Code: UKCAL-CWF-CON-EIA-APL-00001-A012

Application Document 7

Outline Peat Management Plan

Caledonia Offshore Wind Farm Limited

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OCEAN WINDS

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Acronyms and Abbreviations

AOD	Above Ordnance Datum
AMSC	Approval of Matters Specified by Condition
cm	Centimetre
ECOW	Environmental Clerk of Works
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
ha	Hectares
HDD	Horizontal Directional Drilling
LDP	Local Development Plan
m	Metre
MLWS	Mean Low Water Springs
NETS	National Electricity Transmission System
NPF4	National Planning Framework 4
NVC	National Vegetation Classification
ONEC	Onshore Export Cable Corridor
OnTI	Onshore Transmission Infrastructure
OPMP	Outline Peat Management Plan
OWF	Offshore Wind Farm
PPP	Planning Permission in Principle
RLB	Red Line Boundary
SEPA	Scottish Environment Protection Agency
WFD	Water Framework Directive

1 Introduction

1.1 Background

1.1.1.1 This Outline Peat Management Plan (OPMP) has been prepared in support of the Planning Permission in Principle (PPP) Application for the Onshore Transmission Infrastructure (OnTI) for the Caledonia Offshore Wind Farm (OWF), the Proposed Development (Onshore).

1.1.1.2 It has been produced to address the potential requirement for excavation of peat and peaty soils during the construction process.

1.1.1.3 The objective of this plan is to review the available information on peat location and depth within the OnTI Red Line Boundary (RLB), and to set out basic peat management principles that will be incorporated into later stages of the detailed design of the Proposed Development (Onshore) development.

1.1.1.4 This is an outline plan, which is intended to be a working document. It will be updated as and when new information becomes available during the detailed design stage (e.g. following site investigation) and finalised post consent into a Final Peat Management Plan.

1.2 Proposed Development (Onshore)

1.2.1.1 The Caledonia OWF comprises two OWF (Caledonia North and Caledonia South) which will connect to the National Electricity Transmission System (NETS) via the OnTI. The Environmental Impact Assessment Report (EIAR) supports a PPP for the OnTI for both Caledonia North and Caledonia South. The OnTI may be phased to align with the delivery of the two OWFs.

1.2.1.2 The OnTI covers all intertidal and onshore components of the Proposed Development (Onshore) located landward of Mean Low Water Springs (MLWS).

1.2.1.3 The OnTI RLB consists of four main permanent components:

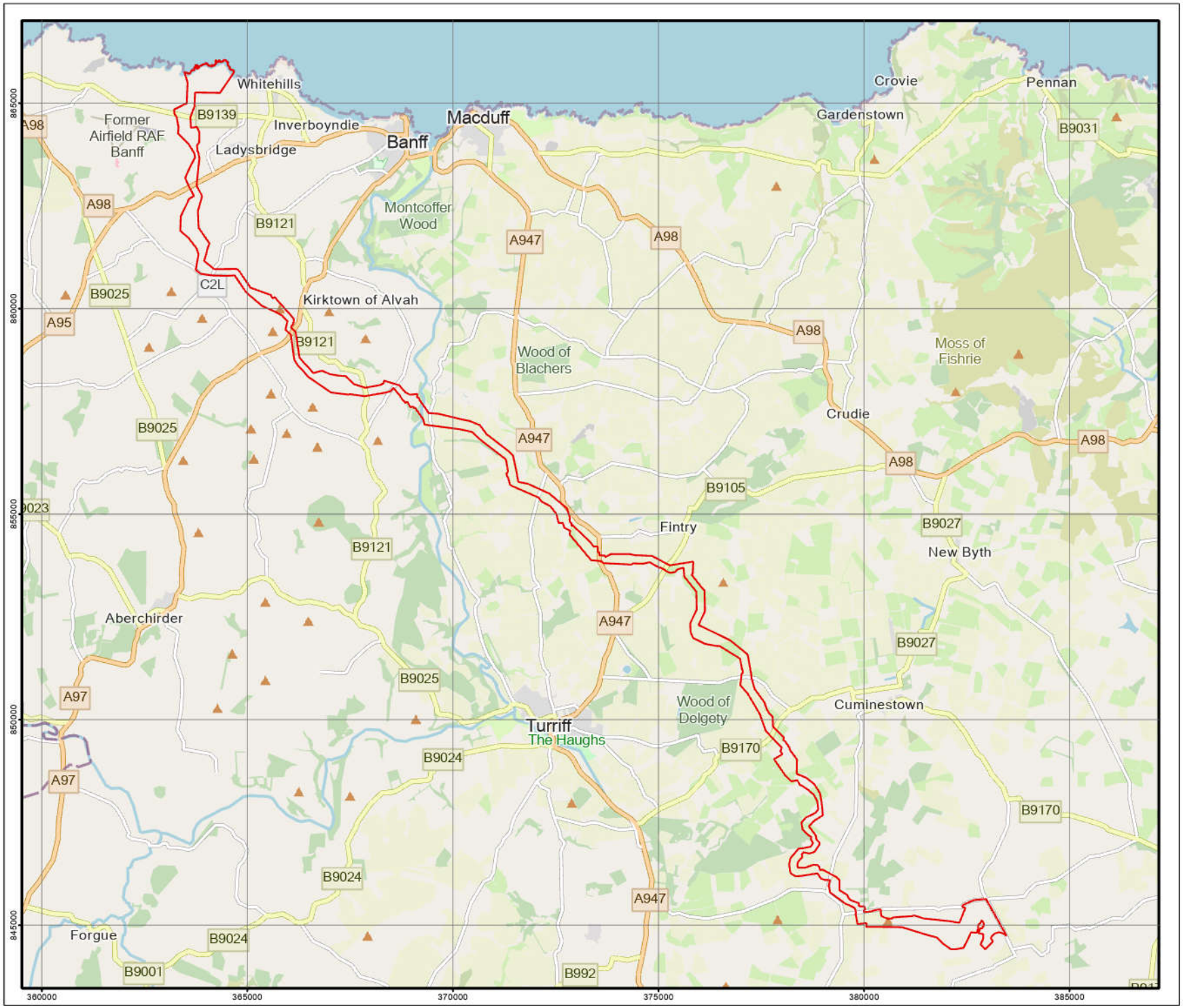
- **A Landfall Site** comprising Horizontal Directional Drilling (HDD) activities to connect Offshore Export Cable Circuits to Onshore Export Cable Circuits at buried Transition Joint Bays;
- **An Onshore Export Cable Corridor (ONEC)** of a minimum width of approximately 100m within which the Onshore Export Cable Circuits will be located. At this PPP stage, an ONEC width has been defined to allow for micro siting of the Onshore Export Cable Circuits at the detailed design stage and to allow for differing cable installation activities such as trenchless techniques like HDD;
- **Two Onshore Substations** which will be co-located within an Onshore Substation Site within the OnTI RLB; and

