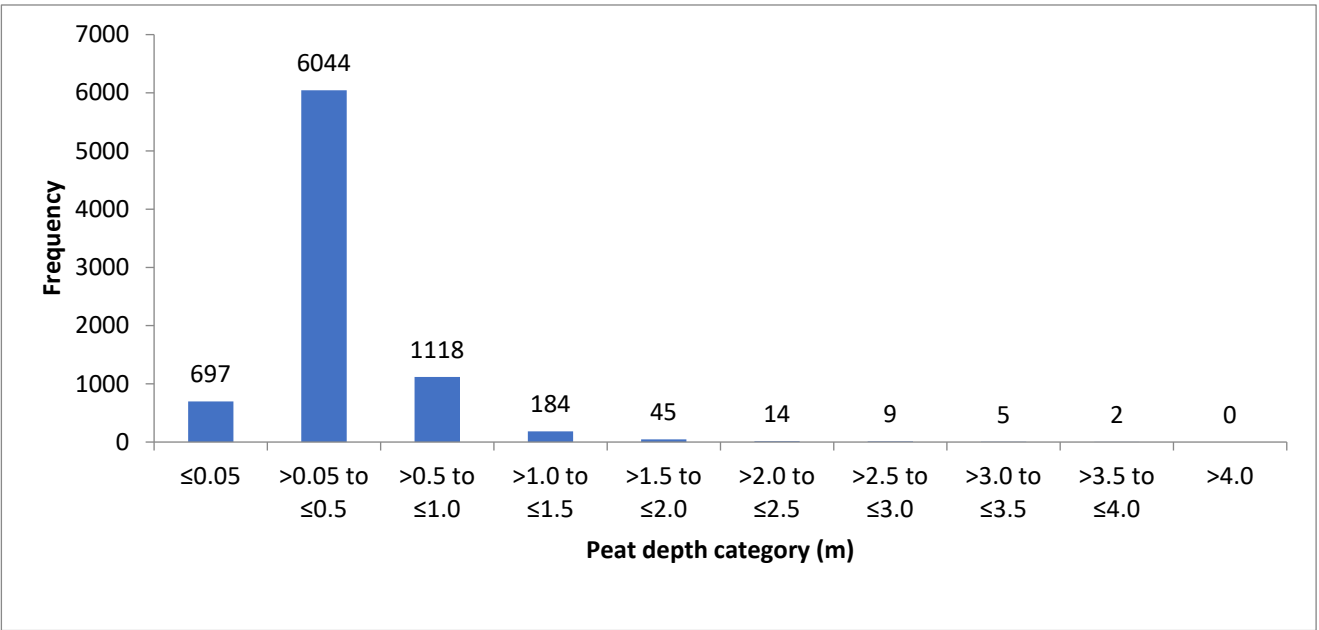
- 1.4.1 Peat probing and mapping has been used to inform the design process, at strategic points in the design evolution of the Proposed Development. However, there are some differences between the final design and the extent of the peat survey results based on design changes made through this process, as a result of microsites.
- 1.4.2 It is considered that the peat depth data collected, and interpolations derived from these data, are representative of the Site and have adequately informed the layout of the Proposed Development and are sufficient to inform a robust Peat Landslide Hazard Risk Assessment and outline Peat Management Plan.
- 1.4.3 Should turbines be microsites outside of the areas covered by the Stage 2 peat probing, further targeted peat probing would be undertaken post application.

1.5 Results

Peat Probing

- 1.5.1 A combined total of 9,015 peat depth probes were taken during the Stage 1 and Stage 2 peat surveys, comprising 897 peat depth probes during the Stage 1 surveys and 8,118 peat depth probes across the two Stage 2 surveys. This was supplemented by an additional 1,502 peat depth probe data points from the third party 2018 data.
- 1.5.2 The Stage 1 and third party 2018 data covered a wider area than the Site and were used to inform the early design stages. The Stage 2 surveys were within the Site and focused on the locations of infrastructure associated with the Proposed Development, to provide detailed information on the peatland likely to be impacted by the Proposed Development.
- 1.5.3 **Figure 8.6 (EIAR Volume 3a)** shows the results of the peat depth surveys at the Site, as well as the specific depth class at each sample location. Additionally, **Figure 8.6** shows the indicative peat depth contours, which is based on IDW data interpolation of the survey results.
- 1.5.4 Graph 1 presents the frequency of peat probe results from the Stage 2 peat surveys within each peat depth category. The Stage 2 survey dataset provides the most representative assessment of the condition of the peatland likely to be impacted by the Proposed Development.

Graph 1 Peat Depth Frequency Distribution



- 1.5.5 The definition for deep peat used in this Technical Appendix comprises areas of soil with a peat layer more than 1 m deep in line with the Joint Nature Conservation Committee (JNCC) report 'Towards an assessment of the state of UK Peatlands'⁶.
- 1.5.6 The peat depth survey results indicate that the footprint of the Proposed Development is predominately underlain by areas where either no peat is present or a shallow depth of peat is present, which can be considered as organo-mineral soil (approximately 83% of the Stage 2 peat depth probes recorded peat depths less than or equal to 0.5 m depth). Further, approximately 97% of the Stage 2 peat depth probes recorded peat depths less than or equal to 1 m in depth.
- 1.5.7 The Stage 2 peat depth survey results represented in Graph 1 are described as follows:

⁶ Joint Nature Conservation Committee, 2011. Towards an assessment of the state of UK Peatlands, JNCC report No. 445.

