Breezy Hill Energy Park

Outline_PMP

Breezy Hill Energy Limited

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Making Sustainability Happen

Revision Record

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Basis of Report

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1.0 Introduction

1.1 General

SLR Consulting Ltd (SLR) was commissioned by Brockwell Energy Limited on behalf of Breezy Hill Energy Limited (the 'Applicant'), to undertake an Outline Peat Management Plan (PMP) for the proposed Breezy Hill Energy Project (the 'Proposed Development'). The Proposed Development is located approximately 13 km south-east of Ayr, 8.5 km south-west of Cumnock and 4.5 km north of Dalmellington, within the North Kyle Forest Estate (NKF) managed by Forestry and Land Scotland (FLS).

The Proposed Development is located adjacent to the North Kyle Energy Project. The Site falls within the East Ayrshire Council (EAC) administrative area, Site centre at British National Grid (BNG) coordinates 248092 612583, as shown on **Figure 8.2.1**.

1.2 Proposed Development

The Proposed Development, detailed on **Figure 8.2.2** will have a maximum total capacity of 140 MW, comprised of the following:

- Up to 20 standalone, three bladed horizontal axis turbines up to 149.9 m tip height, each with a generating capacity of up to 5 MW each, totalling 100 MW generating capacity; and
- A 40 MW BESS will also be included as part of the Proposed Development.

In addition to the turbines and BESS, the Proposed Development will include the following long-term ancillary infrastructure:

- turbine foundations;
- crane hardstands;
- a site entrance;
- internal and private access road network;
- watercourse crossings;
- transformers and underground cables; and
- an on-site substation / switchgear building.

Temporary infrastructure required for construction will include:

- three construction compounds;
- a construction compound for exclusive use by the District Network Operator (DNO);
- crane assist pads;
- blade laydown supports;
- boom supports;
- laydown areas;
- a concrete batching plant; and
- potential excavations/borrow pit workings.

Full details of the Proposed Development are provided in **Chapter 2: Proposed Development.**

1.3 Objectives

The aim of this Outline PMP, undertaken in accordance with best practice guidance, is to ensure that there has been systematic consideration of peat management, and a quantitative assessment takes place through the development process. This outline PMP is required to show:

- that peat has been afforded significant consideration during the design and construction phase of the Proposed Development, should consent be granted;
- how areas of deeper peat have been avoided where technically feasible and how shallow deposits of peat and soils can be safeguarded and used to support the long-term habitat restoration and management proposals, minimising the requirement for peat extraction; and
- how excavated peat will be managed.

1.4 Role of the Peat Management Plan

The PMP is intended to be a working document to be used throughout the key stages of the design, construction, operation, decommissioning and re-instatement phases of the Proposed Development as part of an overall Construction Environmental Management Plan (CEMP). These stages are outlined below:

- Stage 1: Environmental Impact Assessment (EIA)
    - This report forms the Outline PMP and is submitted as part of the EIA Report. From this initial report the PMP will be developed further into a Stage 2 Pre-Construction PMP.
- Stage 2: Post Consent / Pre-Construction
    - The peat mass balance calculations may be further developed prior to the works commencing, following detailed ground investigation or further survey works required to inform detailed design, or that may be required under planning consent conditions.
- Stage 3: Construction Stage
    - Actual peat volumes excavated during construction will be recorded against the overall predicted volumes. Within micrositing allowances, the alignment and design of tracks, tower foundation and associated construction methods will be reviewed to avoid/minimise peat disturbance as much as possible considering the more detailed information available once construction commences. A regular review and update of the peat mass balance table will be undertaken by the appointed Principal Contractor and monitored by the Environmental Clerk of Works (EnvCoW) on-site and made available to regulators as required.

1.5 Legislation and Guidance

The PMP has been compiled in accordance with the following legislation and best practice guidance:

- National Planning Framework for Scotland 4 (NPF4) (Scottish Government, February 2023)[1];

1 Scottish Government (2023). https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2022/11/national-planning-framework-4-revised-draft/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4-revised-draft.pdf

- Scottish Government, Scottish Natural Heritage, SEPA (2017) 'Peat Survey Guidance; Developments on Peatland: Site Surveys'[2];
- SEPA Regulatory Position Statement - Developments on Peat (SEPA, 2010)[3];
- SEPA Regulatory Position Statement– Developments on Peat and Off-Site Uses of Waste Peat (SEPA, 2017)[4];
- Good Practice During Wind Farm Construction, NatureScot (July 2024)[5];
- Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and the Minimisation of Waste (Scottish Renewables and SEPA, 2012)[6];
- The Waste Management Licensing (Scotland) Regulations 2011[7];
- Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments (Scottish Government, January 2017)[8]; and
- Floating Roads on Peat - Report into Good Practice in Design, Construction and Use of Floating Roads on Peat with reference to Wind Farm Developments in Scotland (Forestry Commission Scotland & Scottish Natural Heritage, 2010)[9].

1.5.1 Requirements of National Planning Framework for Scotland 4

The intent of Policy 5 (Soils) of NPF4[1]is "*to protect carbon rich soils, restore peatlands and minimise the disturbance of soils from development*".

The Policy states [5(a)] that development proposals should only be supported if they are designed and constructed:

- in accordance with the mitigation hierarchy by first avoiding and then minimising the amount of disturbance to soils on undeveloped land; and
- in a manner that protects soils from damage including from compaction and erosion, and that minimises soils sealing.

Further [5(c)] confirms *that development proposals on peatland, carbon rich soils, and priority peatland will only be supported if they are:*

- essential infrastructure and there is a specific locational need and no other suitable site;
- the generation of energy from renewable sources that optimises the contribution of the area to greenhouse gas emissions reductions targets;
- small-scale development directly linked to a rural business, farm or croft;
- supporting a fragile community in a rural or island area; or
- restoration of peatland habitats.
- And [5(d)] confirms *that where development on peatland, carbon-rich soils or priority peatland habitat is proposed, a detailed site specific assessment will be required to identify:*

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2 Scottish Government, Scottish Natural Heritage, SEPA (2017) Peatland Survey. Guidance on Developments on Peatland, on-line version only.

3 Scottish Environment Protection Agency. 2010. Regulatory Position Statement – Developments on Peat

4 SEPA (May 2017). SEPA Regulatory Position Statement – Developments on Peat and Off-site Uses of Waste Peat) SEPA Guidance., WST-G-052. Version 1.