- **An Onshore Grid Connection Cable Corridor** connecting the Onshore Substation to the Grid Connection Point at the existing New Deer Substation (for Phase 1).

1.2.1.4 The OnTI RLB also includes provision for temporary infrastructure associated with construction of the OnTI.

1.3 Study Area

1.3.1.1 The study area for this OPMP has been defined as the OnTI RLB, and is shown in Figure 1-1.



Onshore Transmission Infrastructure Red Line Boundary

0 1 2 3 4 km

REV	DATE	DOC STATUS	ORIGIN	REVIEW	APP
04	30/08/2024	Approved	CW	GS	EC
03	16/08/2024	For Review	CW	GS	EC
02	22/07/2024	For Review	CW	GS	EC
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CALEDONIA Offshore Wind Farm

ARUP

CONTRACTOR DRAWING NO: UKCAL1_ARP_WNF_ENV_MAP_00532

CONTRACTOR REV: 04

GEODETIC PARAMETERS: OSGB36 / British National Grid (EPSG:27700)

DRAWING TITLE

Figure 1-1: Proposed Development (Onshore) Red Line Boundary

STATUS: Approved

SCALE: 1:125,000

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SHEET NO: 01 of 01

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1.4 Assessment methodology

1.4.1.1 This OPMP reviews the available information on peat location and depth within the study area and provides a summary of the findings. Calculations to determine the volumes of peat that will require excavation cannot be provided at this stage, as detailed design information is not available. However, re-use options are identified for any excavated peat generated within the study area, together with good practice measures relating to peat handling and storage.

1.4.1.2 The assessment presented in this document has comprised the following stages:

- Desk-based study to determine the baseline conditions within the OnTI RLB and the presence of peat based on the Carbon and Peatland mapping hosted by Scotland's Soils (James Hutton Institute, 2016[1]);
- Consideration of survey information from a National Vegetation Classification (NVC) survey and Phase 1 peat probing survey carried out in an area of mapped Class 1 peatland within the OnTI RLB;
- Identification and review of the potential options to avoid, minimise or re-use peat, and
- Identification and review of peat handling and storage options.

1.5 Consultation

1.5.1.1 Consultation was carried out as part of the Environmental Impact Assessment (EIA) process, and comments relating to peat were received from Aberdeenshire Council and Scottish Environment Protection Agency (SEPA).

1.5.1.2 The Onshore EIA Scoping Report (see Caledonia OWF EIAR Volume 7, Appendix 1: Onshore Scoping Report) was submitted to Aberdeenshire Council in December 2022, who then circulated it to other consultees. A Scoping Opinion was received on 1 February 2023.

1.5.1.3 Further consultation was then carried out with consultees as the Proposed Development (Onshore) design developed.

1.5.1.4 A summary of the consultation responses received are summarised in Caledonia OWF EIAR, Volume 7E, Appendix 7-4: Consultation Summary. The comments relevant to peat and carbon-rich soils have been considered and inform the drafting of this this OPMP.