- 697 no. samples (8.6%) located on land with no peat present (≤ 0.05 m depth of peat);
 - 6044 no. samples (74.5%) located on land with > 0.05 m and ≤ 0.5 m depth of peat or organo-mineral soil;
 - 1118 no. samples (13.8%) located on land with > 0.5 m and ≤ 1.0 m depth of peat;
 - 184 no. samples (2.3%) located on land with > 1.0 m and ≤ 1.5 m depth of peat;
 - 45 no. samples (0.6%) located on land with > 1.5 m and ≤ 2.0 m depth of peat; and
 - 30 no. samples (0.4%) located on land with > 2.0 m and ≤ 4.0 m depth of peat.
- 1.5.8 The maximum peat depth recorded during the Stage 2 surveys was 3.7 m and the average (mean) was 0.36 m.
- 1.5.9 Table 8.5.1 indicates the maximum and average (mean and median) peat depth within the areas of the proposed footprints for the Proposed Development infrastructure.

Table 8.5.1: Peat depth within the footprint of the Proposed Development			
Infrastructure element	Peat depth (m) within proposed footprint		
	Maximum	Mean	Median
Hardstanding T1	1.05	0.42	0.39
Hardstanding T2	0.75	0.31	0.30
Hardstanding T3	0.75	0.45	0.47
Hardstanding T4	0.30	0.11	0.10
Hardstanding T5	0.75	0.33	0.29
Hardstanding T6	0.82	0.51	0.50
Hardstanding T7	0.70	0.47	0.48
Hardstanding T8	0.82	0.42	0.43
Hardstanding T9	0.79	0.38	0.36
Hardstanding T10	0.45	0.26	0.27
Hardstanding T11	0.87	0.46	0.46
Hardstanding T12	0.71	0.53	0.54
Hardstanding T13	0.51	0.27	0.29
Hardstanding T14	0.51	0.12	0.11
Hardstanding T15	0.55	0.20	0.19
Hardstanding T16	0.55	0.46	0.48
Hardstanding T17	0.48	0.19	0.18
Hardstanding T18	0.65	0.42	0.44
Hardstanding T19	0.57	0.31	0.33
Hardstanding T20	1.04	0.39	0.29
Hardstanding T21	0.35	0.17	0.16
Substation	0.85	0.34	0.34
BESS	0.82	0.34	0.32
Borrow pit search area BP1	0.71	0.26	0.25
Borrow pit search area BP2	0.65	0.29	0.29
Borrow pit search area BP3	1.00	0.28	0.24
Borrow pit search area BP4	0.90	0.23	0.21

Table 8.5.1: Peat depth within the footprint of the Proposed Development			
Infrastructure element	Peat depth (m) within proposed footprint		
	Maximum	Mean	Median
Indicative Construction Compound - CC1	0.66	0.25	0.26
Indicative Construction Compound - CC2	0.44	0.21	0.19
Indicative Construction Compound - CC3	1.29	0.46	0.45
Indicative Construction Compound - CC4	0.61	0.25	0.24
Access tracks	2.02	0.34	0.30

- 1.5.10 The peat probe depth and interpolated contours are shown on **Figure 8.6 (EIAR Volume 3a)**. It can be seen from **Table 8.5.1** and **Figure 8.6** that most of the permanent infrastructure of the Proposed Development (turbines, turbine hardstanding, substation and BESS compounds) has been sited in areas where the mean peat depth is expected to be 0.5 m or less (exceptions comprising the hardstanding for turbines T6 and T12 where the mean peat depth is 0.51 m and 0.53 m respectively). The proposed new access tracks do pass through some areas of deep peat within the Site, particularly to the west of turbine T16, which have not been feasible to completely avoid.

Core Sample Results

Overview

- 1.5.11 A total of 38 peat core samples were taken at the proposed locations for key infrastructure associated with the Proposed Development. The results of the peat core sampling are presented in full in Annex 8.5.1 of the Technical Appendix.