5 NatureScot (July 2024), Good Practice During Wind Farm Construction. https://www.nature.scot/doc/good-practice-during-wind-farm-construction

6 Scottish Renewables, Scottish Environment Protection Agency. 2012. Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and the Minimisation of Waste

7 Scottish Government 2011, The Waste Management Licensing (Scotland) Regulations 2011. https://www.legislation.gov.uk/sdsi/2011/9780111012147/contents

8 Peat Landslide Hazard and Risk Assessments (Scottish Government, April 2017)

9 Scottish Natural Heritage, Forestry Commission (August 2010). Floating Roads on Peat

- the baseline depth, habitat condition quality and stability of carbon rich soils;
- the likely effects of the development on peatland, including on soil disturbance; and
- the likely net effects of the development on climate emissions and loss of carbon.

Policy 5 also confirms that the site specific (above) assessment [5(d)] "*should inform careful project design and ensure, in accordance with relevant guidance and the mitigation hierarchy, that adverse impacts are first avoided and then minimised through best practice. A peat management plan will be required to demonstrate that this approach has been followed, alongside other appropriate plans required for restoring and/ or enhancing the site into a functioning peatland system capable of achieving carbon sequestration*".

This Stage 1 Outline PMP considers the protection and safeguarding of peat and seeks to fulfil the requirements of Policy 5(d) with further detail on peatland habitat and peatland restoration provided in Technical Appendix 6.6: Outline Biodiversity Enhancement Management Plan

1.5.2 Mitigation Hierarchy

SEPA has published guidance[3] regarding the mitigation hierarchy for developments on peat, which is summarised below and has been used in development of the outline PMP:

- **Prevention** – The best management option for waste peat is to prevent or limit its production. This can be done through design, positioning infrastructure in shallower peat or through consideration of alternative construction methods or engineering solutions e.g., floated roads or piling solutions;
- **Re-use** – use of peat produced on-site in restoration or reinstatement, provided that its use is fully justified and suitable;
- **Recycling / Recovery / Treatment** – modify peat produced on-site for use as fuel, or as a compost / soil conditioner, or dewater peat to improve its mechanical properties in support to re-use; and
- **Storage** – applying the SEPA guidance, storage of peat up to a depth of 2 m is not classified as a waste, however clarification should be sought from the waste regulator prior to re-use and care must be taken to ensure that it does not cause environmental pollution.

2.0 Baseline Conditions

2.1 Definition of Peat

Peat is defined as an organic soil comprising the partly decomposed plant remains that have accumulated *in situ*, rather than being deposited by sedimentation. When peat forming plants die, they do not decay completely as their remains become waterlogged due to regular rainfall. The effect of waterlogging is to exclude air and hence limit the degree of decomposition. Consequently, instead of decaying to carbon dioxide and water, the partially decomposed material is incorporated into the underlying material and the peat ‘grows’ *in situ*.

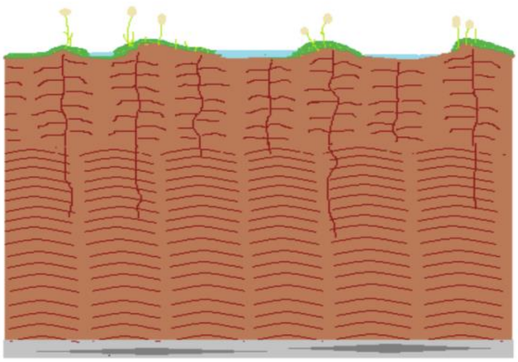
The Scottish Government Peat Landslide Hazard Best Practice Guide (2017)[8] uses the following Joint Nature Conservation Committee (JNCC) report 455 ‘Towards an Assessment of the State of UK Peatlands’ definition for classification of peat deposits:

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

There are two principal types of peat, as shown on **Plate 1-1**:

- The upper (acrotelm) layer in which the water table fluctuates, which is fibrous and comprises plant roots etc. The acrotelm is relatively dry and has some tensile strength and is generally considered to be stable for storage and re-use. Its thickness varies depending on topography such as steepness of slope, peat hags, and hummocks but typically ranges from 0.1 m to 0.6 m deep. Hydraulic conductivity in this layer tends to be higher in relation to distance from the water table. In particular, the acrotelm layer can be affected during periods of drought or as a consequence of drainage.
- The lower (catotelm) layer, which is saturated, sitting permanently below the water table. The catotelm layer is highly decomposed, generally becoming more amorphous/liquid in nature and losing structure with increasing depth. The structure of catotelmic peat tends to disrupt completely on excavation and handling. The catotelm layer is pseudo-fibrous to amorphous and has very low tensile strength making it less suitable for storage and re-use.

Plate 1-1: Drawing of two layered Structure of Active Bog Peatlands above Non-Active Peat[10]



10 Bruneau, P.M.C & Johnson, S.M. 2014. Scotland’s peatland - definitions & information resources. Scottish Natural Heritage Commissioned Report No 701.

2.2 Topography

Based on the digital terrain model available from the BGS Geoindex[11], the topography across the Proposed Development is generally low-lying (260 to 425 m AOD) with typically moderate to steep slopes with steep slopes around hilltops and surface water and river valleys.

2.3 Peatland Classification

The Carbon and Peatland Map 2016[12] indicates that there is no Class 1 or Class 2 peatland located on the site. Class 1 and 2 peatland are considered nationally important carbon-rich soils, deep peat and priority peatland habitat with areas likely to be of high conservation value. In addition, Class 2 peatland is of high restoration potential.

Four turbines (T2, T3, T9 and T10) and approximately 980 m of track are located on Class 3 peatland. Class 3 peatland is not considered priority peatland habitat, however, most of the soils are carbon-rich and areas of deep peat may be present.

The remainder of the Proposed Development is mapped as Class 5 peatland and mineral soils. Class 5 peatland is not associated with peatland habitats, but soils may be carbon-rich and deep peat may be present.

Peat and peat soils throughout and surrounding the Proposed Development have been used intensively over the past century. Across the Proposed Development, plantation forestry is present which has resulted in extensive drainage through deep furrow ploughing, digging of a dense network of collector and feeder drains and the planting of non-native Sitka Spruce and Lodgepole pine further drying and oxidising the surface peat. Further areas have been subject to removal associated with opencast mining within the site.

The Carbon and Peatland classifications are shown in **Chapter 8: Figure 8.4.**

2.4 Hydrology

The Proposed Development is largely within the catchment of the Water of Coyle, with the Burnock Water catchment located in the north-east of the Site. These catchments are part of the wider surface water catchment of the River Ayr which lies to the north-west of the Site.

