Scottish & Southern Electricity Networks
TRANSMISSION

Beauly to Blackhillock to New Deer to Peterhead 400 kV Project

Environmental Impact Assessment Report

Volume 5 | Appendices

Appendix 10.2 – Peat Management Plan

APPENDIX 10.2 – PEAT MANAGEMENT PLAN

1 Introduction

1.1 Background

1.1.1 This outline Peat Management Plan (PMP) is an Appendix to **Chapter 10: Water and Geological Environment** and has been prepared by Fluid Environmental Consulting (Fluid) on behalf of the Applicant to support the Environmental Impact Assessment (EIA) Report for Beauly to Blackhillock to New Deer to Peterhead 400 kV Project (the 'Proposed Development'). This Appendix is not intended to be read as a standalone assessment and reference should be made to the introductory chapters of this EIA Report (**Chapters 1 to 6**). This PMP has been developed due to identification of the presence of peatland (**Chapter 10: Water and Geological Environment**) and peat habitats on the site (**Chapter 8: Ecology**) and as requested by the SEPA at scoping. It should be read in conjunction with the Peat Survey Report included as **Appendix 10.1: Peat Depth Survey Report.**

1.1.2 The PMP will form the basis for developing the detailed Peat Management Plan (PMP) subsequent to the Proposed Development receiving consent from the Scottish Government in consultation with the Scottish Environment Protection Agency (SEPA), NatureScot, Moray Council (MC), Aberdeenshire Council (AC) and The Highland Council (THC). Further details and specific plans will be determined during the detailed design process and once further site investigations have been undertaken. These details will then be included in a detailed PMP as a part of the Principal Contractor's (PC) detailed Construction Environmental Management Plan (CEMP). The responsibility for the implementation of the PMP will be with the PC.

1.1.3 The potential volumes of peat extracted and reused have been calculated based on an area specific or infrastructure specific basis, using a modelled peat contour plan developed on a high-density probing grid where excavations will be undertaken.

1.1.4 This PMP addresses the management of peat during the construction period for the Proposed Development and the restoration of the site both during construction and once construction has been completed. In accordance with SEPA guidance[1], as much peat as possible will be reused on-site.

1.2 Objectives and Approach

1.2.1 This PMP has been developed to demonstrate that peat has been afforded significant consideration during the design and assessment process and will be afforded necessary protection during the construction phase of the Proposed Development, should consent be granted. It proposes mitigation measures that will minimise any impacts to peat and management methods to protect excavated peat.

1.2.2 The PMP outlines the overall approach of minimisation of peatland disruption that has been adopted during the design stage. It aims to ensure that all further opportunities to minimise peat disturbance and excavation will be taken.

1.2.3 The PMP seeks to demonstrate that appropriate proposals to reuse the surplus peat can be accommodated within the site (i.e., the Proposed Development footprint and any associated temporary works areas), without significant environmental or health and safety implications, to minimise risk in terms of carbon release and human health.

1.2.4 The PMP is intended to be the basis for developing the detailed PMP, which would 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 CEMP. The overall aim is to minimise the impacts associated with excavation of peat by using the following hierarchy of design principles: avoid peat to prevent excavation; adjust construction methodology to reduce volumes of peat excavated; and reuse excavated peat in a manner to which it is suited. This hierarchical approach comprises:

[1] Scottish Renewables and Scottish Environment Protection Agency (2012). Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and the Minimisation of Waste. Available at: Guidance+on+the+assessment+of+peat+volumes%2C+reuse+of+excavated+peat%2C+and+the+minimisation+of+waste.pdf

- assessment of peat coverage on-site based on the James Hutton Institute (JHI) model presented in **Appendix 10.1: Peat Depth Survey Report**;
- design of layout based on various constraints including peat occurrence on-site;
- further detailed site surveys undertaken to obtain peat depth across the proposed layout and micro-siting allowance and iteration as necessary;
- calculation of estimated volumes of excavated peat and potential reuse volume requirements based upon the proposed site design / layout;
- determine whether there is likely to be negative or positive overall peat balance, and whether the generation of excess material can be avoided, and, if not, where reductions in the volumes of excavated materials may be achieved which may also include the use of floated infrastructure;
- refinement of site layout to avoid areas of deeper peat and hence reduce carbon impacts of the project construction activities;
- further surveys undertaken if required in new sections of infrastructure;
- record specific examples of how overriding principles of prevention and minimisation of peat disturbance are to be taken into account in the design of the site;
- the assessment is to be consistent with and feed into the peat stability and carbon payback assessment; and
- identify limitations and make recommendations for further site investigation (post-consent) in order to steer detailed design and micro-siting such that opportunities for further reductions in excavated peat volumes can be implemented where possible.

1.2.5 The peat mass balance calculations may be further developed and refined post planning consent, and prior to the relevant works commencing, as a consequence of any further or more detailed ground investigation or survey works required to inform detailed design, or that may be required under planning consent conditions.

1.2.6 Actual peat volumes excavated during construction will be recorded against the overall predicted volumes provided in **Tables 4.1** and **4.2** of this PMP. Within micro-siting allowances, the alignment and design of tracks, construction methods will be reviewed to avoid / minimise peat disturbance as far as possible taking account of 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 PC and monitored by the Environmental Advisor on-site, and made available to regulators as required.

1.3 Structure

1.3.1 The structure of the PMP is as follows:

- Section 2 presents the definition of peat, details of peatland characteristics and peat conditions on-site;
- Section 3 states the principles of avoidance and minimisation of peat disturbance;
- Section 4 presents the peat excavation volumes and assumptions;
- Section 5 presents the peat restoration areas and reuse volumes;
- Section 6 details the general peat excavation and handling methods / controls and temporary peat storage;
- Section 7 discusses the general methodologies for reuse in infrastructure construction restoration and in habitat enhancement;
- Section 8 provides monitoring recommendations; and
- Section 9 provides a summary.

1.3.2 Tables are included showing:

- **Table 2.1**: a summary of depth of penetration probe data;
- **Table 2.2**: a summary of depth of penetration distribution (area);

- **Table 4.1**: a summary of tower excavation details and volumes;
- **Table 4.2**: a summary of track excavation details and volumes;
- **Table 5.1**: the net peat balance.

