

# **TECHNICAL ANNEX 7.2: OUTLINE PEAT MANAGEMENT PLAN**

## 1.1 Introduction

Ramboll was commissioned by Scottish and Southern Electricity Networks Transmission (SSEN Transmission) operating under licence held by Scottish Hydro Electric Transmission plc (SHET), hereafter referred to as the Applicant to produce an Outline Peat Management Plan (OPMP) for the Proposed Development. The OPMP has been prepared in accordance with appropriate guidance and best practice<sup>1,2</sup>.

This Outline PMP should be read in conjunction with the following Technical Annexes (Volume 2):

- Technical Annex 3.2: Outline Construction Environmental Management Plan (CEMP)
- Technical Annex 7.1: Peat Depth Survey Report ; and
- Technical Annex 7.3: Peat Landslide Hazard Risk Assessment (PLHRA).

The OPMP describes principles and methods to be used by the Applicant's contractor when excavating, moving and reinstating peat. It includes a volumetric peat balance and contains requirements for the final PMP, that would be developed by the Applicant's contractor prior to construction.

The overarching aim of the OPMP is to provide guidance and a framework for the contractor to effectively re-use peat excavated during construction to maintain and improve peatland habitats, minimise the risks to water quality, and retain and use peat as close as possible to the point of extraction. The main requirement for the contractor is to plan peat management in detail and incorporate its progressive reinstatement and restoration of adjacent peatland areas into the construction programme so that they take place concurrently, minimising time the peat is in temporary storage and avoiding double-handling of peat.

The PMP is a 'live' document and would be developed into a final PMP prior to construction. As part of this process it is proposed that further peat depth probing and coring is undertaken for the substation site and ancillary infrastructure locations post-consent and during pre-construction ground investigation surveys to inform the final Proposed Development layout. Whilst the location of the proposed substation platform is fixed, further peat probing would confirm peat volumes to inform the final PMP before construction works commence. The final PMP would be secured through an appropriately worded planning condition.

## 1.2 Limitations

Peat probing and mapping have 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 micrositing etc.

The peat survey probing points provide high resolution coverage of the Proposed Development area including around the proposed Creag Dhubh Substation Site, and these revealed the peatland to be typically shallow (<1.0 m) but with pockets of deeper peat. It is considered that the peat depths collected, and interpolations derived from these data, are representative and have adequately informed the layout of the Proposed Development.

The peat excavation and reuse volumes included in this OPMP are intended as an initial indication. The total peat volumes are based on a series of design assumptions and estimates for the Proposed Development layout and peat depth sample data interpolated across discrete areas of the Proposed Development and Creag Dhubh Substation Site. Such parameters can still vary over a small scale and therefore local topographic changes in the geological profile may impact the total accuracy of the volume calculations.

## 1.3 Summary of Peat Depth

The majority of the developable area of the Proposed Development area, as discussed in **Technical Annex (TA) 7.1** and shown in **Figure 7.3.3, TA 7.3 (Volume 2)**, has either no peat present or has a shallow depth of peat soil present (61.6 % of peat probes were <0.5 m in depth). Within the Proposed Development area the peat thickness

<sup>&</sup>lt;sup>1</sup> Scottish Renewables and SEPA, (2012). Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and the Minimisation of Waste.

<sup>&</sup>lt;sup>2</sup> SEPA, (2011).*Restoration Techniques Using Peat Spoil from Construction Works.* 

was generally found to be between 0.0 m and 1.0 m thick in the western half, with some isolated pockets of peat extending to 2.0 m in thickness located to the north of P4. The deepest peat depth recorded within the Study Area was 4.2 m thickness, located to the south of the proposed Creag Dhubh Substation. The probe depth and interpolated contours are shown on **Figure 7.3.3**, **TA 7.3** (Volume 2). The mean peat depth recorded across all the survey data was 0.71 m.