2.5 Hydrogeology

Information from Scotland's environment map[13] indicates that the centre and south of the Proposed Development is underlain by the Western Midland Valley Sills bedrock aquifer, (Carboniferous to Permian). The centre and north of the Proposed Development is underlain by the Scottish Coal Measures Group. The Western Midland Valley Sills is a low productivity with groundwater flow largely through fractures or sometimes where weathering increases intergranular porosity and permeability. Groundwater flow paths largely follow local surface water catchments. The Scottish Coal Measures, Carboniferous sedimentary aquifer is generally moderate productivity, however, mine voids can artificially increase local aquifer storage. Where the bedrock is not mined, groundwater flow occurs preferentially along natural layers present. Flow is largely through fractures with minor intergranular present.

11 BGS Online Viewer, available at [https://mapapps2.bgs.ac.uk/geoindex/home.html?_ga=2.133433804.376188765.1646739904-1030004651.1646739904]

12 NatureScot, Carbon and Peatland Map 2016, Available online at: map.environment.gov.scot/soil_maps/

13 Scotland's Environment Online Viewer. Available at [https://map.environment.gov.scot/sewebmap/]

3.0 Fieldwork

3.1 Peat Surveys

The following peat depth surveys were undertaken by MacArthur Green, and are detailed within **Technical Appendix 8.1**;

- Phase 1 surveys were undertaken in July 2020 and May/June 2021, with additional surveys in September 2024 and March 2025, additionally survey data for the Polquhairn area of the Site (northwest) was originally gathered by MacArthur Green in 2013 – 2014.
- Phase 2 surveys were undertaken in December 2024, January 2025 and March 2025.
- Additional walkovers were undertaken by SLR in December 2024 to assess the condition of peat at the site, relating to peat stability.

Peat surveys were carried out in accordance with best practice guidance for developments on peatland[2].

Phase 1 peat probing was undertaken on a 100 m grid across the Site, where access allowed, informing the site design such that areas of recorded peat could avoided where technically feasible.

Phase 2 probing saw detailed probing undertaken across the Proposed Development layout, focussing on turbines and ancillary infrastructure areas, typically undertaken using the following pattern:

- Probe turbine centre and every 10 m to the north, east, south, and west, out to 50 m from the centre;
- Probe points every 50 m along the proposed access tracks, with staggered, offset probes 10 m either side of the access track centre line, and at turning heads (allowing for coverage of any micrositing allowance); and
- Other infrastructure locations were probed to an approximate 25 m grid.

The thickness of the peat was assessed using a custom made, collapsible solid steel peat depth probe. This was pushed vertically into the peat to refusal and the depth recorded, together with a unique location number and the co-ordinates from a handheld Global Positioning System instrument (GPS). The accuracy of the GPS was quoted as ±2 m, which was considered sufficiently accurate for this survey. All data was uploaded into a GIS database for incorporation into various figures and analysis assessments.

Where the peat probing met refusal on a hard substrate, the 'feel' of the refusal can provide an insight into the nature of the substrate. The following criteria were used to assess material:

- Solid and abrupt refusal – rock;
- Solid but less abrupt refusal with grinding or crunching sound – sand or gravel or weathered rock;
- Rapid and firm refusal – clay; or
- Gradual refusal – dense peat or soft clay.

Only peat or organo-mineral soil depths were recorded; where the sample point fell on mineral soil/rock the probe depth was recorded as zero.

3.2 Peat Depth

Peat is generally defined as a soil with a surface organic layer in excess of 0.5 m. Where the probing recorded less than 0.5 m thick, it is considered to be a peaty soil (or organo-mineral soil). Soils with a peaty organic horizon over mineral soil are often referred to as 'peaty soils'. These organo-mineral soils are extensive across the UK uplands, but do not meet recognised definitions of peat as they are either shallower than true peat or have a lower carbon density.

A total of 2751 peat probes were undertaken within the Proposed Development site boundary across all survey phases. **Figures 8.2.3** and **8.2.4** detail the interpolated peat depth across the Proposed Development based on the results of the survey work. The interpolation was undertaken using the spline methodology.

3.2.1 Peat Deposits

A summary of the peat depths encountered during probing is detailed in **Table 3-1** below. The results show that deep peat (>1 m) is present across much of the Proposed Development, located primarily on shallow gradients.

The Proposed Development infrastructure has been through several design iterations, informed by multiple phases of peat probing. The development infrastructure has avoided areas of deep peat so far as practicable, whilst taking into consideration other technical and environmental constraints. The existing forestry track network has been utilised where possible, and where tracks cross areas of peat, floated construction is proposed. The average peat depths identified at infrastructure locations is detailed in **Table 3-2**.

Table 3-1: Peat Probing Results Summary

Infrastructure Location		Average Probe Depth (m)
T1	Turbine and Permanent Hardstand	0.72
	Hardstand - Temporary	0.81
T2	Turbine and Permanent Hardstand	0.50
	Hardstand - Temporary	0.69
T3	Turbine and Permanent Hardstand	0.88
	Hardstand - Temporary	0.83
T4	Turbine and Permanent Hardstand	0.93
	Hardstand - Temporary	0.66
T5	Turbine and Permanent Hardstand	0.30
	Hardstand - Temporary	0.30
T6	Turbine and Permanent Hardstand	0.60
	Hardstand - Temporary	0.54
T7	Turbine and Permanent Hardstand	0.84
	Hardstand - Temporary	0.28
T8	Turbine and Permanent Hardstand	0.82
	Hardstand - Temporary	0.76
T9	Turbine and Permanent Hardstand	0.69
	Hardstand - Temporary	0.61
T10	Turbine and Permanent Hardstand	0.65
	Hardstand - Temporary	0.56
T11	Turbine and Permanent Hardstand	0.66
	Hardstand - Temporary	0.65
T12	Turbine and Permanent Hardstand	0.92
	Hardstand - Temporary	1.00
T13	Turbine and Permanent Hardstand	0.56
	Hardstand - Temporary	0.51
T14	Turbine and Permanent Hardstand	1.46
	Hardstand - Temporary	1.60
T15	Turbine and Permanent Hardstand	1.25
	Hardstand - Temporary	1.38
T16	Turbine and Permanent Hardstand	1.53
	Hardstand - Temporary	1.97
T17	Turbine and Permanent Hardstand	1.19
	Hardstand - Temporary	1.48