2 Peat Survey Results and Peat Characteristics

2.1 Peat Survey Methodology

2.1.1 To obtain a detailed understanding of the spatial and depth distribution of peat and its properties, a series of tasks have been completed which include:

- The development of a peat depth model by the JHI using various input layers to determine the likelihood of peat occurrence across the site. A comparison was then completed with probing and coring data undertaken at various locations for model verification prior to commencement of probing at infrastructure locations. The model details are summarised in **Appendix 10.1: Peat Depth Survey Report** and the JHI approach is presented in **Annex A: Peat Depth Mapping and Survey Area Approach**.
- Depth of penetration probing was completed, as agreed with SEPA and NatureScot, at 21,203 locations either (see **Appendix 10.1: Peat Depth Survey Report**):
  - where the JHI model predicts peat with the initial probing density dependent on the model value assigned to the infrastructure where probing is required. A coarser grid (50 m) was used where there was less likelihood of peat and a denser grid was used where the likelihood was higher. If peat was located on the coarser grid, the probing density was increased to the denser grid; or
  - where priority peatland habitats were present based on habitat mapping regardless of the JHI model score as requested by NatureScot.
- No probing was completed where the JHI model predicted no peat and no priority peatland habitats were mapped.
- Coring was also completed at 40 locations to enable verification of the probing depths and assessment of the characteristics of the peat (see **Appendix 10.1: Peat Depth Survey Report**).

2.2 Peat Survey Results

2.2.1 The details of the various peat surveys completed, the methodology and data collected are presented in **Appendix 10.1: Peat Depth Survey Report**.

2.2.2 Each probe measured the depth of penetration and the potential substrate at the limit of penetration (see **Appendix 10.1: Peat Depth Survey Report**).

2.2.3 Of the 21,203 peat probes a total of 11,662 probes (55.00 %) recorded depths of 0.5 m or less (no peat), 3,724 probes (17.56%) recorded depths of penetration between 0.5 m and 1.0 m and 5,817 probes (27.44%) recorded depths of penetration >1.0 m, as shown in **Table 2.1**.

Table 2.1: Depth of Penetration Distribution (probes)

Depth Range (m)	Number of Probes	Percentage of Probes
0 to 0.5 (no peat)	11,662	55.00
>0.5 – 1.0	3,724	17.56
>1.0 – 1.5	1,485	7.00
>1.5 – 2.0	1,222	5.76
>2.0 – 3.0	1,574	7.42
>3.0 - 4.0	921	4.34
>4.0 - 5.0	416	1.96

Depth Range (m)	Number of Probes	Percentage of Probes
>5.0 - 6.0	135	0.64
>6.0 - 7.0	43	0.20
>7.0 - 8.0	19	0.09
>8.0	2	0.01
Total	21,203	**100.0**

2.2.4 The depth of penetration at each probe location within the site is presented on **Figure 10.1.1** in **Appendix 10.1: Peat Depth Survey Report.**

2.2.5 The peat depth point results were used to develop a peat depth contour model across the area of the peat survey using a natural neighbour analysis. The peat depth contour model is presented in **Figure 10.1.2** in **Appendix 10.1: Peat Depth Survey Report.**

2.2.6 The peat study area totals 16,734,631 m^2 and the peat depth is distributed as presented in **Table 2.2** based on the peat probing results and interpolated depth model.

Table 2.2: Depth of Penetration Distribution (area)

Depth Range (m)	Area (m^2)	Percentage
0 to 0.5 (no peat)	13,933,645	83.26
>0.5 – 1.0	1,279,374	7.65
>1.0 – 1.5	501,121	2.99
>1.5 – 2.0	323,109	1.93
>2.0 – 3.0	373,773	2.23
>3.0 - 4.0	198,852	1.19
>4.0 - 5.0	89,491	0.53
>5.0 - 6.0	25,775	0.15
>6.0 - 7.0	9,095	0.05
>7.0 - 8.0	395	0.01
>8.0	1	0.01
Total	**16,734,631**	**100%**

2.2.7 The peat depth across the 16,734,631 m^2 survey area is comprised of 83.26% with no peat, 7.65% of the area with peat up to 1 m depth and 9.09% of the area with peat >1 m depth.

2.2.8 Peat is almost entirely absent for the section of the Proposed Development from Beauly to about 7 km east of Inverness and from south of Elgin to Peterhead. From approximately 7 km east of Inverness to directly south of Elgin, peat occurrence and depth is variable along with peat generally present in pockets which can extend up to 8 m in depth.

2.2.9 Peat depth does not always correspond with areas mapped as priority peatland habitat. Peat has also been recorded in areas of forestry and open moorland, while some areas mapped as priority peatland habitat were found to have little or no peat (i.e. probing depths of less than 0.5 m).

2.2.10 The peat depth model has been used to calculate the volume of peat that will be excavated for the construction of the Proposed Development as described in **Section 6**.

3 Avoidance and Minimisation of Peat Disturbance

3.1 NatureScot's 2023 Guidance and NPF4 Mitigation Hierarchy

3.1.1 In line with the National Planning Framework 4 (NPF4)[2] and NatureScot's 2020[3] guidance on peatland and carbon-rich soils, the Proposed Development adheres to the mitigation hierarchy to ensure that impacts on peatland habitats, carbon-rich soils, and sensitive ecosystems are minimised and, where necessary, compensated for. The following hierarchy is applied to the Proposed Development:

- Avoid – The Proposed Development's design has prioritised avoiding areas of peatland, carbon-rich soils, and priority peatland habitat from the outset. Site selection and layout have been carefully considered to prevent disturbance to these sensitive areas;
- Minimise – Where impacts cannot be fully avoided, efforts have been made to reduce them to the absolute minimum. This includes measures such as using existing access routes, optimising infrastructure locations, and implementing sensitive construction techniques to limit soil disturbance and damage to peatland habitats. Methods include:
  - the use of floated access tracks and floated working areas where feasible; and
  - piling of tower foundations within areas of peat so that peat excavation is minimised through the use of piles. Depending on peat depth and ground conditions, this could include driven piles in shallow deposits or replacement piles where material is removed during drilling. Final pile type selection will be confirmed following ground investigation.
- Restore – Where damage to peatland habitats is unavoidable, the Proposed Development will include restoration measures to repair any damaged areas. This includes re-establishing peatland vegetation and improving the condition of any degraded habitats, ensuring that any impacted areas are restored to the extent possible; and
- Offset – In cases where residual impacts remain, effective restoration and management of equivalent peatland habitats will be carried out to offset the loss. On-site restoration measures will be prioritised.

3.1.2 Through this approach, the Proposed Development seeks to ensure that peatland and carbon-rich soils are adequately protected, and any unavoidable impacts are effectively managed, in line with both NPF4 and NatureScot's guidelines.