Depth of Acrotelm

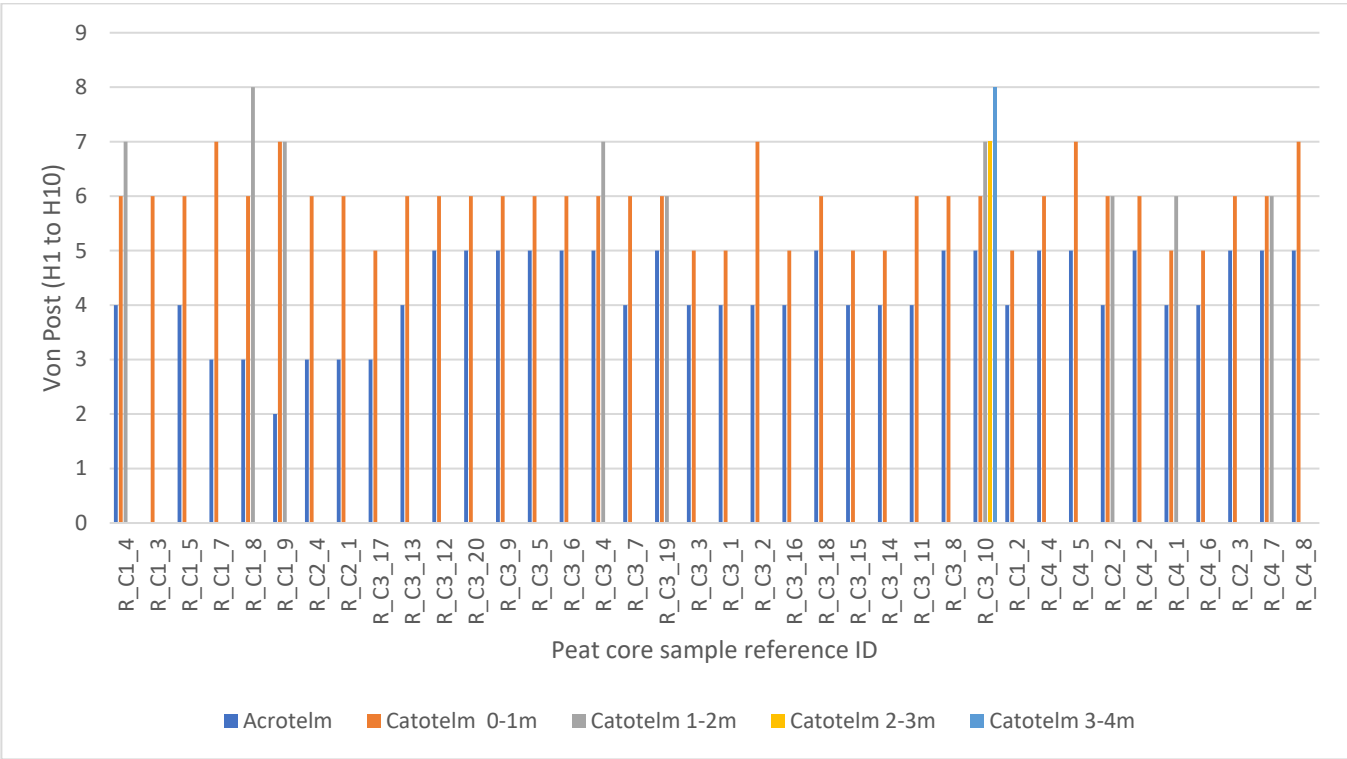
- 1.5.12 The acrotelm and catotelm represent two distinct layers within undisturbed peat that control the hydrological regime. The catotelm is the bottom layer of peat that is mostly below the water table. The acrotelm overlies the catotelm and is the 'living' layer in which most water table fluctuations 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.
- 1.5.13 The depths of the acrotelmic layer of peat within each peat core sample was recorded. The mean depth of acrotelm recorded was 0.14 m.
- 1.5.14 In the context of any development, it is recommended that for the purposes of construction and subsequent reinstatement, that where a sufficient peat depth exists, the top 50 cm of material should be treated as acrotelm. This approach will allow excavation of intact turves for reinstatement purposes where they are present, which will 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 may contain a seedbank, particularly in open habitats, which will aid re-vegetation of reinstatement areas.

Von Post (Degree of Humification)

- 1.5.15 An estimate of the degree of humification according to the Von Post scale was carried out on samples at all core locations, for each 1 m fraction and for the acrotelm. The criteria associated with the Von Post scale is included in **Table 8.5.2**.

Table 8.5.2: Von Post Scale for Degree of Humification	
Von Post Scale	Humification Description (Decomposition, Plant Material Present, Water Content, Character)
H1	Completely undecomposed peat free of amorphous material. On squeezing, clear colourless water is pressed out.
H2	Nearly undecomposed peat, free of amorphous material, yielding only yellowish brown water on pressing.
H3	Very slightly decomposed peat, containing a little amorphous material. On squeezing, muddy brown water but no peat passes between the fingers. Residue is not pasty.
H4	Slightly decomposed peat containing some amorphous material. Strongly muddy brown water but no peat passes between the fingers. Residue is somewhat pasty.
H5	Moderately decomposed peat containing a fair amount of amorphous material. Plant structure recognisable though somewhat vague. On squeezing, some peat but mainly muddy water issues. Residue is strongly pasty.
H6	Moderately decomposed peat with a fair amount of amorphous material and indistinct plant structure. On pressing, about one third of the peat passes between the fingers. Residue is strongly pasty, but shows the plant structure more distinctly than in unsqueezed peat.
H7	Strongly decomposed peat with much amorphous material and faintly recognisable plant structure. On squeezing, about one half of the peat is extruded. The water is very dark in colour.
H8	Strongly decomposed peat with much amorphous material and very indistinct plant structure. On squeezing, two thirds of the peat and some water passes between the fingers. Residue consists of plant tissues capable of resisting decomposition (roots, fibres, wood, etc.).
H9	Practically fully decomposed peat with almost no recognisable plant structure. Nearly all the peat squeezed between the fingers as a uniform paste.
H10	Completely decomposed peat with no discernible plant structure. On squeezing, all the peat, without water, passes between the fingers.

1.5.16 The results are shown in Graph 2 below, where the vertical axis refers to the Von Post scale of peat decomposition (on a scale of H1 to H10).