Infrastructure Location		Average Probe Depth (m)
T18	Turbine and Permanent Hardstand	0.45
	Hardstand - Temporary	0.53
T19	Turbine and Permanent Hardstand	0.67
	Hardstand - Temporary	0.65
T20	Turbine and Permanent Hardstand	0.81
	Hardstand - Temporary	0.85
Substation Compound		0.43
Temporary Construction Compound 1		0.65
Temporary Construction Compound 2		1.15
Temporary Construction Compound 3		0.83
SPEN Compound		0.87
BESS		0.91
Borrow Pit 01		0.65
Borrow Pit 02		0.66
New Track - Borrow Pit 01 track		0.49
New Track - Borrow Pit 02 track		0.55
Borrow Pit 03		0.23
New Track - BESS and Substation track		0.89
New Track - T1-T5 track		0.76
New Track -T7 track Junction		0.74
New Track - T6 track		0.72
New Track - Const Comp 2 track		0.45
New Track - T13 track		0.48
New Track - T15 track junction		0.33
New Track - Site entrance Cut through track		1.66

Table 3-2 Peat Probing Results - Infrastructure

Peat Thickness (m)	No. of Probes	~ Percentage (of total probes undertaken on-site)
0 (no peat)	271	18.7
0.01 – 0.49 (peaty soil)	559	19.0
0.50 – 0.99	806	25.2
1.00 – 1.49	492	15.6
1.50 – 1.99	284	9.2
2.00 – 2.49	149	4.8
2.50 – 2.99	97	3.2
3.00 – 3.49	52	1.7

Peat Thickness (m)	No. of Probes	~ Percentage (of total probes undertaken on-site)
3.50 – 3.99	26	0.8
> 4.0	19	0.6

3.3 Physical Peat Condition

Peat and peat soils surrounding the Proposed Development have been subject to a number of pressures over the past century which include historical coal mining, grazing (deer and sheep) and commercial forestry which has contributed to significant degradation of peat habitats in areas of the Proposed Development. Peatland condition is detailed further in **Technical Appendix 6.1: National Vegetation Classification & Habitat**. Where peat is present, the vast majority is situated on heavily drained and modified peatland, with limited areas of near natural peatland present.

Peat is described using the Von Post classification[14]. Six peat cores were undertaken by MacArthur Green using a peat auger and used to inform interpretations of the underlying peat. Peat samples were undertaken to depths of between 0.3 and 1.77 m bgl and the descriptions are detailed in **Technical Appendix 8.1**.

3.4 Acrotelmic and Catotelmic Layers

Based on the recorded physical peat characteristics within the Proposed Development site it has been assumed that the acrotelm layer is 500 mm thick. The depth underlaying the acrotelm layer is therefore assumed to be the catotelm layer (>500 mm) and is assumed to be the remaining section of the measured peat depth.

14 Von Post, L. and Grunland, E., (1926), 'Sodra Sveriges torvillganger 1' Sverges Geol. Unders. Avh., C335, 1-127.

4.0 Peat Management and Mitigation

The design of the Proposed Development has taken account of a number of environmental and technical constraints. The design sought to avoid areas of thick peat (>1 m), based on survey data, where technically feasible, whilst taking into account other environmental and technical factors such as ecology, ornithology, archaeology, hydrology, topography and existing infrastructure.

The design has evolved through a combination of initial low resolution probing on a 100 m grid, to develop initial designs and then multiple phases of more detailed probing to allow refinements to the design and avoid further areas of extensive deeper peat >1 m.

The detailed peat probing has highlighted the presence of more localised deep peat deposits >1 m which have typically formed in flatter expanses present in areas of proposed infrastructure which the Proposed Development cannot avoid based on other design constraints.

The initial construction phase for the Proposed Development will include soil and peat stripping and excavation activities associated with the construction of the Proposed Development. There are four main types of impact on peat which can occur during construction. These are:

- Loss of structural integrity and peat strength, due to stripping off or damaging the surface vegetation turf, excavation, handling and transporting peat (particularly wet, subsurface peat);
- Erosion and gullying, caused by exposure and desiccation of bare peat surfaces primarily caused by water erosion, due to surface runoff after rainfall;
- Contamination, caused by leaks, spillages or inappropriate laydown of materials; and
- Peat slide, caused by laying wet peat on top of wet peat, laying other heavy materials (including excavated mineral soil or other construction materials) on top of wet peat or by inappropriate stockpiling, such as attempting to create stockpiles of peat that are too high, without bunding, engineering or geotechnical support.

The best practice and control measures detailed in the following sections have been written in accordance with the principles of the Nature Scot (2024)[5] guidance. These measures are designed to prevent the construction impacts from occurring.

As described previously there are two distinct layers of peat; the acrotelm (including the vegetated turves) and the catotelm. These distinct layers should be recognised during peat excavation and reuse activities.

4.1 Excavation

If peat is to be reused or reinstated with the intention that its supported habitat continues to be viable, the following good practice applies:

- Peat will be excavated as turves, including the acrotelm (surface vegetation) and a layer of adjoining catotelm (more humified peat) or as blocks of catotelmic peat.
- The acrotelm will not be separated from its underlying peat, if possible, the full depth of acrotelm layers from the top surface of the peat deposit should be excavated together.
- Turves will be as large as possible to minimise desiccation during storage.
- Peat derived from previously afforested areas will be transported and stored separately due to the high likelihood of disturbance/mixing of the peat structure during afforestation and felling alongside enhanced decomposition. There is also likely to be more limited surface vegetation within these turves.

- Basal peats are likely to be enriched in mineral matter and therefore will be excavated separate to the turves where depth allows.
- Mineral soils will be transported and stored separately to reduce the risk of contamination of excavated peat.
- The timing of excavation of peat will avoid periods of very wet weather and multiple handling of peat will be avoided to reduce the risk of peat losing its structural integrity.

4.2 Temporary Storage

Peat storage will only be required where reinstatement is not immediately possible, and all stored peat will be reinstated at the end of the construction phase. To ensure that the storage locations are suitable in terms of environment, construction practicality and safety, the precise location of temporary peat stockpiles will be determined at a site level following consideration and assessment of suitable areas by the EnvCoW, Geotechnical Engineer and contractor using the guiding principles below:

- Peat turves will be stored in wet conditions or irrigated to prevent desiccation (once dry, peat will not rewet).
- Vegetated turves will not be stacked on top of each other to avoid damage to seeds/vegetation.
- Stockpiling of peat will be in large volumes to minimise exposure to wind and sun but with due consideration for slope stability.
- Excavated peat and topsoil will be stored to a maximum of 1 m thickness (unless otherwise agreed by the Geotechnical Engineer).
- Stockpiles of peat will be isolated from any surface drains and a minimum of 50 m from watercourses, and stockpiles will not be located on areas of deep peat, in order to avoid increasing peat slide risks associated with additional loading.
- Stockpiles will include appropriate bunding to minimise any pollution risks where required. Excavated topsoil would be stored on geotextile matting to promote stability, to a maximum of 1 m thickness.
- Stores of non-turf (catotelm) peat will be bladed off to reduce the surface area and desiccation of the stored peat.
- Areas of steep peat/storage will be monitored during periods of wet weather, or during snow melt, to identify early signs of peat instability.