3.2 Avoidance

3.2.1 The development of the infrastructure layout has been an iterative process designed to avoid or minimise impact on blanket bog habitats and peat where possible. The mapping of peat depth through probing has therefore allowed a peat depth contour map to be generated with a greater level of detail at proposed infrastructure locations. The peat depth model has been used to inform further layout modifications to enable higher confidence in the avoidance of peat. Where avoidance of peat >1 m in depth has been unavoidable for any section of track, a floating track design is proposed, if feasible. This also applies to other hardstanding areas. The final iteration of the infrastructure layout was informed by detailed peat probing across all infrastructure.

[2] Scottish Government (2023). National Planning Framework 4. Available at: https://www.gov.scot/publications/national-planning-framework-4/
[3] NatureScot (2020). Advising on carbon-rich soils, deep peat and priority peatland habitat in development management. Available at: https://www.nature.scot/sites/default/files/2020-11/Guidance%20-%20Advising%20on%20carbon-rich%20soils%2C%20deep%20peat%20and%20priority%20peatland%20habitat%20in%20development%20management.pdf

3.3 Further Minimisation

3.3.1 The disturbance of peat by the construction of the infrastructure will be minimised as much as practicably possible, taking into account the other constraints to the Proposed Development, in order to try to reduce any peat being removed from site and the need for a waste management licence, and reduce potential carbon losses from the peat excavation process.

3.3.2 Throughout the construction process, the appointed PC will aim to minimise the volumes of excavated peat. Appropriate handling and storage of excavated materials will be undertaken such that their integrity and subsequent reuse is not jeopardised.

3.3.3 Adjustment of infrastructure within the micrositing limits is likely to allow further improvements. Further measures to minimise peat disturbance will be incorporated in the Proposed Development and construction process. The principles of the waste hierarchy (outlined above) will be followed to:

- avoid and / or minimise production of excavated peat;
- reuse, where possible, excavated peat on-site to facilitate habitat, ecological and hydrogeological restoration, improvement and enhancement; and
- avoid waste peat being sent for disposal, recovery and / or reuse off-site.

3.3.4 All contractors will be made aware of the sensitivity of peat and wetland habitats and will be required to work within the narrowest practical construction corridor when working in or near areas of peat.

3.3.5 All plans and method statements will be accompanied by justification of the detailed design and / or construction methods identified by the PC including reasons for discounting alternative methods. This is required in order to demonstrate that all avenues for avoiding hydrological disruption and reducing the disturbance and excavation of peat have been considered.

3.3.6 It is anticipated that an Environmental Advisor will be appointed and will:

- identify areas of sensitive habitat;
- clearly mark sensitive habitats near to construction areas and make the PC aware of the sensitivity of peat habitats and inform all sub-contractors;
- walk the areas affected by the Proposed Development with engineers before construction commences;
- authorise minor movement of infrastructure within the Limit of Deviation where impact can be reduced; and
- monitor construction to ensure that any micro-siting does not result in movements into more sensitive habitats and deeper peat unless unavoidable.

4 Peat Excavation Volumes and Assumptions

4.1 Tower Excavation Assumptions and Volumes

4.1.1 Peat excavation volumes have been calculated for each tower location associated with the Proposed Development. Each tower comprises four legs, and excavation will be undertaken at each leg to accommodate pile installation and construction of a reinforced concrete pile cap.

4.1.2 The standard pile cap dimensions in areas of peatland are expected to be approximately 6.5 m x 6.5 m x 1.5 m. Excavation for each leg is expected to be 8.5 m x 8.5 m in plan, to a maximum depth of 2.1 m. This includes an additional lateral extent beyond the pile cap to allow for working space and side battering. Excavation volumes are constrained to 2.1 m depth regardless of peat thickness, as no deeper excavation is anticipated.

4.1.3 In addition, the neck extension from the pile cap, as described in **Chapter 3: Project Description**, may be up to 1.5 m x 1.5 m in plan and approximately 0.9 m in height (including 300 mm above ground level). This results in an additional excavation volume of approximately 2.025 m^3 per tower.

4.1.4 Volume calculations have been based on measured or interpolated peat depths at each tower leg location. Where peat is less than 2.1 m deep, the excavation volume corresponds to the actual peat thickness multiplied by the excavation area. Where peat exceeds 2.1 m, only the upper 2.1 m is included in the volume calculation.

4.1.5 The volume of peat excavated at each leg has been calculated and combined to determine the total peat volume for each tower **(Table 4.1).** These figures inform the baseline excavation requirement for peat management planning and restoration proposals.

4.1.6 **Table 4.1** presents the calculated area, depth, and volume of peat to be excavated at each tower and leg, as well as the total peat volume per tower.

4.1.7 The Proposed Development infrastructure and dimensions used in the peat balance calculations are summarised in **Table 4.1.**

4.1.8 Within **Table 4.1**, in some instances, multiple volume values are reported for the same tower leg. This reflects variations in peat distribution beneath the leg footprint, where peat occurs in pockets rather than as a continuous layer. As a result, peat excavation and management may be required in several distinct areas within the overall leg footprint. These individual peat volumes have been recorded separately to reflect the spatial variability in peat depth and extent across each leg area.

4.1.9 **Table 4.2** presents the corresponding peat excavation calculations for the towers associated with the Kellas Alternative Alignment. The table follows the same format as **Table 4.1**, showing the calculated area, depth, and volume of peat to be excavated at each tower and leg, along with total volumes per tower.

Table 4.1: Tower Excavation Details and Volumes

Tower Name	Leg ID	Area on Peat of Each Leg (m^2)	Average Peat Depth on Each Leg (m)	Volume of Excavated Peat from Each Leg (m^3)	Volume of Excavated Peat per Tower (m^3)
BC4-2B	1	67	1.21	81.07	90.56
	2	13	0.73	9.49	
BC5-10	1	65	0.88	57.02	350.24
	2	72	1.64	118.08	
	3	72	0.86	61.92	
	4	72	1.57	113.04	
CB3-9	1	2	0.51	1.02	34.84
	2	10	0.53	5.30	
	3	46	0.62	28.52	
CB3-11	1	53	0.58	30.74	174.02
	2	72	0.69	49.68	
	3	72	0.70	50.40	
	4	72	0.60	43.20	
CB3-12	1	72	0.62	44.64	185.16
	2	56	0.64	35.84	
	3	72	0.74	53.28	
	4	72	0.70	50.40	
CB3-14	1	16	0.53	8.48	98.98
	2	1	0.50	0.50	
	3	72	0.63	45.36	
	4	72	0.62	44.64	
CB3-17A	1	2	0.50	1.00	1.54
	2	1	0.54	0.54	
CB3-19A	1	72	1.09	78.48	288.88
	2	62	0.92	57.04	
	3	72	1.29	92.88	
	4	72	0.84	60.48	
CB4-2A	1	72	0.98	70.56	220.51
	2	72	0.90	64.80	
	3	65	0.68	44.20	
	4	63	0.65	40.95	
CB4-3A	1	4	0.51	2.04	4.08
	2	4	0.51	2.04	
CB4-4A	1	15	0.55	8.25	8.25
CB4-5A	1	72	1.12	80.64	282.24
	2	72	1.09	78.48	
	3	72	0.87	62.64	
	4	72	0.84	60.48	
CB4-6A	1	72	0.99	71.28	163.84
	2	72	1.07	77.04	
	3	13	0.58	7.54	
	4	14	0.57	7.98	