The design of the Proposed Development has considered the presence and depth of peat, along with other technical and environmental constraints, and proposed infrastructure has been sited away from these areas and adjusted to avoid pockets of deep peat, where possible.

## 1.4 Summary of Peatland Condition

Four peat depth probing surveys were undertaken between March 2021 and April 2022 across the Proposed Development and adjacent areas, with a combined total of 612 peat probes taken (see **TA 7.1**, **Volume 2**, **Section 1.2.2**). The results of the surveys were used to inform the design layout of the Proposed Development.

The surveyed area (covering the Proposed Development and adjacent areas) has either no peat present or has a shallow depth of peat present (approximately 61.6 % <0.5 m in depth). These areas of shallow peat can be considered as organo-mineral soils.

The peat depth data was interpolated in GIS using an inverse distance weighting approach, the results of which are shown on **Figure 7.3.3**, **TA 7.3** (Volume 2).

The peat was found to be generally dry to semi-dry, with some samples classified as wet. Three of the samples were found to comprise weakly decomposed, with the others of moderate to strong rate of decomposition. This is likely to be as a result of the historical presence of coniferous plantation, replanting and extensive artificial drainage across the Proposed Development Site, which has resulted in modification to the integrity and composition of the peat and carbon rich soils.

The Proposed Development's infrastructure has been located away from the deeper peat locations where practicable, taking into account other environmental and technical constraints, or microsited to minimise potentially significant adverse effects.

Further details of the peatland condition and findings from the peat surveys are included in the Peat Depth Survey Report **(TA 7.1, Volume 2)**.

## 1.5 Estimated Peat Balance

The volume of peat excavated and to be reinstated has been estimated based on the following data and assumptions:

- peat depth survey data;
- excavations take place only within the footprint of the Proposed Development;
- peat will shrink on replacement due to some inevitable dewatering during handling and compaction at placement;
- ditch backfilling and reinstatement of ploughed furrow and destumped areas could be subject to backfilling
  with peat, along with improvement to other areas of degraded or existing peatland as part of habitat
  management and restoration. These will be confirmed and developed further in producing the final PMP and
  habitat management plans prior to construction;
- peat excavated from temporary infrastructure such as the poles could be reinstated fully in-situ, and therefore not considered as part of the permanent excavation volumes;
- upgrade of existing access tracks would not require significant excavations of peat and can be reinstated, and therefore not considered as part of the excavation volumes;
- a hierarchical approach to peat restoration and re-use has been used given the limited suitable peat restoration areas on the site and wider areas. Peat that cannot be re-used within the Proposed Development would be used for potential habitat and peat restoration as part of the associated Creag Dhubh to Dalmally



275 kV OHL Connection project (ECU00002199), with off-site restoration use as part of local and regional peat restoration projects considered if the above areas are not practicable;

- the Applicant would intend to follow the approach and principles implemented in NatureScot's Peatland Action project to deliver peatland restoration, albeit with site specific measures to work with landowners in developing and delivering successful restoration actions; and
- a proportion of acrotelm peat will become unsuitable for reuse as the top layer due to unavoidable damage to vegetation during the excavations.

Specific design assumptions used to estimate the peat volumes to be excavated and reinstated are:

- the working areas used in the calculation of excavated peat has been assumed as 6,400m<sup>2</sup> for angle and terminal towers;
- the construction and removal of the wood poles would require temporary trackways and bog mats (or similar) along the length of the temporary diversion to minimise peat excavation. It has been assumed that temporary wooden poles will be augered and peat excavated can be reinstated. It is proposed that temporary access will be via bog mats or similar;
- assumed that a 1.0 m depth of reinstatement can be used for towers;
- a conservative approach to excavated peat has been used and the deepest recorded peat depth at each location has been used;
- 700 m of new access tracks with a running width of 3.5 m would be flanked by low angle landscaped verges
  that would seek to provide visual continuity and topographical tie-in between the access tracks and the
  surrounding peatland. Where practicable verges used for finishing and landscaping of the new access tracks
  would be extended to 5 m<sup>3</sup> either side of the full track width (e.g. running width and track shoulders), and
  assumed a 0.5 m depth of peat reinstatement can be used; and
- assumed that up to 495 m of existing access tracks can be used for peat reinstatement up to 5 m either side of the tracks, with 0.5 m depth of acrotelmic peat/turves used.