4.2.1 Temporary Storage Around Infrastructure

Where peat cannot be transferred immediately to an appropriate restoration area, short term storage will be required. The following good practice applies:

- Peat will be stored around the perimeter at sufficient distance from the cut face to prevent overburden induced failure.
- Local gullies, drainage lines, wet ground and steep slopes will be avoided.
- Stored upper turves (incorporating vegetation) will be organised and identified according to National Vegetation Classification (NVC) community (assisted by EnvCoW) for reinstatement adjacent to like communities in the intact surrounding peat blanket.
- Drying of stored peat will be avoided by irrigation (although this is unlikely to be significant for peat materials stored less than 2 months).

Where longer term storage is required (>2months) the following good practice applies:

- Peat generated will be transported directly to its allocated restoration area to minimise the volume being stockpiled, with the possibility of drying out.
- Stores of catotelmic peat will be bladed off to reduce surface area and minimise desiccation.
- Monitoring of large areas after wet weather or snow melt.

4.3 Transport

The following good practice applies to transport:

- movement of turves should be kept to a minimum once excavated, and therefore it is preferable to transport peat planned for translocation and reinstatement to its destination at the time of excavation; and
- if heavy goods vehicles (HGVs) / dump trucks that are used for transporting non-peat material are also to be used for peat materials, measures should be taken to minimise cross-contamination of peat soils with other materials.

4.4 Handling

Following refinement of the peat model, a detailed storage and handling plan should be prepared forming part of the detailed CEMP, including:

- best estimate excavation volume at each infrastructure location (including peat volumes split into area/volume of acrotelm, ‘topsoil’ or ‘turf’, and volume of catotelm) which would be achieved by undertaking additional probing in line with current guidance;
- volume to be stored locally and volume to be transferred directly on excavation to restoration areas elsewhere (e.g. peat storage areas) in order to minimise handling;
- location and size of storage area relative to tower foundations and natural peat morphology / drainage features; and
- irrigation requirements and methods to minimise desiccation of excavated peat during short term storage.

These parameters are best determined post-consent, informed by detailed ground investigation with the micro-siting areas for each element of infrastructure.

4.5 Monitoring and Inspection

There would be frequent, routine and regular inspections of peat in all stockpiles and temporary storage areas as part of the PMP audit process. Inspections would assess in situ peat physical conditions, integrity of containment and temporary drainage conditions, and they would seek to confirm that stockpile design and management was adequate to prevent erosion and peat slide. These inspections would take place weekly during stockpile creation and storage.

Should any problems be observed during regular visual inspections of peat stockpiles, this would invoke implementation of an appropriate corrective action which would be recorded and monitored for effectiveness. Types of corrective actions would include, but would not necessarily be limited to; modification of temporary drainage, additional or modified bunding, incorporating of sediment fencing if required, light re-grading to correct any areas of surface erosion, etc.

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

- peat surface, peat profile and peat consistency conditions would be carried out as part of ground investigations prior to the start of construction. This information would provide detailed information on the baseline conditions for each part of the infrastructure footprint;
- restored peat conditions would be inspected immediately after restoration to ensure that the methods detailed in the PMP had been correctly implemented and to inform any corrective actions should they be required;
- further monitoring to be undertaken where required to ensure restoration works have been correctly implemented;
- the physical condition of peat would be retained as carefully as possible both at the peat storage and the peat restoration stages. This is particularly important for vegetation establishment;
- Within three months of completion of works in any area, the EnvCoW inspects the reinstatement efforts to determine satisfactory placement of sub-soil, topsoil and turves;
- The EnvCoW (or other qualified person) undertakes a final inspection of all reinstated areas at the end of the first growing season following completion of reinstatement; and
- The EnvCoW should complete a daily diary of onsite activities which would be compiled within a monthly EnvCoW report which will include information relating to peat reinstatement, these reports will be available at the request of the Planning Authority.

4.6 Re-Use

All excavated material (including peat and non-peat soils) from the installation of the wind turbines and related infrastructure will be re-used for reinstatement immediately surrounding them, where practicable.

It is anticipated that the volume of material excavated for the new permanent access track can be entirely reused for a variety of restoration/reinstatement purposes, including verge restoration to taper into the existing peatland by infilling depressions and levelling-out gradients as part of the cut and fill track construction process. As a result, based on a maximum running width of 6 m for new permanent floating access tracks, the balance between excavation and re-use will be zero.

To estimate the volume of peat that could be re-used as part of construction and restoration, an indicative estimate has been calculated based on best practice and past project experience. **Annex A** provides an approximate total volume of peat that could be accommodated across the site. This estimate has incorporated the predicted volumes of both acrotelmic and catotelmic peat.

There is also the potential for usage of predominantly acrotelmic peat in the restoration of adjacent former open cast coal mining areas for remediation and reestablishment of peatland margin and marginal woodland lost during mining activities within the site boundary. This would have the aim of re-establishing ecological connectivity between now separate peat bodies, whilst also remediating areas which are currently barren. Additionally, it is likely that there will be opportunities for reuse of catotelmic peat in forest to bog restoration.

5.0 Development Specific Peat Mitigation

There are a number of ways in which detailed design and construction activities can be specified to prevent or minimise these impacts from occurring. The following sections outline briefly the likely mitigation required to minimise impact, based on the re-use of peat specific to key elements of the proposed development.

5.1 Specialist Contractor

As indicated above there are typically four main types of impact on peat which may occur during construction and a number of these can mitigated by the use of a specialist contractor who is experienced in undertaking construction in peatland. When combined with the support and guidance of an EnvCoW, potential impacts to peat can be mitigated during the construction phase.

5.2 Access Track

Access tracks are required to enable passage of construction and servicing traffic around the site. Over peatlands, the choice of access track design normally reflects the peat depths along the route, with shallow peat/organic soils <0.5 m deep, excavated to competent strata (cut and fill tracks), and deeper peats overlain by floating tracks (with no excavation). Sections of floating tracks are anticipated as part of these development proposals as some sections of access track are on peat with depths >0.5 m.

Access tracks are permanent infrastructure, peat excavated for cut and fill would be considered a permanent loss, unless the peat can be reused elsewhere on site.

If following more detailed investigations any sections of floating track are deemed necessary, no excavations would be undertaken, and therefore there would be no associated peat excavation.

In excavated tracks, the surface vegetation (i.e. habitat) would be lost unless stored and reused elsewhere, however the intention would be to reuse excavated turves on verges and track shoulders and hardstandings for landscaping and restoration purposes. Where areas of peat are identified, this would only be reused where the excavated acrotelm is already dry and where adjoining habitats to the area being restored is of the same dry habitat.