Tower Name	Leg ID	Area on Peat of Each Leg (m^2)	Average Peat Depth on Each Leg (m)	Volume of Excavated Peat from Each Leg (m^3)	Volume of Excavated Peat per Tower (m^3)
CB4-9B-SW	1	1	0.51	0.51	142.95
	2	43	0.60	25.80	
	3	72	0.70	50.40	
	4	72	0.92	66.24	
CB4-13	1	32	0.63	20.16	20.16
CB4-14	1	64	1.03	65.92	155.26
	2	66	1.29	85.14	
CB4-15	1	72	2.10	151.20	604.80
	2	72	2.10	151.20	
	3	72	2.10	151.20	
	4	72	2.10	151.20	
CB4-17	1	41	0.83	34.03	328.51
	2	72	1.66	119.52	
	3	72	1.09	78.48	
	4	72	1.34	96.48	
CB5-2	1	1	0.54	0.54	0.54
CB5-3	1	59	0.91	53.69	353.62
	2	37	0.77	28.49	
	3	72	1.69	121.92	
	3	72	2.08	149.52	
CB5-4	1	72	1.64	118.20	534.36
	2	72	1.58	113.76	
	3	72	2.10	151.20	
	4	72	2.10	151.20	
CB5-5	1	72	1.95	140.55	509.07
	2	72	1.98	142.80	
	3	72	1.33	95.76	
	4	72	1.81	129.96	
CB5-6	1	72	2.10	151.2	604.80
	2	72	2.10	151.2	
	3	72	2.10	151.2	
	4	72	2.10	151.2	
CB5-9	1	27	0.69	18.63	167.67
	2	72	1.16	83.52	
	3	72	0.91	65.52	
CB5-10	1	49	1.00	49.00	430.60
	2	72	1.43	102.96	
	3	72	1.77	127.44	
	4	72	2.10	151.20	
CB5-11	1	28	0.58	16.24	65.70
	2	46	0.58	26.68	
	3	16	0.53	8.48	
	4	26	0.55	14.30	
CB5-17A	1	7	0.53	3.71	3.71

Tower Name	Leg ID	Area on Peat of Each Leg (m^2)	Average Peat Depth on Each Leg (m)	Volume of Excavated Peat from Each Leg (m^3)	Volume of Excavated Peat per Tower (m^3)
159A-T	1	72	0.68	48.96	49.47
	2	1	0.51	0.51	
CA1/CU2-160-O5	1	72	2.10	151.10	604.70
	2	72	2.10	151.20	
	3	72	2.10	151.20	
	4	72	2.10	151.20	
CA1/CU2-163-O5	1	62	0.67	41.54	98.94
	2	72	0.79	56.88	
	3	1	0.52	0.52	
CB6-11	1	72	1.00	72.0073.30	278.64
	2	72	0.93	66.96	
	3	72	1.01	72.72	
	4	72	0.93	66.96	
CB7-1 (69)	1	18	0.59	10.62	10.62
CA1/CU2-166-O5	1	70	0.58	40.60	117.50
	2	66	0.55	36.30	
	3	70	0.58	40.60	
CB7-2 (70)	1	34	0.54	18.36	18.36
CB7-3 (70-1)	1	72	0.76	54.72	235.44
	2	72	0.69	49.68	
	3	72	0.80	57.60	
	4	72	1.02	73.44	
CB7-4 (70-2)	1	72	1.18	84.96	295.02
	2	72	1.33	95.76	
	3	54	0.73	39.42	
	4	72	1.04	74.88	
CB7-5 (70-3)	1	72	210	151.14	591.51
	2	72	1.92	137.97	
	3	72	2.10	151.20	
	4	72	2.10	151.20	
CB7-6 (70-4)	1	72	1.91	137.55	497.23
	2	72	1.71	122.80	
	3	72	1.71	123.12	
	4	72	1.58	113.76	
CB7-13 (70-11)	1	72	1.69	121.68	572.88
	2	72	2.07	148.80	
	3	72	2.1	151.20	
	4	72	2.1	151.20	
CB7-21 (80-5)	1	72	0.82	59.04	198.60
	2	71	0.60	42.60	
	3	72	0.84	60.48	
	4	64	0.57	36.48	
CB8-4 (92)	1	72	0.72	51.84	174.30
	2	72	0.69	49.68	

Tower Name	Leg ID	Area on Peat of Each Leg (m^2)	Average Peat Depth on Each Leg (m)	Volume of Excavated Peat from Each Leg (m^3)	Volume of Excavated Peat per Tower (m^3)
	3	72	0.60	43.20	
	4	51	0.58	29.58	
CB8-7A	1	20	0.52	9.88	52.16
	2	23	0.56	12.88	
	3	49	0.6	29.40	
CB8-8A	1	72	1.66	119.52	190.49
	2	33	0.59	19.47	
	3	67	0.68	45.56	
	4	11	0.54	5.94	
CB8-11A	1	72	1.08	77.76	292.32
	2	72	1.08	77.76	
	3	72	0.98	70.56	
	4	72	0.92	66.24	
CB8-12A	1	72	1.05	75.60	275.04
	2	72	1.23	88.56	
	3	72	0.69	49.68	
	4	72	0.85	61.20	
CB8-13A	1	72	2.10	151.20	604.80
	2	72	2.10	151.20	
	3	72	2.10	151.20	
	4	72	2.10	151.20	
CB8-14 (93A)	1	72	1.73	124.54	576.22
	2	72	2.07	149.28	
	3	72	2.10	151.20	
	4	72	2.10	151.20	
CB8-15 (93A-1)	1	72	1.95	140.56	569.80
	2	72	1.76	126.84	
	3	72	2.10	151.20	
	4	72	2.10	151.20	
CB8-19 (94-2)	1	72	1.32	95.10	543.84
	2	72	2.03	146.34	
	3	72	2.10	151.20	
	4	72	2.10	151.20	
CB8-20 (94-3)	1	72	2.10	151.20	604.80
	2	72	2.10	151.20	
	3	72	2.10	151.20	
	4	72	2.10	151.20	
CB8-21 (94-4)	1	72	2.10	151.20	604.80
	2	72	2.10	151.20	
	3	72	2.10	151.20	
	4	72	2.10	151.20	
CB8-22 (94-5)	1	72	2.10	151.08	604.38
	2	72	2.10	150.90	
	3	72	2.10	151.20	