**Table 7.2.1** provides estimates of the volumetric peat excavated for the Proposed Development. These volumes would be subject to review and updated following ground investigation, detailed design and micrositing as part of the post-consent process, prior to construction.

Element	Estimated Total Peat Volume to be Excavated (m <sup>3</sup> )	Estimated Acrotelmic Peat Volume to be Excavated (m <sup>3</sup> )	Estimated Catotelmic Peat Volume to be Excavated (m <sup>3</sup> )
Towers	21,120	10,120	10,910
Temporary Poles	0	0	0
Permanent Access Track	1,225	1,225	0
Temporary/Upgrade of Existing Access Track	0	0	0
TOTAL	22,275	11,275	10,910

Table 7 2 1	Estimated	Peat	Volume to	he	Excavated
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Table **Table 7.2.2** provides an estimate of the potential reinstatement opportunities for the Proposed Development to ensure that all excavated peat is reinstated, and indicates that there are sufficient reinstatement opportunities to manage the peat excavated for the Proposed Development.

<sup>&</sup>lt;sup>3</sup> The width along the new access track will vary, however 5 m has been used to represent a worst case scenario.



Element	Area to be Reinstated( m <sup>2</sup> )	Average Depth of Reinstatem ent Area (m)	Volume of Acrotelmic Peat reinstateme nt (m <sup>3)</sup>	Volume of Catotelmic Peat Reinstatem ent (m <sup>3</sup> )	Total Reinstatem ent (m <sup>3</sup> )
Towers	25,600	1.0	12,800	12,800	25,600
Poles	0	0	0	0	0
Permanent Access Track	7,000	0.5	3,500	0	3,500
Temporary/ Upgrade of Existing Access Track	0	0.5	2,475	0	2,475
TOTAL	32,600	N/A	18,775	12,800	31,575

## Table 7.2.2: Estimated Peat Volume Opportunities to be Reinstated

## 1.6 Classification of Peat

Peat was characterised as part of the surveys undertaken as part of the proposed Creag Dhubh Substation which considered the physical properties of peat cores taken across the surrounding area, and are considered representative. The key measures of peat condition, which are important to establishing the appropriate type of reuse, are noted in **Table 7.2.3**. Overall, the sample results suggest that the acrotelm layer is likely to be minimal in depth but it is recommended that the upper 0.5 m should be reused as part of the reinstatement programme in accordance with guidance, where this depth of material is available. Excavation of 0.5 m ensures that the acrotelm regeneration. The results of the samples collected during the survey indicated that slightly more samples were classed as being fibrous in nature. This is suggestive that there is a low degree of humification present in these samples; however, slightly lower numbers of samples were classed as being of amorphous/intermediate in nature.

Peat Type	Classification Summary
Acrotelm	Depth - The depth of the acrotelm was found to be limited and no discernible acrotelm was found in the peat samples. However, it is considered that there is acrotelmic peat present. Due to the difficulties of excavating a thin layer of acrotelm, without causing significant damage to it, it is recommended that 0.5 m of surface peat is excavated (where possible) for reuse as acrotelm material.
Acrotelm/catotelm	Degree of humification – slightly more of the sub-samples were recorded as fibrous but slightly less were recorded as being amorphous/intermediate in nature.
	Fibrous content – the majority of the samples were assessed as having low to moderate fine fibre content (F1 and F2), with three samples each being recorded as having low or moderate fine fibre content.
	The majority of the sample locations were assessed as having a low coarse fibre content (R1), with three locations having a moderate coarse fibre content (R2). No samples were assessed as having a high coarse fibre content (R3).
	Water content - the results indicate that all the samples were noted to be dry or semi-dry peat (B1 to B3). Three of the samples were recorded as wet (B3).