Access tracks have the potential to disrupt natural hydrological drainage pathways, appropriate drainage would be designed to mitigate this.

5.2.1 Access Track Design

In comparison to infrastructure specific to wind turbines, there is considerably more guidance, available to support access track design in peatlands. Guidance is generally focused on excavated and floating track designs and is summarised below.

For all types of track the following should be followed:

- Prior to construction works, the setting out the centreline of the proposed access track to identify any ground instability concerns or particularly wet zones;
- Identifying ‘stop’ rules, i.e. weather dependent criteria for cessation of access track construction based on local meteorological data; and
- Maximising the interval between material deliveries over newly constructed access tracks that are still observed to be within the primary consolidation phase.

The calculations at **Annex A** are based on an average depth of probing along the new excavated tracks. The main external access route to the Proposed Development forms part of the access for the consented North Kyle Energy Project and as such does not require upgrade or excavation. Within the Proposed Development area the average peat depth under new track is 0.7 m with 0.44 m under upgraded track, indicating that excavated track is preferred. It is noted however that there are a number of new tracks which overly peat and these will be floated to reduce peat impacts, where conditions allow.

The actual lengths of floated track would be determined following detailed ground investigation; however, it is assumed that floated track will have a cross slope and longitudinal slope of less than 5 % and be located on peaty soil / peat with a depth greater than 0.3 m

5.2.2 Excavated Access Tracks

Based on the avoidance of significant areas of thick peat with existing tracks adopted where possible, and only limited sections of track on localised areas of peat, then the use of excavated tracks is proposed. Floating tracks may be considered on suitable length sections of access track where peaty soil / peat depths are greater than 0.3 m, on suitable gradients, where detailed ground investigation confirms suitability.

Excavated tracks require complete excavation of soil/peat to a competent substrate. Excavated tracks will generally be undertaken where peat depths are less than 0.5 m. This peat/soil would require storage ahead of re-use elsewhere within Proposed Development. Good practice guidance relates mainly to drainage in association with excavated tracks:

- interceptor drains should be shallow and flat bottomed (and preferably entirely within the acrotelm to limit drawdown of the water table);
- any stripped peat turves should be placed back in the invert and sides of the ditch to assist regeneration and prevent erosion to the peat and wash out that could occur; and
- culverts and cross drains should be installed under excavated tracks to maintain subsurface drainage pathways (such as natural soil pipes or flushes). Discharge from constructed drainage should allow for as much diffuse dispersion of clean (silt free) water as possible while minimising disturbance to existing peatland as far as possible. Silt mitigation measures will be incorporated into all constructed drainage as per the requirements of the CEMP.

Although excavation is normally undertaken in peat of minor thickness (< 1.0 m), there is a possibility of minor slippage from the cut face of the peat mass. Accordingly:

- free faces should be inspected for evidence of instability (cracking, bulging, excessive discharge of water or sudden cessation in discharge); and
- where significant depths of peat are to be stored adjacent to an excavation, stability analysis should be conducted to determine Factor of Safety (FoS) and an acceptable FoS adopted for loaded areas.

Regular routine monitoring should be scheduled post-construction to ensure that hydrological pathways and track integrity have been suitably maintained.

5.2.3 Floating Tracks

The use of floating access track is anticipated as part of these proposals and where applied the following guidance should be followed.

Over deeper peat (typically >1.0 m), floating tracks are used to remove the requirement for peat excavation and limit disruption of hydrological pathways. The success of construction requires careful planning to take account of the unique characteristics of peat soils. Specific guidance is available on design, the duration and timing of construction, the sequence of construction and the re-use of peat on the shoulders of the floating access track. Floated tracks will be utilised where possible when peaty soil / peat depths of greater than 0.3 m are identified along with shallow topography in the area (generally below 5 %) and the section is long enough to make floating track appropriate.

5.2.3.1 Design of Floating Access Tracks

The following issues should be considered during detailed design of floating access tracks:

- Adopting conservative values for peat geotechnical properties during detailed design (post-consent);
- Applying a maximum depth rule whereby an individual layer of geogrid and aggregate should not normally exceed 450 mm without another layer of geogrid being added;
- On gently sloping ground and where the access track runs transverse to the prevailing slope, accommodating natural hydrological pathways such as flushes and peat pipes through installation of a permanent conduit within or underneath the track and allowing for as much diffuse discharge (while minimising disturbance to existing peatland) on the downslope as possible;
- Ensuring transitions between floating tracks and excavated tracks (or other forms of track not subject to long term settlement) are staged in order to minimise likelihood of track failure at the boundary between construction types;
- Scheduling access track construction to accommodate for, and reduce peat settlement characteristics; and
- Reuse of existing roads (with upgrading if required), where possible.

5.2.3.2 Duration and Timing of Construction of Floating Access Tracks

The critical factor in successful construction of floating access tracks is the timescale of construction, and the following good practice guidance is provided:

- The settlement characteristics of peat should be accommodated by appropriate scheduling of access track construction, as follows:

Sequence of Construction

The sequence of construction is normally stipulated in guidance provided by the supplier of the geotextile or geogrid layer, and suppliers are often involved in the detailed access track design. Good practice in relation to the sequence of access track construction is as follows:

- Retaining rather than stripping the vegetation layer (i.e. the turf in this case, providing tensile strength), and laying the first geotextile/geogrid directly on the peat surface;
- Adding the first rock layer;
- Adding the second geotextile/geogrid, and add overlying graded rock fill as a running surface;
- Heavy plant and Heavy Goods Vehicles (HGV) using the access tracks during the construction period should be trafficked slowly in the centre of the track to minimise dynamic loading from cornering, breaking and accelerating;
- Ensuring wheel loads should remain at least 0.5 m from the edge of the geogrid, markers should be laid out, monitored and maintained on the access track surface to clearly emphasise these boundaries; and
- Ongoing ‘toolbox’ talks and subsequent feedback to construction and maintenance workers and drivers to emphasise the importance of the implementing the above measures.