Tower Name	Leg ID	Area on Peat of Each Leg (m^2)	Average Peat Depth on Each Leg (m)	Volume of Excavated Peat from Each Leg (m^3)	Volume of Excavated Peat per Tower (m^3)
	4	72	2.10	151.20	
CB8-23 (94-6)	1	72	1.66	119.52	339.41
	2	72	1.58	113.76	
	3	72	1.30	93.60	
	4	72	2.10	151.16	
CB8-26A	1	72	1.23	88.56	535.91
	2	72	2.01	144.95	
	3	72	2.10	151.20	
	4	72	2.10	151.20	
CB9-1A	1	72	2.10	151.20	604.80
	2	72	2.10	151.20	
	3	72	2.10	151.20	
	4	72	2.10	151.20	
CB9-5A	1	72	0.99	71.28	281.72
	2	28	0.65	18.20	
	3	72	1.50	108.00	
	4	72	1.17	84.24	
CB9-7A	1	72	2.09	150.64	604.24
	2	72	2.10	151.20	
	3	72	2.10	151.20	
	4	72	2.10	151.20	
CB9-8A	1	71	0.75	53.25	71.55
	2	30	0.61	18.30	
CB9-13B	1	7	0.51	3.57	19.23
	2	29	0.54	15.66	
CB9-14B	1	72	2.04	146.88	563.04
	2	72	1.90	136.80	
	3	72	2.10	151.20	
	4	72	1.78	128.16	
CB9-15 (127)	1	23	0.52	11.56	11.56
CB9-17 (127-4)	1	24	0.56	13.44	73.04
	2	72	0.71	51.12	
	3	16	0.53	8.48	
CB9-18 (127-5)	1	72	0.62	44.64	168.93
	2	57	0.57	32.49	
	3	72	0.70	50.40	
	4	69	0.60	41.40	
CB9-20 (128-1)	1	72	0.84	60.48	411.84
	2	72	1.62	116.64	
	3	72	1.36	97.92	
	4	72	1.90	136.80	
CB10-3 (129-2)	1	72	1.34	96.48	438.48
	2	72	1.67	120.24	
	3	72	1.42	102.24	

Tower Name	Leg ID	Area on Peat of Each Leg (m^2)	Average Peat Depth on Each Leg (m)	Volume of Excavated Peat from Each Leg (m^3)	Volume of Excavated Peat per Tower (m^3)
	4	72	1.66	119.52	
CB10-5 (129-4)	1	72	1.96	141.00	539.88
	2	72	1.34	96.48	
	3	72	2.10	151.20	
	4	72	2.10	151.20	
CB10-8	1	72	1.51	108.72	473.04
	2	72	1.70	122.40	
	3	72	1.75	126.00	
	4	72	1.61	115.92	
Total					19,761.50

Table 4.2: Tower Excavation Details and Volumes for Kellas Alternative Alignment

Tower Name	Leg ID	Area on Peat of Each Leg (m^2)	Average Peat Depth on Each Leg (m)	Volume of Excavated Peat from Each Leg (m^3)	Volume of Excavated Peat per Tower (m^3)
CB9C-13	1	72	1.72	123.84	535.33
	2	72	1.96	141.12	
	3	72	1.65	119.25	
	4	72	2.10	151.12	
CB9C-14B	1	53	0.53	28.09	119.22
	2	51	0.53	27.03	
	3	72	0.64	46.08	
	4	34	0.53	18.02	
CB9C-15	1	34	0.61	20.74	55.54
	2	60	0.58	34.80	
CB9C-16	1	57	0.52	29.64	46.60
	2	32	0.53	16.96	
Total					756.69

4.1.10 The total volume of peat that will be excavated for the construction of the towers is 19,761.5 m^3 based on the survey information, infrastructure footprint and assumptions detailed.

4.2 Kellas Alternative Alignment Excavation Volumes

4.2.1 The total volume of peat that will be excavated for the construction of the towers associated with the Kellas Alternative Alignment is 756.69 m^3, based on the survey information, infrastructure footprint, and assumptions detailed.

4.3 Track Excavation Assumptions and Volumes

4.3.1 Excavation of peat along access tracks has been assessed based on peat depth thresholds and the nature of the track type.

- for new permanent tracks, excavation is proposed only where peat depth is up to 1.0 m;
- where peat exceeds this threshold, tracks will be floated to minimise peat excavation;

- for upgraded tracks (where widening of existing tracks is required, which applies only to those in poor and very poor condition), an excavation width of 2.0 m on one side of the existing track has been assumed;
- excavation will be undertaken only where peat depth is between 0.5 m and 1.0 m; and
- in areas where peat exceeds 1.0 m it is assumed that the existing tracks are floated and therefore the same would apply to any widened sections.

4.3.2 These criteria align with current best practice for infrastructure development on peatlands and reflect input from the Applicant's engineering team regarding feasibility of construction.

4.3.3 Excavation volumes for both permanent and temporary tracks have been calculated based on these assumptions and are included in the **Table 4.3** below. Excavation for temporary tracks has also been quantified, and it is assumed that peat from these areas can be reinstated post-construction. All other track sections and infrastructure will be floated and therefore do not contribute to peat excavation volumes.

Table 4.3: Track Excavation Details and Volumes

Track Type	Length of track within Study Area (m)	Length of track on peat (m)	Length of track within peat (0.5 - 1.0 m) (m)	Area on peat (0.5 - 1.0 m) (m^2)	Average Peat Depth (m)	Excavated Volume (m^3)
Existing Access – Upgrade – Poor Condition	8,002	728	154	311	0.71	220.6
Existing Access – Upgrade – Very Poor Condition	4,524	35	18	35	0.67	24.8
Proposed Access – Permanent (No Floated)	31,716	1,201	994	4,858	0.61	2,917.9
Proposed Access – Temporary (No Floated)	26,348	1,152	593	2,939	0.66	1,606.1
Total						**4,769.4**

4.3.4 The total volume of peat required to be excavated from the tracks based on the above assumptions is 4,769.4 m^3.

4.4 Total Excavation Volume

4.4.1 A total volume of approximately 24,530.9 m^3 of peat is calculated to be excavated for the Proposed Development which will be handled, stored and reinstated as described in **Sections 6 and 7**. This assumes the design does not require the Kellas Alternative Alignment.