## Table 7.2.3: Peat Classification



Peat Type	Classification Summary
	Von Post - the results indicate that nearly all the samples were found to be scored relatively high on the Von Post scale (>H4). Three of the samples were indicative of weaker decomposition, with the remainder indicating a stronger rate of decomposition (between H5 and H7). This is likely to be as a result of the previous land use as commercial forestry, and modified soils from artificial drainage at the Proposed Development site.

#### 1.7 Project phasing

There are three distinct project phases: construction, operation, and decommissioning. Key activities for each phase are described in the following sections.

#### 1.7.1 Construction

The key activities to be undertaken prior to and during the construction phase include:

- prepare the final PMP referring to the detailed design and additional site information (such as ground investigation);
- confirm peat restoration plan, including obtaining agreements with off-site receptor sites<sup>4</sup> and relevant licences (including waste transfer notes and waste management licencing exception<sup>5</sup>);
- set-out peat stripping areas;
- set-out temporary peat and no peat soil storage areas;
- set-out receptor areas for direct translocation of peat, where this is possible and as detailed in the peat restoration plan;
- strip peat in pre-defined phases;
- put peat and other soils into temporary storage;
- translocate peat where pre-planned;
- reinstate the peat and other soils that have been in temporary storage; and
- monitor vegetation and stability of reinstated soil around the infrastructure, restored peatland areas, and soils to be stored for the duration of the construction period.

#### 1.7.2 Operation

During this phase no peat excavation is anticipated.

#### 1.7.3 Decommissioning

Should the proposed infrastructure be decommissioned the site would be restored as follows:

- the infrastructure would be removed;
- where removal of the infrastructure such as tower foundations would result in more damage than leaving them in place, they would be left in-situ; and
- disturbed ground would be reinstated.

Full details of the decommissioning plan would be agreed with the appropriate authorities and the landowners prior to any decommissioning works commencing and therefore has not been considered further here.

<sup>&</sup>lt;sup>4</sup> Legally binding agreements with receptor site landowners must be obtained prior to the commencement of construction works.

<sup>&</sup>lt;sup>5</sup> A waste transfer note must be held by the haulier and the waste management licencing exemption must be in place for the receptor site (see TA 8.1).



## 1.8 Requirements for the Detailed Peat Management Plan

The contractor would be required to update the OPMP prior to the construction phase commencing, based on additional information such as the results of further ground investigation and detailed design. As part of this update, the following key activities are anticipated:

- a) Update the PMP with relevant measures as set out in SSENs General Environmental Management Plans (GEMPS) as included in TA 3.2 (Volume 2) with specific reference to 'Working in Sensitive Habitats' and 'Soil Removal, Storage and Reinstatement';
- b) Ensure the excavated peat is placed in the peat storage area ready for the restoration phase;
- c) Reuse some of the excavated peat, on-site, as indicated in **Table 7.2.2**. The PMP should specify where the contractor intends to reuse peat on site and provide estimates of the quantities that will be used. The reuse of peat will be subject to the conditions and methods of reinstatement described in the PMP and relevant GEMPs; and
- d) Remaining peat to be used for habitat restoration.

The final PMP would detail the following:

- project background, such as the Proposed Development description, peat-related planning conditions attached to the consent, and peat management recommendations as per consultation with SEPA;
- confirmation of excavated peat volumes based on completion of ground investigation and review of detailed design;
- review of peat restoration opportunities using a hierarchical approach to re-use (i.e. on-site peat restoration to be considered in the first instance, followed by restoration opportunities as part of the associated Creag Dhubh to Dalmally 275 kV OHL Connection project, with off-site restoration as the final option;
- a detailed peat translocation plan for off-site receptor sites;
- a construction timetable, highlighting any seasonal considerations;
- compliance with SEPA run-off permit<sup>6</sup>, as required;
- a detailed method statement for peat and mineral soil handling, including specification of equipment to be used;
- measures to be put in place to deal with weather related events (flash floods, peat slide, snow melt, dust);
- appropriate use of track and road material, and other hard-standing material to minimise pollution;
- measures to enable sediment management in emergency situations, to cope with high rainfall and runoff;
- scheduling of construction works around key site constraints (such as the breeding or migration seasons for bird and fish). Where scheduling is not practical it would state what other mitigation could be put in place;
- scheduling of construction to benefit site restoration; and
- a record keeping system of what the final PMP will include.

## 1.8.1 Monitoring and Record Keeping

An Ecological Clerk of Works (ECoW), experienced in working with peat, would be appointed by the contractor prior to commencement of the construction phase. They would be responsible for monitoring compliance against the final PMP and other relevant documents such as the final CEMP. They would also be responsible for ensuring the legislative requirements are complied with.

The contractor and the ECoW would be responsible for maintaining clear records during the construction phase such as depths and types of peat excavated, plans showing peat storage areas and locations of reinstated peat.

<sup>&</sup>lt;sup>6</sup> Water run-off from construction sites | Scottish Environment Protection Agency (SEPA).



Τ R A N S M I S S I O N

## 1.8.2 Peat and Mineral Soil Handling Methods

This section provides guidance to help the contractor in both planning and executing the construction works for the Proposed Development. Working in peat cannot be avoided because the Proposed Development Site is underlain by peat of variable depth and thickness (refer to Figure 7.3.3, TA 7.3 in Volume 2). Careful handling of the peat would also be required to ensure its suitability for reuse.

The contractor would provide a detailed method statement for works in peat habitats, including but not limited to:

- how to minimise the area of impact;
- how to avoid/work around areas of higher quality vegetation (with the assistance of the ECoW);
- means of access to areas of work and to areas where peat would be reused;
- methods of peat removal;
- managing water in the peat and pollution prevention;
- where to avoid unnecessary intrusive work wherever possible; and
- drainage measures and design and use of appropriate techniques to maintain local hydrology.

It would be necessary for the final PMP to detail the methods and timing involved in handling, storing and using peat for reinstatement. The final method statement for this should be based on the following principles:

- the surface layer of peat and vegetation (acrotelm) would be stripped separately from the catotelmic peat. Where possible this would involve an excavation depth of 0.5 m and the creation of turves;
- the turves should be as large as practicably possible to minimise desiccation effects during storage;
- the turves should be kept wet but not saturated, and not allowed to dry out when in temporary storage;
- contamination of excavated peat with other substrate materials (e.g. gravels, clays or silts) should be avoided and these materials stored separately where excavated;
- acrotelmic material would be stored separately from catotelmic material even if some of this layer appears to be lacking vegetation, since it may contain a seedbank that is useful for re-establishing vegetation;
- any risk of peat slide must be considered by a suitably qualified engineer and where risk is identified protective measures developed and agreed with the Applicant before further construction works take place. Reference should be made to the findings of the PLHRA (**TA 7.3, Volume 2**) and subsequent detailed assessment;
- careful handling would be essential to retain any existing structure and integrity of the excavated materials and thereby maximise the potential for excavated material to be reused;
- plan all works to reduce the need for double handling the peat;
- movement of excavated turves and peat should be kept to a minimum and it is preferable to transport peat intended for translocation to its final destination at the time of excavation;
- less humified catotelmic peat (consolidated peat), which maintains its structure upon excavation, should be kept separate from any highly humified amorphous peat;
- consider the timing of excavation activities to avoid very wet weather periods to reduce the risk of peat becoming wet and unconsolidated, thereby reducing pollution or peat slide risk;
- acrotelmic material for reuse within the Proposed Development Site would be replaced as intact as possible once construction is complete; and
- to minimise handling and transportation of peat, acrotelmic and catotelmic materials for re-use within the RLB Site would be replaced, as far as is reasonably practicable, in the location from which it was removed. Acrotelmic material must be placed on the surface.