1.6 Related Documents

1.6.1.1 This document should be read in conjunction with the following documents:

- The Caledonia OWF EIAR, specifically:
  - Volume 1, Chapter 6: Site Selection and Alternatives;
  - Volume 5, Chapter 7: Geology, Soils and Contaminated Land;
  - Volume 5, Chapter 3: Terrestrial Ecology and Biodiversity;
  - Volume 7E, Appendix 7-2: Peat Survey Reports; and
  - Volume 7E, Appendix 7-4: Consultation Summary.

1.7 Limitations

1.7.1.1 This OPMP is based on desk-based information and preliminary peat probing data. It is noted that this document will be developed in consultation with Aberdeenshire Council and SEPA into a Final PMP at the Approval of Matters Specified by Condition (AMSC) stage once further detailed design information is available.

1.8 Document Structure

1.8.1.1 The structure of this OPMP document is as follows:

- **Section 1** (this section) sets the background to this OPMP, providing a description of the Proposed Development (Onshore), the study area, methodology and a summary of the consultation undertaken to date;
- **Section 2** provides a definition of peat, it's importance in Scotland and the policy and guidance relevant to this OPMP;
- **Section 3** covers the environmental setting within the OnTI RLB and the topography, habitats and hydrology which have led to the formation of peat deposits. It includes information on peat identified from desk based assessment and provides descriptions of peat condition and depth, where these have been determined by survey;
- **Section 4** provides advice on peat management during construction of the Proposed Development (Onshore), following the mitigation hierarchy of avoid, minimise and re-use. It also provides advice on the temporary storage of peat; and
- **Section 5** presents the overall conclusions of this OPMP.

2 Peat, Policy and Guidance

2.1 Definition of peat and peat importance in Scotland

2.1.1.1 The Carbon and Peatland Map (James Hutton Institute, 2016[1]) defines peat soils as *"soil with an organic layer at the surface containing more than 60% organic matter and are at least 50cm in thickness".* Peat soil with a surface organic layer of greater than 1 metre (m) is considered to be "deep peat".

2.1.1.2 Peat is formed of the partially decomposed remains of plants and organic matter that have been preserved in anaerobic conditions within an essentially waterlogged environment. There are two principal types of peat:

- The upper (acrotelm) layer, which is quite fibrous and contains plant roots etc. Acrotelmic peat is relatively dry and has some tensile strength; and
- The lower (catotelm) layer, which is highly amorphous, with very high water content and low tensile strength. The structure of catotelmic peat tends to disrupt completely on excavation and handling.

2.1.1.3 Scotland's National Peatland Plan (NatureScot, 2015[2]) identifies that peatlands cover more than 20 per cent (%) of Scotland's land area with peat playing a vital role in carbon storage and combating the effects of climate change, and in maintaining Scotland's water quality and rich biodiversity.

2.1.1.4 The carbon and peatland mapping describes various classes of peat and carbon-rich soils, as summarised in Table 2-1 below. The map is described by Scotland's Soils as "a predictive tool which provides an indication of the likely presence of peat on each individually-mapped area, at a coarse scale" and is therefore indicative but not definitive evidence of peat or carbon-rich soils. Reference is made to these classes throughout this OPMP.

Table 2-1: Description of Peatland Classes (James Hutton Institute, 2016)

Peat Class	Description
Class 0	Mineral soil – peatland habitats are not typically found on such soils.
Class 1	Nationally important carbon-rich soils, deep peat and priority peatland habitat. Area likely to be of high conservation value.

Peat Class	Description
Class 2	Nationally important carbon-rich soils, deep peat and priority peatland habitat. Areas of potentially high conservation value and restoration potential.
Class 3	Dominant vegetation cover is not priority peatland habitat but is associated with wet and acidic type. Occasional peatland habitats can be found. Most soils are carbon-rich with some areas of deep peat.
Class 4	Area unlikely to be associated with peatland habitats or wet and acidic type. Area unlikely to include carbon-rich soils.
Class 5	Soil information takes precedence over vegetation data. No peatland habitat recorded. May also include areas of bare soil. Soils are carbon-rich and deep peat.

2.1.1.5 Table 2-1 shows that Class 1 and 2 soils are areas which may contain priority peatland habitats and peat soil. Class 3 describes peaty soil with some or mostly peat-forming vegetation, and Class 5 describes peat soil greater than 50 centimetre (cm) depth, but without peatland habitat being present.

2.1.1.6 Class 4 and Class 0 do not describe peatland habitat or peat soil and these soils are not classed as peat or carbon-rich soil for the purposes of this OPMP.

2.2 Policy

2.2.1.1 National Planning Framework 4 (NPF4) (Scottish Government, 2023[3]), which sets out national planning policy requirements, recognises the importance of peat protection and the requirement to consider potential impacts to peat for all development proposals.

2.2.1.2 As a result, Policy 5, the Soils Policy, within NPF4, is intended to protect carbon-rich soils, restore peatlands and minimise disturbance to soils from development.

2.2.1.3 Policy 5 states:

"a) Development proposals will only be supported if they are designed and constructed: i. In accordance with the mitigation hierarchy by first avoiding and then minimising the amount of disturbance to soils on undeveloped land; and ii. In a manner that protects soil from damage including from compaction and erosion, and that minimises soil sealing."