Graph 2: Von Post Scale of Humification

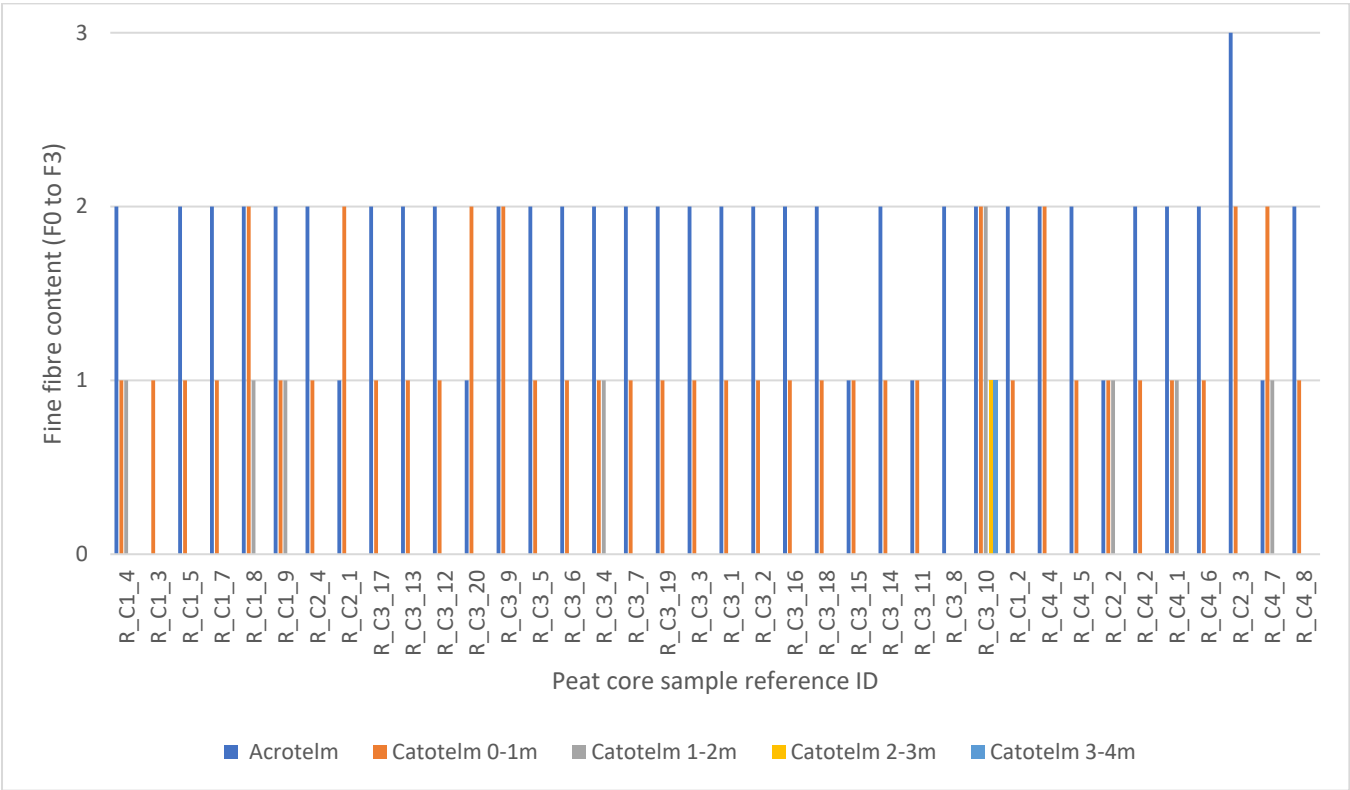
1.5.17 Graph 2 shows how the degree of humification increases the deeper the layer of peat, as is to be expected. The degree of humification for the catotelmic layers across the core samples ranged from H5 (moderately decomposed peat) to H8 (strongly decomposed peat).

Fibrous Content

1.5.18 The proportions of fine and course fibres within the peat samples were derived in the field according to the Hobbs⁷ scale, where F0/R0 indicate no fine/ coarse fibre content to F3/R3 which are indicative of high fine/ coarse fibre respectively.

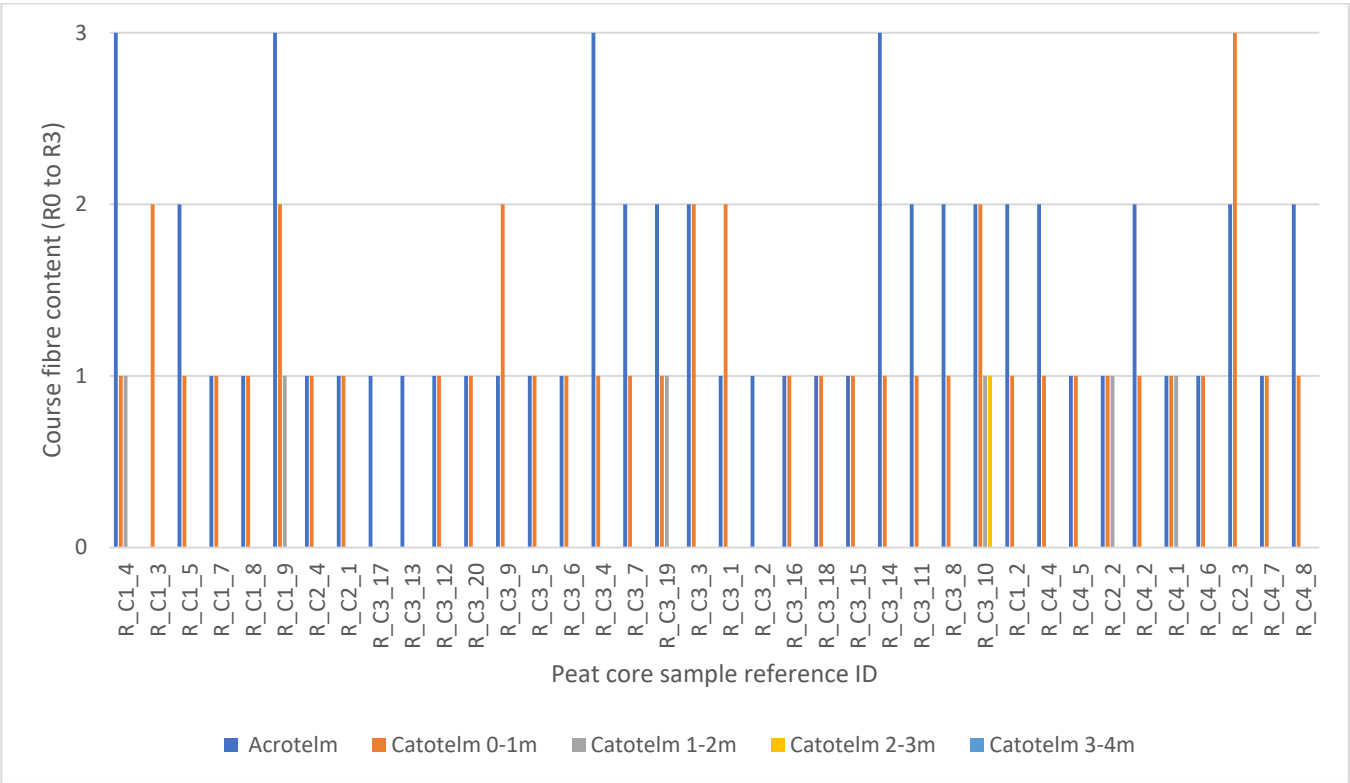
1.5.19 Graph 3 presents the results for the analysis of fine fibre content across the peat core samples, for the acrotelm and each subsequent 1 m fraction of catotelm.