5.2.4 Use of Soil and Peat as Trackside Shoulders

Excavated soil will generally be reused on site for partial track shoulder reinstatement and landscaping of constructed access tracks. Some limited reuse of peat for trackside verges can be considered using good practice at the margins of an access track under the following conditions:

- Peat is only re-used at the edges of tracks if:
  - there is valid need and it provides an environmental benefit, e.g. reduces or buffers runoff, encourages habitat restoration, stabilises verges, minimises visual impact;
  - re-used peat consists of turves and drier acrotelm peat only, which is anticipated on this site; widths of reinstated verges are kept to a minimum, defined on a case by case basis and be fully justified
- Care should be taken when forming verges and landscaping with soil and peat so as not to over-deposit arisings to the detriment of the works. Therefore, low verges are used on the sides of the track to permit any surface water to drain naturally, and diffusely, where it arises;
- Reuse and reinstatement is only applied in stretches of low longitudinal track gradient (e.g. <5 °) to ensure stability, with batters used to form stable slopes;
- Rapid revegetation of the soil and peat surface through the use of stored turves or re-seeding is encouraged to stabilise the reuse and reinstated areas and minimise erosion;
- Buffer zones are maintained around surface water bodies where no peat reuse or reinstatement is carried out; and
- Verges may also be suitable locations for burying cables to avoid excavating cable trenches in undisturbed peat material. If this is planned, then the verges should be constructed wider to accommodate the cabling.

Careful assessment and selection of peat by the EnvCoW to be used for reuse and reinstatement, in line with the guidelines set out above, will ensure that peat integrity is retained and there will be no loss of peat through this process.

5.3 Turbines and Permanent Hardstands

Wind turbine foundations represent permanent excavation, and the primary mitigation measure is to locate the wind turbines to avoid the areas of peat soils as detailed in **Section 3.2**, thereby reducing excavated volumes.

In relation to crane hardstanding, guidance is to avoid their full reinstatement post-construction, given the likelihood of re-use for maintenance activities associated with the wind turbines.

To assemble the wind turbine and enable servicing during operation, crane pads are constructed adjacent to each wind turbine. These must be sufficient to take the weight of both the crane and turbine components, and therefore excavation to underlying competent strata is required.

Crane pads must remain in place for the life of the Proposed Development to enable routine inspection and maintenance. Soil and peat generated from these excavations would be considered a permanent loss, unless satisfactory reuse could be achieved within the development, dependent on the suitability of excavated turf and acrotelmic peat and soils layers.

5.4 Temporary Hardstands

In relation to areas of hardstands, the following good practice guidance applies:

- Soil and peat stripped from compound and hardstanding areas would not be stored higher than 1m and may require covering to prevent drying out, if stored for longer residence times;
- Stripped turves are used for final restoration, however where turves are insufficient or vegetation regeneration requires reseeding, temporary fencing may be considered around compound areas undergoing restoration to prevent grazing; and
- The choice of seed mix for reseeding should be appropriate to the ecological and hydrological conditions of the restored compound location and surrounding habitats and should be advised by the EnvCoW.

5.5 Substations and BESS

Substation and BESS foundations represent permanent excavation and the primary mitigation measure is to locate them to avoid the areas of deepest peat, thereby reducing excavated volumes. This has been achieved by targeting areas of mineral soil and therefore no peat impacts are foreseen.

5.6 Construction Compounds

Temporary compounds are provided during the construction phase to enable storage of construction materials, turbine components and fuel, concrete batching plant, siting of welfare facilities and site offices.

Should soil and peat be excavated during the construction of the proposed substation, this would be considered a permanent loss if it cannot be reinstated or reused onsite.

Due to their temporary nature, soils and peat excavated for compounds would normally be stored locally and then will be used to reinstate the temporary construction compound in question.

5.7 Borrow Pit Reinstatement

The Borrow Pit search areas have been selected to avoid peat soils where possible to avoid excavation and disturbance to peatland habitat and resource. The Borrow Pit search areas are located adjacent to areas of peatland and the final Borrow Pit locations would re-use surplus excavated soils and peat soils to undertake restoration of Borrow Pits to tie into existing habitats where possible.

5.8 Cable Trenches

Electrical cabling is typically buried or ducted adjacent to the proposed access track network where practicable (cable trenching). The grid connection cable would similarly be buried or ducted within trenches along the final selected route. Where excavation is required for trenching, peat generated from these works is normally reinstated at its point of origin, and therefore is not considered a volume loss and re-use for reinstatement is a certainty.

Cable trenches either require soil/peat excavation specifically for this purpose, or they could be constructed within landscaping of shoulders adjacent to floating tracks. Guidance is as follows:

- Utilise trackside shoulders for cable lays where possible to minimise peat excavations specifically for this purpose, in this case, peat shoulders should be 1.0 m to 1.5 m thick;

- Where cable trenching is constructed adjacent to a floating road, ensure the trench is backfilled to prevent void filling by material migration;
- Minimise time between excavation of the cable trench and peat reinstatement, preferably avoiding excavation until the electrical contractor has cables on-site ready for installation; and
- Avoid incorporating substrate materials in the excavation, to minimise contamination of the peat to be reinstated. Replace excavated materials sequentially.

5.9 Peatland Restoration and Coal Mine Remediation

At the time of writing, the areas available for enhancement (and the type of enhancement proposed for those areas) were in the process of being discussed and agreed with Forestry and Land Scotland (the landowner), the developer of neighbouring North Kyle Energy Project , the Applicant (Breezy Hill Energy Project) and East Ayrshire Council. Through extensive discussions with the landowner (paying particular cognisance to the emerging Land Management Plan for the Site (FLS, 2025), assessment of the Final Habitat Management Plan (FHMP) for neighbouring North Kyle Energy Project (MacArthur Green, 2022), and consultation with East Ayrshire Council regarding their landscaping work completed at North Kyle Energy Project, the Applicant is committed to work alongside to complement the aforementioned plans to provide biodiversity enhancement on a landscape scale, providing significant biodiversity enhancements to the local area.

Based on the nature of existing habitats within the Site and discussions with the landowner and consideration of adjacent enhancement plans (as previously discussed), the following methods of enhancement are being discussed may be implemented:

- Forest to bog restoration;
- Native woodland creation;
- Scrub planting; and
- Heath-acid grassland mosaic creation.

The use of predominately acrotelmic peat and carbon-rich soils are likely to be required, in part, to achieve the intended restoration outcomes, in particular at former open cast coal l mining areas, for remediation and reestablishment of peatland margin and marginal woodland lost during mining activities within the site boundary and the adjacent North Kyle site boundary which is under the control of the applicant. This would have the aim of re-establishing ecological connectivity between now separate peat bodies, whilst also remediating areas which are currently barren. Further discussion around restoration opportunities are discussed in Technical Appendix 6.6.

6.0 Peat Balance Assessment

Table 6-1 provides an estimate of peat and peaty soil volumes to be excavated and re-used during the construction of the Proposed Development. The peat and peaty soil excavation and re-use volumes are detailed for each infrastructure element in **Annex A**. The excavated materials data from **Annex A** indicates that the areas of infrastructure within the Proposed Development are typically located in areas of peaty soils however there are infrastructure locations present in areas of peat >1.0 m typically in the flatter topographic areas which cannot be avoided due to design constraints.