2.2.1.4 It also notes:

"c) Development proposals on peatland, carbon rich soils and priority peatland habitat will only be supported for: i. Essential infrastructure and there is a specific locational need and no other suitable site; ii. The generation of energy from renewable sources that optimises the contribution of the area to greenhouse gas emissions reductions targets."

2.2.1.5 The Aberdeenshire Local Development Plan (LDP) 2023 (Aberdeenshire Council, 2023[4]) guides future development in Aberdeenshire. Policies PR1.1, PR1.10, C3.1 are intended to safeguard peat and carbon-rich soils against damage or loss, where they provide important sinks for carbon or ecological value.

2.3 Guidance

2.3.1.1 In addition to policy when drafting this OPMP, the following guidance from SEPA and the Scottish Government for the development of peatland including prevention and re-use has been considered:

- Good Practice during Windfarm Construction (NatureScot, 2024[5]). Although the Proposed Development (Onshore) is not an onshore wind farm, this guidance document contains good practice measures for the protection of peat during construction;
- Guidance on Developments on Peatland: Site Surveys (Scottish Government, Scottish Natural Heritage and SEPA, 2017[6]);
- SEPA Regulatory Position Statement – Developments on Peat (SEPA, 2010[7]);
- Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and the Minimisation of Waste (Scottish Renewables and SEPA, 2012[8]);
- Developments on Peat and Off-Site Uses of Waste Peat (SEPA, 2017[9]); and
- Advising on peatland, carbon-rich soils and priority peatland habitats in development management (NatureScot, 2023[10]).

3 Development Setting

3.1.1 Topography and Geomorphology

3.1.1.1 The study area lies within an area of generally low topography, with elevations ranging from sea level at the Landfall Site, to a maximum elevation of 175m Above Ordnance Datum (AOD) at Deershill, to the west of the Onshore Substation Site.

3.1.1.2 The Landfall Site comprises low cliffs of around 10m in height, which slope gently down to a rocky shoreline at the MLWS mark. Above and inland from this coastal cliff, the Landfall Site development area slopes upward to an elevation of 35mAOD. The proposed Onshore Substation Site ranges in elevation from 100m AOD to 110m AOD, gently sloping upward from west to east.

3.1.2 Habitats and Vegetation

3.1.2.1 An ecological assessment was undertaken within the OnTI RLB and is reported in Volume 5, Chapter 3: Terrestrial Ecology and Biodiversity of the EIAR. The study area is dominated by arable crops making up approximately 70% of the overall area-based habitats. This habitat provides limited ecological value. The remaining approximate 30% of area-based habitat comprises grasslands, woodlands, scrub and urban areas. There are small areas of woodland within the study area, however, these tend to be fragmented and isolated from one another. Linear habitats include a range of hedgerow types, although these are largely species poor. Many of the hedges span the entire width of the study area.

3.1.3 Hydrology

3.1.3.1 The River Deveron and associated tributaries is the largest watercourse within the study area. The study area is within the North East Water Framework Directive (WFD) basin district.

3.1.3.2 There are three WFD catchment areas within the study area:

- Banff Coastal in the north;
- River Deveron across the majority of the study area, and
- River Ythan in the south.

3.1.3.3 There are eight watercourses within the OnTI RLB that have been assigned a WFD classification, along with their tributaries, and there are 26 named watercourses. In addition to the named watercourses, there are artificial agricultural and forestry drainage features, ponds, dams and small tributaries throughout the study area.

3.2 Coastal areas

3.2.1.1 The north of the study area interacts with the intertidal coastal zone of the North Sea, landward of MLWS. This incorporates the coastal WFD waterbody Findochty to Knock Head.

3.3 Peat within the study area

3.3.1 Desk-Based Assessment of Peat Distribution

3.3.1.1 At an early stage in the Proposed Development (Onshore) design process, it was identified that the OnTI RLB has the potential to include areas of peat. A high level desk-based study was carried out using a range of publicly-available information, such as spatial data from the Scottish Government, the British Geological Society and the Carbon and Peatland Map 2016 (James Hutton Institute, 2016[1]). The data was used to carry out a Red Amber Green assessment to determine the more or less favourable areas for development, avoiding areas of priority peatland where possible, refer to Volume 1, Chapter 6: Site Selection and Alternatives within the EIAR for further information.

3.3.1.2 Within the study area, the majority of soils are mineral and not carbon-rich. Peat soils are only mapped in the southern part of the study area, which include small areas of Class 1, 3 and 5 soils which are shown in Figure 1-2.

3.3.1.3 The majority of the soils that lie within the study area are mineral (Class 0), or Class 4, which describes soils that are unlikely to be peat.

3.3.1.4 An area of Class 3 soil is mapped near Redbriggs, as illustrated in Figure 1-2 (inset 1). An area of Class 1 soil, which is of the highest importance, is mapped in the southern end of the study area, as shown in Figure 1-2 (inset 3).

3.4 National Vegetation Classification Survey

3.4.1.1 In the southern section of the study area, the Carbon and Peatland 2016 map predicted an area of nationally-important Class 1 peat. Because of the potential presence of Class 1 peat, NVC mapping during ecological Phase 1 surveys was carried out in this area as part of the EIAR.