⁷ Hobbs, N.B. (1986).Mire morphology and the properties and behaviour of some British and foreign peats. QJEG, London



Graph 3: Fine Fibrous Content

- 1.5.20 Graph 3 indicates the acrotelm layers within the majority of the peat cores samples had a low to moderate fine fibre content (F1 to F2 respectively), and the catotelm layers were typically recorded to have low fine fibre content (mostly F1).
- 1.5.21 Graph 4 presents the results for the analysis of course fibre content across the peat core samples, for the acrotelm and each subsequent 1 m fraction of catotelm.

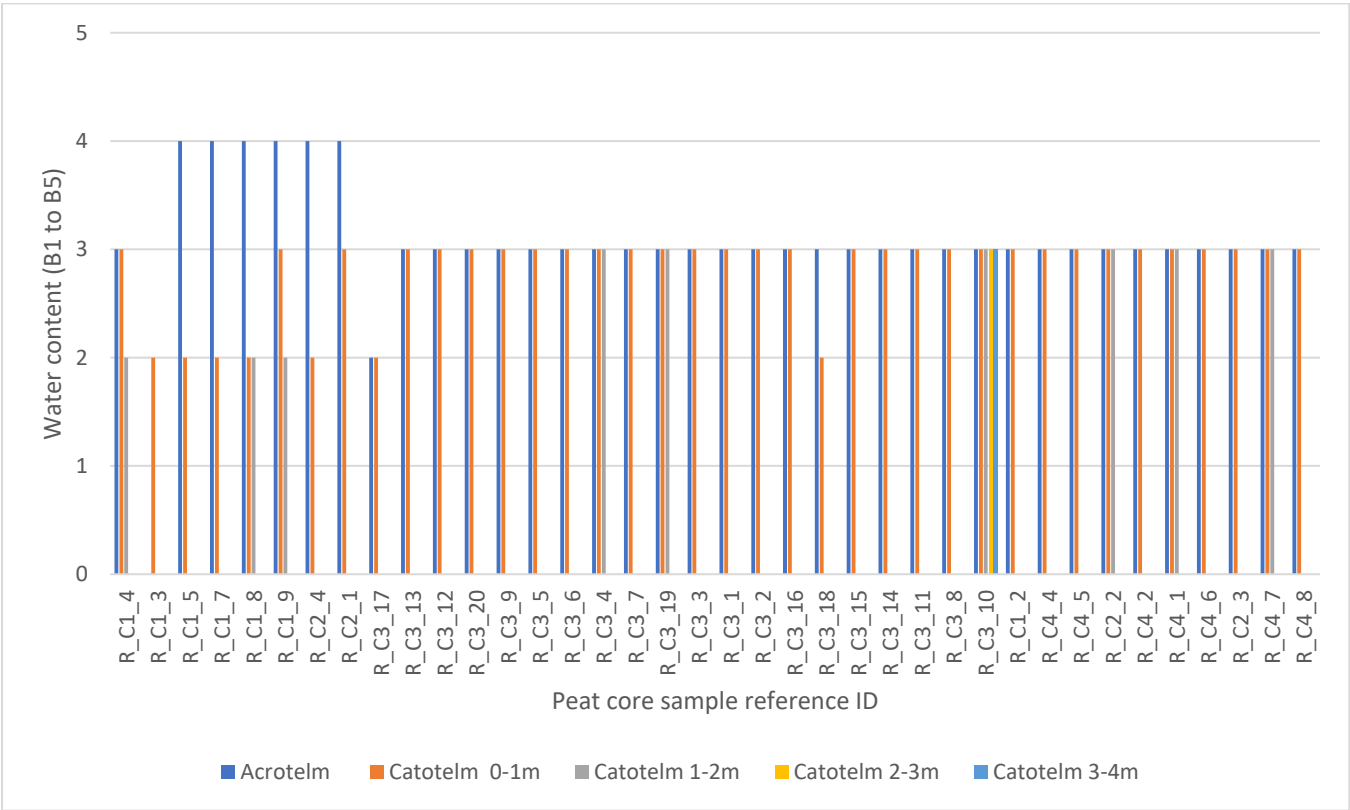


Graph 4: Course Fibrous Content

- 1.5.22 Graph 4 indicates a variable acrotelm course fibre content across the peat core samples, ranging from low to high (R1 to R3 respectively). The catotelmic layers were typically recorded as having a low to moderate course fibre content (R1 to R2).