5 Peat Restoration Areas and Reuse Volumes

5.1 Consultation with NatureScot

5.1.1 A letter outlining the principles of peat reuse and restoration for the Proposed Development was submitted to NatureScot in March 2025. In their response, NatureScot welcomed early engagement and recognised that details on restoration locations may still be evolving due to ongoing discussions with landowners. They supported the project's commitment to effective peat reuse and restoration at an appropriate scale and highlighted the importance of delivering benefits for biodiversity and climate. NatureScot acknowledged the efforts made to minimise peat disturbance through route design and construction and advised on suitable methods for restoration, including the reuse of peat in eroded and cut-over areas, ditch blocking, and forest-to-bog conversion. They also flagged the importance of site-specific considerations, such as deer management and proximity to watercourses. NatureScot encouraged ongoing collaboration with relevant stakeholders, including Peatland ACTION, local conservation bodies, and land managers, to help identify suitable restoration opportunities.

5.2 Restoration at Towers

5.2.1 At each tower location where peat has been excavated, peat restoration will be undertaken following the completion of foundation works. Where peat is present, it is assumed that full backfilling of the excavation void will occur using the excavated material. As the excavation footprint and depth are consistent across legs, the reinstatement volume for each leg is assumed to be the same.

5.2.2 Based on preliminary design assumptions, each leg excavation comprises a pile cap area of 8.5 m × 8.5 m excavated to 2.1 m depth. Once the 1.5 m thick pile cap is installed, a 0.6 m void will be present above the pile cap and a 1 m trench around it. These areas will be reinstated with peat.

5.2.3 The volume of peat that can be reinstated in each tower leg is:

- for the upper 0.6 m a reinstatement volume of 43.35 m^3 per leg based on an area of 8.5 m x 8.5 m;
- the trench surrounding the pile cap is 1.5 m deep x 1 m width x 30 m in length and so a reinstatement volume of 45 m^3 is assumed.

5.2.4 This equates to a total reinstatement value of 88.5 m^3 per leg. As there are 227 legs on peat, the total restoration value of peat from the towers would amount to 24,530.9 m^3.

5.2.5 However, the pile cap neck extension (1.5 m × 1.5 m × 0.6 m) occupies part of the reinstatement area and will not be backfilled with peat. Since the reinstatement volumes are currently calculated per leg, once all reinstatement volumes are combined, a total of 1.35 m^3 of peat reinstatement per tower will be deducted to account for the volume occupied by the pile cap neck extension. As there are 227 legs, a value of 306.5 m^3 has been deducted from the above total to give the total restoration value of peat from the towers as 20,089.5 m^3.

5.3 Restoration of Temporary Track

5.3.1 The reinstatement volumes for temporary tracks have been calculated based on the assumption that all track material will be removed and peat will be reinstated into the resulting void. These volumes are derived using the total area of the temporary track footprint in combination with the average peat depth recorded along each section of track. This method provides a representative estimate of the volume of peat required for reinstatement, aligning with the intended restoration approach of returning the site as closely as possible to its original condition.

5.3.2 The temporary proposed access track will be reinstated with the same volume of peat excavated which will total 1,601 m^3.

5.4 Peat Balance

5.4.1 The total volume of peat predicted to be excavated totals 24,531 m^3 which is 3,147 m^3 less than the currently identified 21,384.1 m^3 of peat reuse in the temporary infrastructure areas (**Table 5.1**).

Table 5.1: Net Peat Balance

	Towers Volume (m^3)	Tracks Volume (m^3)	**Total Volume (m^3)**
Excavated Peat	19,762	4,769	24,531
Peat Reuse	19,783	1,601	21,384
Total Excess of Peat			**3,147**

5.5 Restoration at Kellas Alternative Alignment

5.5.1 At the Kellas Alternative Alignment site, a total of 12 tower legs are located on peat where peat reinstatement will be completed post installation. Each leg involves reinstating 87.15 m^3 of peat resulting in a total reinstatement volume of 1,045.8 m^3.

5.5.2 The peat excavation volume for this section was calculated at 756.7 m^3, resulting in 289.1 m^3 more peat restoration opportunities than required for the volume of peat excavated. These areas therefore provide some contingency as not all need to be restored with excavated peat but provide options if some areas are unsuitable or greater volumes of peat are excavated than currently estimated.

5.6 Peat Restoration Opportunities

5.6.1 The amount of excavated peat that is unable to be reused within the temporary infrastructure is relatively small and there may be opportunities to reduce this volume further through micrositing and also through the reuse of peat along the track verges. There is still, however, a need for identification of other peat restoration opportunities to achieve full peat reuse. If preferential restoration areas are identified that allow immediate translocation of excavated peat for greater benefit then these should also be undertaken in preference of peat reuse in temporary infrastructure which requires long periods of storage.

5.6.2 A number of methods of peat restoration have been presented to NatureScot which will be explored in the vicinity of the proposed infrastructure post submission. These are in accordance with the Peatland ACTION – Technical Compendium[4] and are summarised below.

Peat Reinstatement within Areas of Eroded Peat

5.6.3 Where peat has been eroded, and bare areas of peat remain, the erosion process will continue as rain, wind, frost and surface runoff will remove peat particles from the exposed peat. This process is unable to be halted naturally as gullies in peat lead to dewatering of the adjacent peat, which dries it out and makes it more susceptible to the erosive processes. This process can be halted and the peat restored through the installation of damming structures combined with the reinstatement of excavated peat from the Proposed Development. The Applicant will identify opportunities for this form of restoration in the vicinity of the areas of excavated peat and include in the PMP.

[4] NatureScot (2024). Peatland ACTION - Technical Compendium. Available at: https://www.nature.scot/doc/peatland-action-technical-compendium

Peat Reinstatement within Areas of Cut Peat

5.6.4 Peat has been extensively cut across Scotland for use as a fuel. Where this has been undertaken in some places the vegetation has re-established but is within a cell of reduced elevation which can impact on the adjacent peat. The procedure for peat restoration within the cells is to:

- strip back the upper ~0.3 m of vegetation / peat and place outside of the void for subsequent reinstatement;
- place the required thickness of catotelmic peat within the void;
- reinstate the vegetation / peat over the reinstated peat to bring the vegetation back to the original ground level; and
- it may be necessary to install bunds within the cells to prevent peat from sliding and to improve the hydrological connectivity of the cells.

Ditch Blocking

5.6.5 Although the blocking of ditches uses only a small volume of peat, the benefits are substantial and worth including in any peat restoration programme. The Applicant will look for any nearby opportunities for ditch blocking that could be completed and include in the PMP.