The handling of peat should be monitored and supervised by the ECoW to ensure the above principles are adopted and implemented during construction of the Proposed Development. Based on the current project programme, it is anticipated that the peat excavation and soil stripping activities would be undertaken throughout the construction programme as required for the installation of each specific infrastructure element (see **Chapter 3: Proposed Development and Alternatives, Volume 1**).



## 1.9 Minimising Damage to Existing Vegetation

To minimise damage to the existing vegetation, construction plant required for reinstatement and landscaping works would be positioned on constructed access tracks, hardstanding areas or existing disturbed areas wherever possible. Areas to be excavated would be clearly marked on the plans and then on the ground to ensure that no work is undertaken outside the construction footprint.

Tracked, low ground-pressure, long reach excavators would be used for peat handling and reinstatement works. A low ground-pressure excavator would be used if the extent of the long reach arm is insufficient. Other machinery, such as tippers, would also be tracked and low-ground pressure type when required to travel on soft ground and the use of ground protection mats could be required.

Reinstatement of vegetation would be focused on natural regeneration utilising peat vegetated turves (acrotelm). In the unlikely event that the quantity of excavated acrotelm turves is not sufficient, a nurse moorland grass seed mix would be used. The species mixture would be specified in the final PMP and could include lowland species to encourage early establishment.

## 1.10 Planning of Peat Restoration

Peat translocation and restoration would be carried out concurrently with other elements of the Proposed Development's construction. To achieve this, a detailed peat restoration plan would be included in the final PMP.

Potential peat restoration receptor sites have been identified within the wayleave of the proposed Creag Dhubh to Dalmally 275kV Connection project, and initial engagement with landowners has been undertaken. Following submission of the Proposed Development section 37 application, the Applicant and their contractor will develop a detailed Peat Restoration Plan to include the following key activities:

- further landowner engagement and formal agreements;
- detailed field survey of identified sites;
- production of restoration method statement (including monitoring and maintenance requirements);
- consultation with SEPA and other relevant stakeholders;
- obtain necessary licenses and permissions for peat transportation and restoration; and
- on-going monitoring and maintenance.

The Applicant would intend to follow the approach and principles implemented in NatureScot's Peatland Action Project<sup>7</sup> to deliver peatland restoration, albeit with site specific measures to work with landowners in developing and delivering successful restoration actions.

## 1.11 Temporary Peat Storage

During construction temporary peat storage<sup>8</sup> would be required before the excavated material could be re-used in restoration and placed in its end use location.

The final method statement for this temporary storage of peat would be based on the following guiding principles:

- temporary storage of peat should be minimised where practicable, and is only to be used until such time as the permanent restoration areas become available;
- acrotelm, catotelm, and any clay/ glacial till or other substrata should be stored separately and appropriately to ensure no mixing of materials and to prevent cross-contamination;
- suitable storage areas should be sited in areas with lower ecological value, low stability risk areas and at a
  minimum distance of 30 m from watercourses. Identified suitable areas will be agreed following the
  submission of the planning application and will be incorporated into the PMP;

<sup>&</sup>lt;sup>7</sup> https://www.nature.scot/climate-change/nature-based-solutions/peatland-action-project

<sup>&</sup>lt;sup>8</sup> It is proposed to reinstate along access tracks as soon as they are constructed and therefore negate the need for peat storage. Peat excavated from the tower bases is proposed to be stored within the tower base compounds.