Water Content

- 1.5.23 The water content of the samples was determined in the field using the Hobbs⁷ scale, where B1 is dry and B5 is very wet. The results are summarised in Graph 5.



Graph 5: Water Content

1.5.24 Water content was typically recorded to be B3 (moderately wet) across the core samples.

Observations on peatland condition

1.5.25 Evidence of peat erosion, including areas of bare peat were recorded during the surveys, as well as drainage features within the peatland. These were photographed and included within Annex 8.5.2 of this Technical Appendix.

1.5.26 This supports there being some opportunity for peatland restoration within the Site.

1.6 Summary

1.6.1 Peat surveys were carried out at the Site including peat depth probing and coring. A combined total of 10,517 peat depth probes were used to inform the design of the Proposed Development and provide information on the peatland likely to be affected. A total of 38 peat core samples were taken and analysed at the proposed locations for key infrastructure associated with the Proposed Development.

1.6.2 The peat depth survey results indicate that the footprint of the Proposed Development is predominately underlain by areas where either no peat is present or a shallow depth of peat is present, which can be considered as organo-mineral soil (approximately 83% of the Stage 2 peat depth probes recorded peat depths less than or equal to 0.5 m depth). Further, approximately 97% of the Stage 2 peat depth probes recorded peat depths less than or equal to 1.0 m in depth.

1.6.3 Most of the permanent infrastructure of the Proposed Development (turbines, turbine hardstanding, substation and BESS compounds) has been sited in areas where the mean peat depth is expected to be 0.5 m or less (exceptions comprising the hardstanding for turbines T6 and T12 where the mean peat depth is 0.51 m and 0.53 m respectively). The proposed new access tracks do pass through some areas of deep peat within the Site, particularly to the west of turbine T16, which have not been feasible to completely avoid.

1.6.4 The maximum peat depth recorded during the Stage 2 peat surveys, which were concentrated in the areas of the Proposed Development infrastructure, was 3.7 m and the average (mean) was 0.36 m.

1.6.5 Whilst the mean depth of the acrotelm from the peat core sample locations was recorded to be 0.14 m, it is recommended that a depth of acrotelm of 0.50 m is assumed in order to ensure the excavation of intact turves for peat reinstatement purposes.

1.6.6 The peat core sampling indicated the degree of humification across the Site to be variable, ranging from H5 (moderately decomposed peat) to H8 (strongly decomposed peat) within the catotelmic layers.

1.6.7 Concerning the fibrous content, the peat core samples typically indicated a low fine fibre content and a low-to-moderate course fibre content across the catotelmic layers.

1.6.8 Water content was typically recorded to be B3 (moderately wet) across the core samples.

1.6.9 Evidence of peat erosion, including areas of bare peat were recorded during the surveys, as well as drainage features within the peatland, supporting there to be some opportunity for peatland restoration within the Site.

Annex 8.5.1: Peat Coring Data

Peat core reference ID	Easting	Northing	Peat depths and characteristics			Comments on Core	Comments on Location	Von Post H scores				
			Actual Peat Depth (m)	Acrotelm Thickness (m)	Catotelm Thickness (m)			Acrotelm Von Post	Catotelm Von Post 0-1m	Catotelm Von Post 1-2m	Catotelm Von Post 2-3m	Catotelm Von Post 3-4m
R_C1_4	288279	619020	1.15	0.10	1.05	Silty Clay at 1.15m	Open moor, gentle slope	H4	H6	H7		
R_C1_3	288319	618470	0.50	0.00	0.50	Silt at 0.90m	Boggy moor, flat		H6			
R_C1_5	286906	616412	0.37	0.17	0.20	Gritty silt at 0.38m	Open moor with heather, flat	H4	H6			
R_C1_7	286383	617090	0.70	0.10	0.60	Bedrock at 0.70m	Boggy moor with sphagnum, flat	H3	H7			
R_C1_8	286495	617085	1.30	0.10	1.20	Wood fragments at 0.20m, Silt at 1.35m	Open moor, gentle slope	H3	H6	H8		
R_C1_9	286976	618237	1.80	0.10	1.70	Wood fragments from 1.55m to 1.70m. Rock at 1.80m	Boggy moor with sphagnum, flat	H2	H7	H7		
R_C2_4	287283	617756	0.90	0.10	0.80	Rock at 0.90m	Boggy moor, flat	H3	H6			
R_C2_1	287366	616989	0.90	0.10	0.80	Wood fragments throughout, gritty silt at 0.90m	Open moor, gentle slope	H3	H6			
R_C3_17	292691	619370	0.25	0.10	0.15	Rock at 0.25m	Open moor, moderate slope	H3	H5			
R_C3_13	293041	618993	0.50	0.15	0.35	Rock at 0.50m	Open moor, fairly flat	H4	H6			
R_C3_12	292391	618655	0.70	0.15	0.55	Rock at 0.70m	Open moor, gentle slope	H5	H6			
R_C3_20	292322	618377	0.95	0.15	0.80	Thin layer of gritty silt at 0.95m	Open moor, gentle slope	H5	H6			
R_C3_9	292019	617796	0.40	0.15	0.25	Rock at 0.40m	Open moor, gentle slope	H5	H6			
R_C3_5	290563	617436	0.35	0.20	0.15	Gritty silt at 0.35m	Open moor, gentle slope	H5	H6			
R_C3_6	291274	617349	0.70	0.20	0.50	Rock at 0.70m	Open moor, fairly flat	H5	H6			
R_C3_4	290475	617965	1.95	0.20	1.75	Rock at 1.95m	Open moor, fairly flat	H5	H6	H7		
R_C3_7	290707	618054	0.40	0.10	0.30	Rock at 0.40m	Open moor, gentle slope	H4	H6			
R_C3_19	290507	617760	1.30	0.20	1.10	Wood fragments at 0.80m. Gritty silt at 1.30m	Open moor, fairly flat	H5	H6	H6		
R_C3_3	290077	618189	0.85	0.20	0.65	Gritty silt at 0.85m	Open moor, fairly flat	H4	H5			
R_C3_1	290429	619409	0.45	0.15	0.30	Wood fragments at 0.45m. Gritty silt at 0.45m	Open moor, gentle slope	H4	H5			
R_C3_2	290257	618741	0.30	0.10	0.20	Gritty silt at 0.30m	Open moor, moderate slope	H4	H7			
R_C3_16	291265	618639	0.15	0.05	0.10	Rock at 0.15m	Open moor, fairly flat	H4	H5			
R_C3_18	291427	619126	0.90	0.15	0.75	Silty clay at 0.90m	Open moor, fairly flat	H5	H6			
R_C3_15	291173	619076	0.25	0.10	0.15	Gritty silt at 0.25m	Open moor, moderate slope	H4	H5			
R_C3_14	291780	619505	0.60	0.15	0.45	Gritty silt at 0.60m	Open moor, fairly flat	H4	H5			
R_C3_11	291754	618465	0.80	0.15	0.65	Gritty silt at 0.80m	Open moor, moderate slope	H4	H6			
R_C3_8	291356	617914	0.30	0.15	0.15	Gritty silt at 0.30m	Open moor, gentle slope	H5	H6			
R_C3_10	291680	617866	3.25	0.20	3.05	Rock at 3.25m	Open moor, fairly flat	H5	H6	H7	H7	H8
R_C1_2	288252	617764	0.60	0.15	0.45	Gritty silt at 0.60m	Open moor, gentle slope	H4	H5			
R_C4_4	288188	618628	0.60	0.15	0.45	Rock at 0.60m	Open moor, gentle slope	H5	H6			