Forest to Bog Restoration

5.6.6 Forest-to-bog restoration is currently being trialled by Forestry and Land Scotland (FLS) on afforested deep peat sites in Scotland and, although it is generally completed without the need for imported peat, there are opportunities to use excavated peat to further promote forest to bog restoration. The imported peat is often of better quality and lacks the woody material from that within forests as well as being more likely to have an active peat layer. If undertaken appropriately and with skilled contractors and equipment, the hope is that the forests will result in more diverse habitats and potentially become actively peat forming. A recent International Union for Conservation of Nature (IUCN) 'Demonstrating Success' document[5] presents several successful methods for forest-to-bog restoration.

5.6.7 It should be noted that peat reuse in forest to bog areas only requires a layer of peat about 0.25 m in depth and there are some restrictions, including the need for: gentle ground slopes, relatively shallow (<2 m depth) peat to avoid potential loss of equipment, and proximity to tracks or other infrastructure for ease of access.

5.6.8 Areas of forestry that may be acceptable for forest-to-bog restoration will be identified and the peat depths ascertained along with landowner agreements within the PMP.

6 Handling Excavated Materials

6.1.1 The following section summarises the management of excavated peat and reference should be made to **Appendix 3.3: Outline Construction Environmental Management Plan (CEMP)** for details on the good practice environmental management practices to be employed during construction of the Proposed Development.

6.2 Excavation

6.2.1 The following methodologies for excavation of peat are recommended based on the various guidance documents[6]:

- Areas of peat within the footprint of any excavation will have the top layer of vegetation stripped off as turf, prior to construction by an experienced specialist contractor. When excavating areas of peat, the excavated

[5] International Union for Conservation of Nature (2024). New report showcases successes in forest to bog restoration. Available at: https://www.iucn-uk-peatlandprogramme.org/news/new-report-showcases-successes-forest-bog-restoration
[6] Scottish Environment Protection Agency (2017). Developments on Peat and Off-Site Uses of Waste Peat. Available at: https://www.sepa.org.uk/media/287064/wst-g-052-developments-on-peat-and-off-site-uses-of-waste-peat.pdf

turves should be kept as intact as possible. Often it is easiest to achieve this by removing large turves up to 500 mm in order to keep the peat intact.

- These turves should either be transferred immediately for use in peat restoration areas or stored adjacent to the construction area such that they remain moist and viable (see temporary storage below). Excavated turves should be as intact as possible so as to minimise carbon losses. Stacking of turves will be avoided in order to best preserve the viability of the vegetation layer.
- Peat will then be removed, stored separately and kept damp.
- Excavated soils and turves will be handled so as to avoid cross contamination between distinct horizons and allow reuse potential to be maximised.
- Mineral soil and aggregate will be kept separate from peat or peaty soils in order to avoid contamination (which could result in a change in chemical or hydrological properties in the peat, reducing the likelihood of successful reinstatement on placement).
- Prior to any excavations, the PC will produce a detailed Method Statement identifying where and how excavated peat will be used in reinstatement works. Specific requirements for the excavation, handling, storage and reinstatement of peat will be outlined in this Method Statement. The PC will consider potential impacts on downstream hydrological receptors, and also the potential for instability issues with the excavated material.
- Care will be taken when stripping and removing topsoil and peat turves and appropriate storage methods used on-site, i.e. excavated material will be stored in separate horizons and vegetation rich top layers will be stored vegetation side up.
- Classification of excavated materials will depend on their identified reuse in reinstatement works. At this site it is anticipated that the material to be excavated will comprise peat (which may be sub-divided into turf, acrotelm and catotelm / amorphous), peaty soils and mineral soils (subsoil and topsoil).

6.3 Temporary Storage

6.3.1 Following excavation, peat will be required to be temporarily stored before reuse. Excavated peat should be stored in stockpiles to minimise carbon losses while being stored.

6.3.2 Where possible, excavated turves will be stored adjacent to the construction area such that they remain moist and viable.

6.3.3 Areas of temporary storage required for peat will be identified in the PC's Method Statement taking into account constraints and mitigation requirements identified in further pre-construction investigations. This will describe any intended drainage, pollution prevention and material stability mitigation measures that may be required. The following general guidelines will apply:

- the appropriate temporary storage areas for excavated peat will be as close to the excavation as practicable;
- temporary peat storage areas require the ground conditions to be suitable for loading, the peat slide risk and the topographical gradients to be low and to be located outside of the main watercourse buffers;
- the design and location of stockpiles, including incorporated drainage elements, will be agreed with the EnvCoW and Geotechnical Consultant / Geotechnical Clerk of Works prior to excavation works commencing;
- temporary peat storage areas should be located so that erosion and run off is limited, leachate from the material is controlled, and stability of the existing peatland in the vicinity is not affected;
- excavated material is to be stockpiled at least 50 m away from watercourses. This will ensure that any wetting required on stored peat does not runoff and discharge into adjacent watercourses;
- any edges of cut peat that may remain exposed, or areas of peat excavation on steep slopes, will be covered with geotextile or similar approved. This will allow re-turfing and re-vegetation and reduce erosion risks;

- suitable storage areas are more appropriately sited in areas with lower ecological value and low slopes. Cleared areas of forestry are preferred to areas of higher ecological value or areas close to watercourses;
- temporary peat storage should be in locations where the water table can be kept artificially high;
- an up-gradient cut off ditch should be installed around the edge of the storage bund in order to collect up-gradient surface water runoff and divert water runoff from eroding the toe of the bund;
- it is desirable to keep haul distances of excavated peat as short as possible, and as close as possible to intended reuse destinations, to minimise plant movements in relation to any earthworks activity, including peat management, in order to minimise the potential impact on the peat structure. It is important that temporary storage is safe and keeps the material suitable for its planned reuse;
- the handling and storage of peat will seek to ensure that excavated peat does not lose either its structure or moisture content. Peat turves require careful storage and wetting and to be maintained to prevent drying out and subsequent oxidisation to ensure that they remain fit for reuse;
- stockpiling of peat should be in large volumes, taking due regard to potential loading effects. Piles should be bladed off at the side to minimise the available drying surface area;
- higher piles are more likely to become dewatered, while smaller piles expose a greater area to evaporation. Reducing mound size may also increase likelihood of erosional losses as particulate organic carbon (POC);
- stockpile areas and dimensions will be determined following detailed investigations and subject to conditions at individual locations, will not exceed a height to be approved by SEPA;
- stockpiles should be battered so as to limit instability and erosion and should be bunded or covered using impermeable material. The bunds should extend to a level above the toe of the stockpiled material to provide restraint to surface runoff;
- when planning the temporary storage areas any additional disturbance areas should be minimised; and
- transport of peat to temporary storage areas, restoration areas or designated spoil areas will be by low ground pressure vehicles to avoid excessive compaction of the peat.