3.4.1.2 In the areas of Class 3 peat within the OnTI RLB, the Phase 1 habitat surveys found that the habitats consisted of modified grassland and arable fields, thus NVC surveys were not undertaken in these areas. For further information, please refer to Volume 5, Chapter 3: Terrestrial Ecology and Biodiversity of the EIAR.

3.4.1.3 The NVC surveys within the area of Class 1 peat indicated that the following habitats provide most of the ground cover:

- MG7a arable habitat associated with rye grass and clover ley;
- MG9 waterlogged grassland;
- M23b rush pasture, comprising waterlogged depressions and vegetative communities consistent with typical marshy grassland habitats;
- U4b grassland; and
- MG6a pastoral grassland.

3.4.1.4 None of the habitats recorded were considered to be ecologically notable due to their lack of species diversity or notable plant communities. Furthermore, as outlined by NatureScot's priority peatland habitat guidance (NatureScot, 2023[10]), priority peatland contains the NVC habitat communities M1, M17, M19, M20 or M15, none of which were recorded within the OnTI RLB.

3.5 Peat Probing and NVC Survey

3.5.1.1 Peat probing and NVC surveys were carried out by Botanaeco in 2023 and 2024. The surveys were carried out within the area of mapped Class 1 and 5 soils near the Onshore Substation site within the OnTI RLB (referred to as "Site 5" within the New Deer substation sites: Habitats, peat & GWDTE report in Caledonia OWF EIAR, Volume 7E, Appendix 7-2: Peat Survey Reports) and within an area of mapped Class 3 soils near Turriff within the OnTI RLB (see the Peat near Turriff: Peat survey report within Caledonia OWF EIAR, Volume 7E, Appendix 7-2: Peat Survey Reports). The locations of the surveys within the OnTI RLB are shown in Figure 1-2.

3.5.1.2 Permission was sought to investigate the remaining areas of Class 3 and 5 soils within the RLB, but the Applicant was not successful in obtaining the required landowner approvals. However, these represent a very small proportion of the total area of mapped Class 3 and 5 soils within the OnTI RLB.

3.5.2 Peat probing at "Site 5"

3.5.2.1 A third of the "Site 5" survey area was found to be arable field under a grass ley and there were moderate extents of improved grassland and marshy grassland. Semi-improved acid grassland extends across the area with minor areas of coniferous plantation, nondescript mire and wet modified bog. The habitats were found to be heavily modified from ongoing agricultural practices including grazing, drainage, ploughing and re-seeding. These areas are not considered to align with the definition of "Priority Peatland habitat".

3.5.2.2 A peat probing survey to measure peat depth was carried out on a 100m grid across Site 5 in July 2023. The area of survey is shown on Figure 1-2.

3.5.2.3 From the undertaking of peat surveys across Site 5, the presence of peat was confirmed by examination of exposures in the flanks and drains of a soil pit and the smooth penetration of the probes, with no rasping/grating or resistance typical of mineral soils.

3.5.2.4 Two separate basins of peat were evident within the base of Site 5. The western basin reached a depth of 120cm and the eastern basin a depth of 168cm. Both basins are around 1 hectare (ha) in size. A ridge was identified as present between the basins, which had peat depths of 15 to 18cm and the depth of peat shallows around the basins' periphery.