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- peat turves should be stored in wet conditions where possible (e.g. within waterlogged former excavations) or irrigated in order to prevent desiccation;
- larger stockpiles are preferable to numerous small stockpiles, which minimises exposure to sun and wind, which could lead to desiccation. Stockpiles would not exceed 2 m in height and would be sited with due consideration for slope stability. Benching of stored peat could be necessary to provide stability;
- stores of non-turf, i.e. catotelm, should be bladed off to reduce surface area and desiccation of the stored peat;
- stores of peat, particularly catotelmic material, should be inspected regularly (at least weekly) and following heavy rainfall or thaw conditions to check for any evidence of movement, tension cracks or instability in the stored peat. If there is any evidence of instability, appropriate remedial measures should be taken as necessary on the advice from a suitably qualified engineer;
- in dry weather periods, consideration should be given to watering stored turves and peat to prevent drying out, wastage and erosion;
- pollution prevention measures should be installed around peat storage areas;
- reinstatement would, in all instances, be undertaken at the earliest opportunity to minimise storage of turves and other materials;
- timing the construction work, as much as possible, to avoid periods when peat materials are likely to be wetter; and
- where practical, transportation of peat on-site, from excavation to temporary storage and restoration locations, should be minimised.

## 1.12 Reinstatement of Peat

Towers/Tower Foundations and Temporary Poles

Peat excavated for towers and working areas would be stored as close to the tower as possible, so as to avoid double handling of materials. The construction of the towers involves the excavation of the acrotelm and catotelm, or top, organic layer of peaty soils, and some mineral subsoil. These would be separated on excavation, ensuring no mixing of the different peat layers, and different soil types. Once all the soil has been excavated and the higher bearing underlying subsoil has been reached, the tower foundation would then be constructed.

Up to 50 cm of acrotelm would be used to reinstate the surface vegetation and catotelm re-used to backfill excavations where practicable dependent on the type and depth of the foundation excavation.

Following construction of the tower, turves would be replaced along the excavation/working area edges to allow quicker re-vegetation. Acrotelm turves would be used for this purpose, only where required and would tie in with the surrounding topography, landscape and ground conditions to prevent adverse environmental effects.

Towers located in deep peat would be constructed using a piled foundation solution, where practicable, and it has been assumed that no specific restoration is required.

It has been assumed that the installation and removal of temporary poles would not require the permanent excavation and removal of peat, and this can be reinstated on removal.

#### 1.12.1 Permanent Access Tracks

The reinstatement of peat would be carried out progressively, with peat excavated from other areas placed directly on the sides of the access track. This will take place everywhere where the cut track passes through peat.

The construction of the access track involves the excavation of the acrotelm and catotelm, or top, organic layer of peaty soils, and some mineral subsoil. These would be separated on excavation, ensuring no mixing of the different peat layers, and different soil types. Once all the soil has been excavated and the higher bearing underlying subsoil has been reached, good quality aggregate would then be placed. Up to 50 cm of acrotelm would be used to reinstate the track verges.



Following construction of the section of the access track, turves would be replaced along the road edges to allow quicker re-vegetation and soften visual landscaping of the road edges. Acrotelm turves would be used for this purpose, only where required and would tie in with the surrounding topography, landscape and ground conditions to prevent adverse environmental effects.

Floated access tracks will be used in areas of deep peat, where practicable, and where there is no risk of affecting peat integrity or create risk of peat landslide.

## 1.12.2 Upgrade to Existing Track

It has been assumed that the upgrading of existing access tracks would not result in significant generation of excavated peat, as it is likely, in the construction of the existing access, peat would have been impacted / removed. Any remaining peat is anticipated to be found in small quantities, given the areas affected by the proposed track upgrades and therefore, can be reinstated as part of the upgrade works (using the same principles highlighted above).

## 1.12.3 Drainage /Ditch Reinstatement

The main parameters for ditch backfilling that would be required are:

- areas with relatively dry peat would be chosen;
- works would be carried out during a period of dry weather;
- specialist low-ground pressure tracked dumpers would be used;
- bog mats would be used where required;
- both source and receptor areas would have good vegetation cover; and
- excavated catotelm would be used in ditch-backfilling shall be peat of H6-H8 level of decomposition according to the Von Post scale (moderate to advanced decomposition).