7 Reuse of Peat in Infrastructure Restoration

7.1 Bare Peat

7.1.1 There are a number of important methodologies regarding the exposure of bare peat including:

- the amount of time any bare peat will be exposed will be minimised to preserve its integrity;
- the phasing of work should be carried out to minimise the total amount of exposed ground at any one time. By stripping turf and replacing as soon as reasonably possible after peat has been re-distributed there will be minimal areas of bare peat;
- any peat areas on steep ground or that remains partially bare will be covered using geotextile or a similar method to stop erosion;
- any areas of bare peat, where vegetation is not re-growing, will be seeded with a seed mixture obtained from the existing habitat. Stock exclusion in these areas will continue until vegetation is properly established;
- the re-vegetated areas will be monitored; and
- areas where full recovery is complete will have fences removed.

7.1.2 This approach has been shown to be effective on other peat sites and the turves re-grow quickly both establishing vegetation and consolidating the peat.

7.2 Infrastructure Reuse

7.2.1 Peat reuse around and within infrastructure areas is an important aspect of the Proposed Development, as it allows an opportunity to maintain the integrity of the excavated peat, enhance habitats and create new habitats. This will be undertaken through:

- the PC will be required to provide appropriate plant for undertaking all reinstatement works such that no unnecessary disturbance of the ground surface occurs. In order to minimise disturbance and damage to the ground surface, any mobile plant required for reinstatement works will be positioned on constructed access tracks or existing disturbed areas wherever possible. The use of a long reach excavator for excavations and reinstatement works is preferable as it enables sufficient room to allow initial side casting and subsequent pulling back of turves over reinstated peat or soil;
- excavated catotelm or amorphous peat will only be used in restoration works where the topography allows straight forward deposition with no pre-treatment or containment measures and without risk to the environment. The contained nature of the void containing the pile cap provides an opportunity for reuse of these types of peat. A fibrous layer of acrotelm and turf will be placed above any catotelm or amorphous peat reinstated;
- reinstatement of vegetation will be focused on natural regeneration utilising peat vegetated turves. To encourage stabilisation and early establishment of vegetation cover, where available, peat turves (acrotelmic material) or other topsoil and vegetation turves in keeping with the surrounding vegetation type will be used to provide a dressing for the final surface;
- any reinstatement and re-profiling proposals will consider, and mitigate against, identified significant risks to environmental receptors. In particular, in areas of replaced peat, water management will be considered in the PC's Construction Method Statements to ensure that as far as possible an appropriate hydrological regime is re-established within areas of disturbance. Particular attention will be paid to maintaining hydrological continuity and preventing the creation of preferential subsurface flow paths;
- when cutting the track the vegetation layer (approx. 500 mm thick) will be undercut and rolled back. A geotextile layer will then be installed on the side slopes of the track immediately after track construction to prevent erosion. The undercut vegetation layer will then be rolled back over the verge of the installed track;
- peat placed on track verges should gently taper into the adjacent land form, with the peat blocks placed snugly together and the edge of the peat placed furthest from the track should be firmed into the adjacent ground to form a seal, in order to minimise water loss through evaporation;
- track edges and passing places would be reinstated post construction through the removal of capping material and the reuse of peat turves. Where peat turves are used to reinstate track edges this will be done in a manner to ensure works tie in with the surrounding topography, landscape and ground conditions;
- the design and construction of tracks on peat shall be done in such a way so as to reduce impacts on the existing peat hydrology at the site. The built track should allow for the transmittance of water, so natural drainage can be maintained as far as possible; and
- where possible drains will be blocked as soon as they are no longer required to reduce impacts on adjacent peat habitat and allow recovery of the drains to peat habitat.

8 Monitoring

8.1.1 Monitoring will form an integral part of the Peat Management Plan to ensure that peat excavation, handling, storage, and reinstatement are undertaken in accordance with the agreed methodology and best practice guidance.

8.1.2 A record of actual peat excavation and reuse volumes will be maintained throughout the construction phase. This will include:

- recording of excavated volumes by location and infrastructure type (e.g., tower legs, access tracks);

- tracking of reinstated volumes at restoration locations such as tower legs and temporary tracks; and
- identification of any surplus peat, with reference to agreed reuse or storage options.

8.1.3 The PC will be required to maintain this record and submit periodic updates to the Environmental Advisor. These records will be used to assess compliance with the PMP and inform any necessary adjustments during construction.

8.1.4 Further detail on monitoring frequency and reporting mechanisms will be provided in the CEMP.

9 Summary

9.1.1 A high-density grid of 21,203 peat probes and associated cores has been completed at all site infrastructure between July 2024 and August 2025 to obtain a detailed understanding of peat variability, depth and characteristics at the site.

9.1.2 Peat is present across 45% of the survey area and there are areas where peat is several metres deep.

9.1.3 The total volume of excavated peat associated with the infrastructure footprint has been calculated at 24,531 m^3 and 757 m^3 for the Kellas Alternative Alignment. The excavated peat volume has been minimised through avoidance of peat where possible and a combination of piling and floating of infrastructure where peat is present.

9.1.4 The potential reuse of excavated peat has been calculated within the temporary infrastructure to total 21,384 m^3 resulting in an excess of excavated peat of 3,147 m^3. The opposite applies to the Kellas Alternative Alignment where 1,045.8 m^3 of peat reinstatement opportunities have been identified which exceeds the calculated volume of excavated peat by 289 m^3.

9.1.5 The amount of excavated peat that is unable to be reused within the temporary infrastructure is relatively small and there may be opportunities to reduce this volume further through micrositing and also through the reuse of peat along the track verges. There is still, however, a need for identification of other peat restoration opportunities to achieve full peat reuse. If preferential restoration areas are identified that allow immediate translocation of excavated peat for greater benefit then these should also be undertaken in preference of peat reuse in temporary infrastructure which requires long periods of storage. The PMP will be further updated using any additional survey data and detailed infrastructure design post consent. The detailed PMP will be approved by the local authorities in consultation with SEPA as part of the CEMP pursuant to the imposition of a planning condition.

9.1.6 The PC will maintain a record of actual peat volumes excavated and the subsequent peat reuse to compare the predicted and actual peat volumes. This record during the construction, operation, decommissioning and restoration phases of the Proposed Development will be made available for review by regulators as and when required.