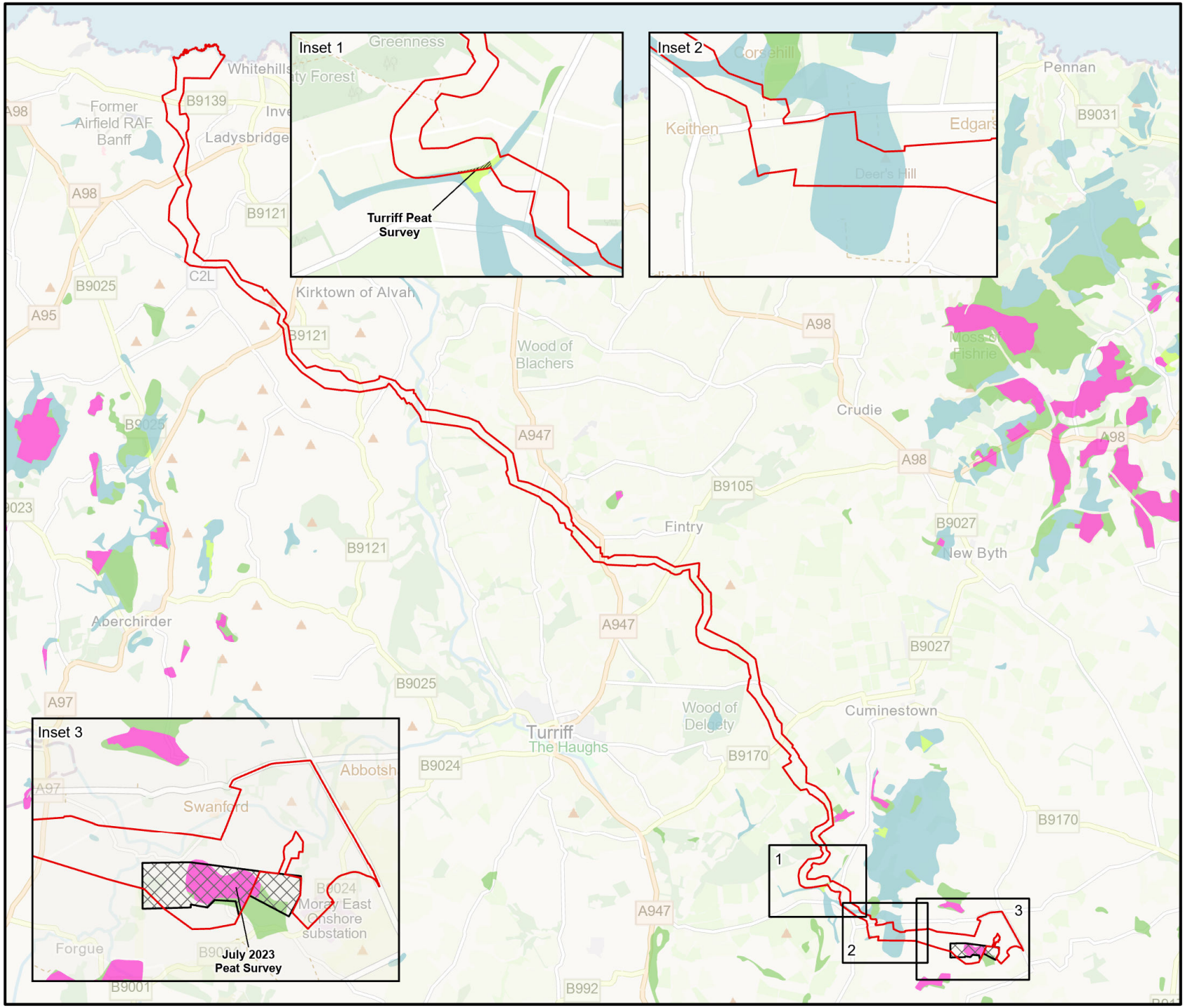
3.5.2.5 The presence of deep peat (peat deposits over 1m thickness) was confirmed in the southern area of the OnTI RLB through peat depth survey and through examination of the ground in a pit.

3.5.2.6 Due to the heavy modification of this peatland habitat, Botanaeco considered that the mapped area of Class 1 is more consistent with Class 5 peat, because it is not peatland/peat-forming habitat.

3.5.3 Peat probing near Turriff

3.5.3.1 The survey area is shown in Figure 1-2 (see Inset 1). The survey identified that grassland habitats are extensive across the survey area and the NVC communities present were not considered to align with the definition of "Priority Peatland habitat".

3.5.3.2 Peat depth probing was carried out on a 10m grid, which did not detect any peat. Two soil pits were dug, which confirmed that no peat is present within the survey area. Therefore, this area of mapped Class 3 soils is more consistent with mineral soil (Class 0).

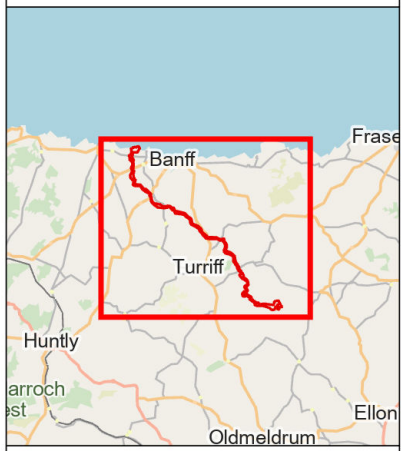


Onshore Transmission Infrastructure Red Line Boundary

Peat Survey

Carbon and Peatland 2016 Map

1 2 3 4 5



0 1 2 3 4 km

REV	DATE	DOC STATUS	ORIGIN	REVIEW	APP
02	25/09/2024	Approved	AC	DH	JG
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CALEDONIA Offshore Wind Farm

ARUP

CONTRACTOR DRAWING NO: UKCAL1_ARP_WNF_ENV_MAP_00604	CONTRACTOR REV: 02
GEODETIC PARAMETERS: OSGB36 / British National Grid (EPSG:27700)	

DRAWING TITLE

Figure 1-2: Mapped Areas of Peat (taken from Scotland's Soils)

STATUS: Approved	SCALE: 1:125,000	
DRAWING NUMBER: N/A	SHEET NO: 01 of 01	REV: N/A

4 Peat Management

4.1.1.1 As identified in Section 2.2 and confirmed through consultation with SEPA, peat should be managed in accordance with mitigation hierarchy, which gives priority to avoidance or minimisation of peat disturbance. Where this is not possible, peat should be re-used and the habitat restored or the losses offset. Application Document 8, Outline Habitat Management Plan, considers the restoration and offsetting of habitat loss for the Proposed Development (Onshore).