Peat core reference ID	Easting	Northing	Peat depths and characteristics			Comments on Core	Comments on Location	Von Post H scores				
			Actual Peat Depth (m)	Acrotelm Thickness (m)	Catotelm Thickness (m)			Acrotelm Von Post	Catotelm Von Post 0-1m	Catotelm Von Post 1-2m	Catotelm Von Post 2-3m	Catotelm Von Post 3-4m
R_C4_5	287859	618871	0.35	0.15	0.20	Clay at 0.35m	Open moor, fairly flat	H5	H7			
R_C2_2	287552	619080	1.10	0.20	0.90	Clay at 1.20m	Open moor, fairly flat	H4	H6	H6		
R_C4_2	287270	619294	0.40	0.20	0.20	Clay at 0.40m	Open moor, fairly flat	H5	H6			
R_C4_1	287105	618109	1.20	0.15	1.05	Thin layer of gritty silt at 0.50m, more catotelm below. Silt at 1.20m	Open moor, fairly flat	H4	H5	H6		
R_C4_6	289479	620277	0.30	0.15	0.15	Gritty silt at 0.30m	Open moor, moderate slope	H4	H5			
R_C2_3	289029	620055	1.00	0.15	0.85	Rock at 1.00m	Open moor, gentle slope	H5	H6			
R_C4_7	290559	620770	1.55	0.20	1.35	Grit at 1.55m	Open moor, fairly flat	H5	H6	H6		
R_C4_8	291801	621509	0.75	0.20	0.55	Rock at 0.75m	Grassy field, fairly flat	H5	H7			

Peat core reference ID	Water content Von Post B scores					Fine Fibre (F0 = nil, F1 = low content, F2 = moderate content, F3 = high content)					Coarse fibre (R0 = nil, R1 = low content, R2 = moderate content, R3 = high content)				
	Acrotelm Von Post	Catotelm Von Post 0-1m	Catotelm Von Post 1-2m	Catotelm Von Post 2-3m	Catotelm Von Post 3-4m	Acrotelm	0-1m	1-2m	2-3m	3-4m	Acrotelm	0-1m	1-2m	2-3m	3-4m
R_C1_4	B3	B3	B2			F2	F1	F1			R3	R1	R1		
R_C1_3		B2					F1					R2			
R_C1_5	B4	B2				F2	F1				R2	R1			
R_C1_7	B4	B2				F2	F1				R1	R1			
R_C1_8	B4	B2	B2			F2	F2	F1			R1	R1	R0		
R_C1_9	B4	B3	B2			F2	F1	F1			R3	R2	R1		
R_C2_4	B4	B2				F2	F1				R1	R1			
R_C2_1	B4	B3				F1	F2				R1	R1			
R_C3_17	B2	B2				F2	F1				R1	R0			
R_C3_13	B3	B3				F2	F1				R1	R0			
R_C3_12	B3	B3				F2	F1				R1	R1			
R_C3_20	B3	B3				F1	F2				R1	R1			
R_C3_9	B3	B3				F2	F2				R1	R2			
R_C3_5	B3	B3				F2	F1				R1	R1			
R_C3_6	B3	B3				F2	F1				R1	R1			
R_C3_4	B3	B3	B3			F2	F1	F1			R3	R1	R0		
R_C3_7	B3	B3				F2	F1				R2	R1			
R_C3_19	B3	B3	B3			F2	F1	F0			R2	R1	R1		
R_C3_3	B3	B3				F2	F1				R2	R2			
R_C3_1	B3	B3				F2	F1				R1	R2			
R_C3_2	B3	B3				F2	F1				R1	R0			
R_C3_16	B3	B3				F2	F1				R1	R1			
R_C3_18	B3	B2				F2	F1				R1	R1			
R_C3_15	B3	B3				F1	F1				R1	R1			
R_C3_14	B3	B3				F2	F1				R3	R1			
R_C3_11	B3	B3				F1	F1				R2	R1			
R_C3_8	B3	B3				F2	F0				R2	R1			
R_C3_10	B3	B3	B3	B3	B3	F2	F2	F2	F1	F1	R2	R2	R1	R1	R0
R_C1_2	B3	B3				F2	F1				R2	R1			
R_C4_4	B3	B3				F2	F2				R2	R1			
R_C4_5	B3	B3				F2	F1				R1	R1			
R_C2_2	B3	B3	B3			F1	F1	F1			R1	R1	R1		
R_C4_2	B3	B3				F2	F1				R2	R1			
R_C4_1	B3	B3	B3			F2	F1	F1			R1	R1	R1		
R_C4_6	B3	B3				F2	F1				R1	R1			