6.1 Excavated Volumes

Peat excavation volumes associated with the construction of the Proposed Development have been calculated using the results from the peat depth surveys and interpolation using the GIS package ArcGIS. Peat excavation volumes are detailed in **Table 6-1** and **Annex A** and based on the following assumptions:

- Interpolation of peat depth was undertaken using the spline interpolation method.
- An estimated acrotelm depth of 0.5 m across all infrastructure based on peat depth survey results.
- The acrotelm volumes have been calculated based on the average peat depth across each item of infrastructure and linear infrastructure based on peat depth survey results.
- An assumption that the peat probe depths are representative of the actual depth of peat (validated by the peat coring).
- The excavated volumes will comprise primarily acrotelmic peat and soils.

6.2 Reuse Volumes

The volume of peat to be reused around the Proposed Development is detailed in **Table 6-1** and **Annex A** and based on the following assumptions:

- In appropriate locations around the infrastructure perimeter such as track verges, the edges of permanent structures a 3 m wide strip either side of the track at a thickness of about 0.5 m (turves and acrotelmic peat).
- Reinstatement of temporary hardstands, construction compounds and borrow pit excavations with re-instatement using peat and soils.
- Use of catotelmic peat across in areas of Forest to Bog Restoration for the infilling of collector drains, alongside reprofiling and furrow blocking activities.
- Use of acrotelmic and catotelmic peat to provide reinstatement of currently barren peatland margin areas due to former coal mining to facilitate peatland edge woodland regeneration and enhance ecological connectivity between now isolated peat bodies.

6.3 Net Peat Balance

Table 6-1 provides an estimate of peat volumes to be excavated and reused during the construction of the infrastructure.

Table 6-1: Peat Balance Assessment

Infrastructure	Volume of Peat Excavated (m^3)	Volume of Peat Reused and Reinstated (m^3)
Permanent Hardstandings and Turbines	27,290	3660
Temporary Hardstandings	24,030	24,030
Temp Hardstanding Assist Crane	8039	8039
Temp Construction Compound	29,075	29,075
Substation Compound	2866	428
SPEN	4350	387
BESS	14,196	660
Borrow Pit	15,400	30,000
New Track (Excavated)	27,570	16,485
New Track Floated	0	15,058
Existing Track (Upgraded)	7253	16,695
Cable Trenching	80,195	80,195
Opencast Remediation (Onsite)	0	11,200
Forest to Bog (Collector Drain Infilling)	0	7500
Total	240,262	240,262

The indicative total volume of peat predicted to be excavated of 240,262 m^3 is expected to be reused within the Proposed Development and within land under the control of the applicant, therefore no excess peat is required to be disposed off-site as a consequence of the Proposed Development.

7.0 Waste Classification

This section of the Stage 1 PMP includes the method for dealing with peat which could potentially be classified as waste (only if the above volumes estimate significant quantities of catotelm peat, which cannot be re-used).

Table 7-1 outlines where those materials that are likely to be generated on-site, fall within the Waste Management Licensing (Scotland) Regulations 2011[15].

Based on the results presented in this document, it has been concluded that all of the materials to be excavated on-site would fall within the non-waste classification and would be re-used on-site. Based on a detailed probing exercise and visual inspection of the peat, it is predominantly fibrous peat which would be suitable to be re-used on-site. Typically, the peat was found to be fibrous and fairly dry within the top metre before becoming slightly more pseudo-fibrous with depth.

15 Scottish Government 2011, The Waste Management Licensing (Scotland) Regulations 2011. https://www.legislation.gov.uk/sdsi/2011/9780111012147/contents

Table 7-1: Excavated Materials – Assessment of Suitability

Excavated Material	Indicative Volume % of total excavated soils	Is there a suitable use for material	Is the Material required for use on Site	Material Classified as Waste	Re-use Potential	Re-use on Site
Turf and Acrotelmic Peat	54	Yes	Yes	Not classified as waste	Yes	Will be re-used in reinstatement of access track verges, cut and fill verges, road verges, tower working areas, side slopes and check drains.
Catotelmic peat	46	Yes	Yes	Not classified as waste	Yes	Will be re-used in reinstatement of floated access track verges, cut and fill verges, road verges, tower working areas, side slopes and check drains.
Amorphous Catotelm Peat (amorphous material unable to stand unsupported when stockpiled >1m)	0	Potentially	Potentially*	Potentially if not required as justifiable restoration of habitat management works	Limited	If peat does not require treatment prior to re-use it can be used on-site providing adequate justification and method statements are provided and approved by SEPA. If it is unsuitable for use without treatment then it may be regarded as a waste. However every attempt to avoid this type of peat has been incorporated into the design.

*Such uses for this type of material are limited, however there may be justification for use in the base of peat restoration areas to maintain waterlogged conditions and prevent desiccation of restored area and in some habitat management works such as gully or ditch blocking where saturated peat is required to mimic mire type habitats and encourage establishment of sphagnum.

8.0 Conclusion

This Stage 1 Outline PMP presents a pre-construction assessment of the expected peat extraction and reuse volumes associated with the works phase of the construction of the Proposed Development. The PMP also provides the guiding principles which would be applied during the construction of the Proposed Development. Peat depth surveys have shown that there are peat deposits across the Proposed Development.

Through a process of continued design refinement (focused on minimising peat excavation volumes) and adoption of best practice working methods, the Proposed Development has been shown to achieve an overall peat balance. Thus, all excavated material will be required for reuse as part of the works and no surplus peat would be generated.

The figures detailed within this report are to be considered indicative at this stage. The total peat volumes are based on a series of assumptions for the layout of the Proposed Development and the results of several phases of peat probing. Such parameters can still vary over small scale areas and therefore topographic changes in the bedrock profile could impact the total accuracy of the volume calculations.

The calculations presented here would be updated and expanded upon as part of detailed design works, taking account of pre-construction site investigations and micro-siting, to confirm actual quantities of arising peat. A detailed, construction phase PMP would be developed, and maintenance by updating this plan in conjunction with a Geotechnical Risk Register. The implementation of the detailed PMP would ensure a robust commitment to excavating, storing and reinstating peat in a manner that follows best practice and ensures the protection of peat throughout the construction and post-construction phases.

Appendix A Figures

Breezy Hill Energy Park

Outline_PMP

Breezy Hill Energy Limited

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Appendix B Annex A Excavated Materials Calculations

Breezy Hill Energy Park

Outline_PMP

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