4.1.1.2 This section of the OPMP details the proposed avoidance and minimisation measures for the Proposed Development (Onshore), outlines re-use options for excavated peat, where avoidance has not been possible, and stresses the importance of re-use, as disposal options for excavated peat are limited.

4.2 Peat Avoidance

4.2.1.1 Throughout the Proposed Development (Onshore) design development a key principle has been the avoidance of priority peatland habitat where possible.

4.2.1.2 Peat probing has been undertaken within the only area of mapped Class 1 peat within the study area. This confirmed that priority peatland habitat is not present within this area and that the habitat is more consistent with Class 5, as deep peat was confirmed to be present within this area.

4.2.1.3 Peat probing carried out within an area of Class 3 peat within the study area confirmed that no peat was present and the soils are mineral (Class 0).

4.2.1.4 As identified within the Proposed Development (Onshore) EIA, the Onshore Substation Site avoids interaction with peat, however, there remain small areas of Class 3 and 5 peat within the OnTI RLB where the Onshore Export Cable Route may be required to be developed.

4.2.1.5 There is currently a lack of infrastructure design information for the Proposed Development (Onshore), as the final cable route is only to be prepared at AMSC stage, therefore it is not possible to calculate specific volumes of peat that will require excavation. It should be noted that only limited peat is present within the OnTI RLB. Therefore, by careful design it is expected to be possible to avoid incursion into areas of peat greater than 1m thickness.

4.2.1.6 At detailed design, the preference will be to avoid all areas of peat of any depth. However, it may not be possible to avoid all areas of peat, as the final route for the Onshore Export Cables will be dependent on agreement with landowners and achieving a balance between environmental constraints and engineering requirements.

4.2.1.7 At detailed design, if required, comprehensive site surveys will be carried out in areas of mapped peat (not including areas mapped as Class 4, where peat is not expected to be present), or where peatland habitat is indicated by ecological surveys, in line with the good practice guidance listed in Section 2.3, to determine the nature and extent of peat deposits. The results of such surveys will then be used in the micrositing of the Onshore Export Cables Route and associated temporary infrastructure, to avoid areas of peat wherever possible.

4.2.1.8 An Ecological Clerk of Works (ECoW) will be employed throughout the construction phase to monitor and ensure compliance with the Final Peat Management Plan (to be developed by the updating of this document as new information becomes available during the detailed design stage).

4.3 Minimisation of Disturbance

4.3.1.1 Where the Proposed Development (Onshore) cannot avoid areas of peat, the construction of the Proposed Development (Onshore) will adopt the following measures to minimise peat disturbance and the creation of waste peat, through the use of appropriate plant and haulage/access routes. These methods are described in more detail below.

4.3.2 Construction plant and access

4.3.2.1 Appropriate plant will be used that minimises the damage to surface vegetation in areas of peat.

4.3.2.2 Designated access/haul routes will be determined that avoid areas of deep peat where possible.

4.3.2.3 Access track layouts will be reviewed, and temporary access tracks routed along the alignment of permanent access roads where possible, to minimise the area of disturbance of the ground. Turning places will be used in place of circular tracks and the need for passing places reviewed.

4.3.2.4 Where new access tracks are proposed in areas of peat greater than 1m depth, floating construction techniques will be considered, noting that they are not possible in all situations, to remove the need to excavate peat.

4.3.2.5 The size and placement of construction compounds will be reviewed to ensure that they are not placed on peat, or the area over peat is minimised.

4.4 Peat Re-use

4.4.1.1 It will be important to specify the areas where peat can be beneficially re-used within the Proposed Development (Onshore) in the Final PMP, as waste peat cannot be used where there is no justified requirement or

demonstrated need for peat; for example, where there is no ecological benefit from specifically using peat.

4.4.1.2 SEPA has issued a position statement[9] which contains guidance on determining whether excavated peat is a waste. Where excavated peat does not have a genuine, identified and legitimate re-use, it is likely that it will be classified as a waste material and will need disposal.

4.4.1.3 This section sets out the good practice that should be followed to ensure that peat can be beneficially re-used.

4.4.2 Good practice during excavation

4.4.2.1 During construction of the Onshore Export Cable Route, the Contractor will adopt the following good practice guidelines in relation to peat excavation, to minimise the damage to peatland and ensure that the maximum quantity of peat excavated can be beneficially re-used:

- Where peat conditions are suitable, peat turves will be excavated as intact blocks;
- The amount of time cable trenches are left open will be minimised, as trenches left open for long periods of time can act as conduits for water, causing erosion and potential sediment pollution of nearby watercourses;
- There will be good separation of excavated materials to avoid mixing peat with mineral soils;
- Clay plugs or peat bunds will be considered to be used to prevent trenches from becoming preferential flow paths and to maintain local hydrological conditions; and
- Geotechnical inspections will be carried out during excavations through deep peat, to ensure that excavation batters are kept as steep as practicable, to minimise the amount of peat needing to be excavated. The use of trench supports will also be considered to reduce the area of excavation required, where appropriate.

4.4.3 Peat re-instatement

4.4.3.1 The reinstatement of cable trenches is the preferred use for excavated peat, as it minimises the need for the transportation of peat and promotes the re-establishment of vegetation.