Peat core reference ID	Water content Von Post B scores					Fine Fibre (F0 = nil, F1 = low content, F2 = moderate content, F3 = high content)					Coarse fibre (R0 = nil, R1 = low content, R2 = moderate content, R3 = high content)				
	Acrotelm Von Post	Catotelm Von Post 0-1m	Catotelm Von Post 1-2m	Catotelm Von Post 2-3m	Catotelm Von Post 3-4m	Acrotelm	0-1m	1-2m	2-3m	3-4m	Acrotelm	0-1m	1-2m	2-3m	3-4m
R_C2_3	B3	B3				F3	F2				R2	R3			
R_C4_7	B3	B3	B3			F1	F2	F1			R1	R1	R0		
R_C4_8	B3	B3				F2	F1				R2	R1			

Annex 8.5.2: Stage 2 Peat Survey Photographs

Geomorphology Data	
SITE:	Ravengill
CLIENT:	Ramboll UK Limited
SURVEY DATES:	November and December 2025

ID	Grid Reference	Description	Photos	
R1	NS 90538 17726	Revegetated erosion gulley		
R2	NS 90476 17778	Sphagnum pool		
R3	NS 90473 17796	Sphagnum pool / peat erosion feature		
R4	NS 90470 17825	Peat erosion feature		

ID	Grid Reference	Description	Photos	
R5	NS 904609 17846	Peat erosion feature		
R6	NS 90432 17884	Erosion gully		
R7	NS 90048 18331	Peat erosion feature / exposed substrate		
R8	NS 87922 19070	Watercourse valley 2 m x 1 m / small watercourse, width 0.2 m x depth 0.1 m, flows to the northeast		

ID	Grid Reference	Description	Photos	
R9	NS 87296 17138	Small watercourse, width 0.3 m x depth 0.1 m, flows to the southwest		
R10	NS 87635 17012	Small watercourse, width 0.5 m x depth 0.1 m, flows to the south		
R11	NS 87361 16939	Peat erosion feature / small watercourse, width 0.3 m x depth 0.2 m, flows to the north		
R12	NS 87304 16807	Small watercourse, width 0.3 m x depth 0.2 m, flows to the northwest		

ID	Grid Reference	Description	Photos	
R13	NS 87193 16811	Peat erosion feature / small watercourse, width 0.3 m x depth 0.1 m, flows to the northeast		
R14	NS 87089 19161	Watercourse valley / watercourse, width 0.8 m x depth 0.3 m, flows to the northwest		
R15	NS 88425 19213	Drain, width 0.4 m x depth 0.4 m		
R16	NS 91221 17287	Erosion gulley / exposed substrate		

ID	Grid Reference	Description	Photos	
R17	NS 90552 17425	Drain, width 0.45 m x depth 0.35 m		
R18	NS 91722 17847	Peat erosion feature, width 2 m x depth 1.2 m		
R19	NS 92383 17859	Drain, width 0.25 m x depth 0.35 m		
R20	NS 92577 18832	Watercourse, width 4.5 m x depth 0.25 m, flows to the north		

ID	Grid Reference	Description	Photos	
R21	NS 90356 18990	Revegetated erosion gulley, width 10 m x depth 1.5 m		
R22	NS 92361 18545	Drain, width 0.3 m x depth 0.4 m		
R23	NS 87969 17020	Small watercourse, width 0.5 m x depth 0.4 m, flows to southwest		
R24	NS 87382 17203	Small watercourse, width 0.45 m x depth 0.2 m, flows to the southwest		

ID	Grid Reference	Description	Photos	
R25	NS 92570 18849	Track / watercourse, width 1 m x depth 0.3 m, fows to the northwest		
R26	NS 92551 18883	Watercourse valley / watercourse, width 1 m x depth 0.3 m, flows to the northwest		
R27	NS 87922 19070	Watercourse valley / small watercourse, width 0.4 m x depth 0.15 m, flows to the northwest		
R28	NS 87902 19089	Watercourse valley / small watercourse, width 0.3 m x depth 0.1 m, flows to the northwest		

ID	Grid Reference	Description	Photos
R25	NS 91291 19019	Sphagnum pool	
R26	NS 91832 17842	Peat erosion feature / sphagnum pool	
R27	NS 92441 18132	Erosion gully, width 5 m x depth 1.5 m	
R28	NS 92445 18596	Small watercourse, width 0.3 m x depth 0.2 m, flows to the southwest	