4.4.3.2 Acceptable uses for excavated peat will be identified during detailed design, ideally those which:

- Require minimal transportation of the peat from the excavation to the final re-use area; and

- Only place peat soils where supporting hydrological conditions exist, or can be created.

4.4.3.3 Acrotelmic peat, particularly vegetated peat turves, may be used for reinstating vegetation around the edges of infrastructure such as tracks and substations. Cable trench infilling will maintain the original soil layering and not mix mineral and peat soils. The acrotelmic peat layer should always be placed on top.

4.4.3.4 Excess peat from excavations will not be used to create bunds around infrastructure. It is unlikely that peat soils will be geotechnically suitable for the creation of bunds. Excess peat will also not be used to create shoulders on floating roads or for cut tracks, or spread on land adjacent to tracks, as this will smother existing vegetation.

4.4.3.5 As described in Section 4.2, the excavation of deep peat (greater than 1m depth) will be avoided during detailed design, where possible. The excavation of deep peat will likely result in the excavation of amorphous peat, which is difficult to handle and store effectively or safely. Amorphous peat is unsuitable for use in reinstatement and restoration works, and cannot be accepted in off-site waste management facilities.

4.4.3.6 Peat compaction as a result of excessive tracking of vehicles over the surface will be avoided. Where vehicle tracking is unavoidable, the number of trips will be minimised and consideration given to the use of low ground pressure tracked vehicles.

4.4.4 Re-use in areas of infrastructure

4.4.4.1 If peat cannot be used to reinstate cable trenches or the working corridor, then excavated peat will be considered to be used to dress and reinstate slopes and the edges of permanent infrastructure, such as the Onshore Substations and access roads, or temporary construction compounds. This work will be carried out as soon as practicable after construction, to avoid the long-term storage of peat which can result in its degradation (see Section 4.5).

4.4.5 Peat re-use volumes

4.4.5.1 The volumes of peat requiring re-use as part of the Proposed Development (Onshore) have not been determined yet, but will be calculated at detailed design stage and incorporated into the Final Peat Management Plan.

4.4.5.2 The estimated volumes of excavated peat will be given as acrotelmic and catotelmic volumes, as this will assist with identifying appropriate re-uses for the material.

4.5 Temporary Storage

4.5.1.1 The temporary storage of peat will be minimised where possible, to prevent it drying out and to maintain its structural integrity. This can be achieved by re-using the peat in the same location e.g. to reinstate cable trenches after excavation.

4.5.1.2 The locations of temporary storage areas will be identified after site investigation, considering the presence of peat and other sensitive receptors. Storage location(s) will be agreed with the ECoW prior to the start of construction.

4.5.1.3 The following good practice should be applied to all peat storage areas:

- Peat turves will not be stacked, but placed beside each other on geotextile matting to protect the underlying soils and vegetation;
- Turves must be cut to an appropriate depth to maintain plant root systems during storage;
- Peat will not be stored more than 1m high;
- Provisions should be made for keeping excavated peat moist in the event of dry weather, where vegetation may succumb to drought or the soil may become susceptible to wind erosion. This may involve tankering water in, where there is no water supply on site;
- The acrotelm and catotelm will be handled and stored separately. Also, peat will not be mixed with mineral soils, as this may result in the release of carbon stored within the peat; and
- Peat and soil storage areas will be located at least 50m from any watercourse or ditch, to prevent pollution resulting from runoff.

5 Conclusions

5.1.1.1 Throughout the Proposed Development (Onshore) design development a key principle has been the avoidance of priority peatland habitat where possible.

5.1.1.2 One area of mapped Class 1 peat is present within the study area. A peat probing and NVC survey has confirmed that this area does not support priority peatland habitat and is not Class 1 peatland habitat, although two pockets of deep peat are present, consistent with Class 5.

5.1.1.3 As detailed design is still to be completed, this OPMP identifies further opportunities to avoid peat disturbance, for example through the use of additional survey to inform micrositing. However, some areas of peat, none of which have been identified as supporting priority peatland habitat, have the potential to be disturbed during construction of the Proposed Development (Onshore). These may include small areas of deep peat.

5.1.1.4 This OPMP sets out the measures that should be taken to minimise disturbance of peat, particularly deep peat and presents potential options for the re-use of excavated peat. The preferred use for excavated peat will be in the reinstatement of cable trenches, as this minimises the need for transportation of peat and will promote the re-establishment of the existing vegetation cover.

5.1.1.5 Peat may be used to dress and reinstate slopes and the edges of permanent infrastructure such as the onshore substation and access roads. All re-use options rely on the appropriate temporary storage of peat.

5.1.1.6 Where excavated peat does not have a legitimate re-use within the OnTI RLB, it is likely to be considered a waste and will need appropriate disposal. This will be avoided, with preference given to avoidance, minimisation and re-use in line with the principles of NPF4.

5.1.1.7 This OPMP is a live document and will be updated to calculate the specific peat volumes requiring excavation and storage using information from site investigations, detailed design and consultation with statutory consultees.

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