Technical Appendix 10.2: Peat Management Plan

Windburn Wind Farm

Windburn Wind Farm Limited

Prepared by:

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SLR Project No.: 428.07767.00009

2 June 2025

Revision: 1

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
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Table of Contents

Tables in Text

Figures

Annexes

1.0 Introduction

1.1 General

SLR Consulting Ltd (SLR) was commissioned by Windburn Wind Farm Limited (the 'Applicant'), to undertake a Phase 1 Peat Management Plan (PMP) for the proposed Windburn Wind Farm (the proposed development). The proposed development is located approximately 2.9km north of Alva, within Perth and Kinross Council and Clackmannanshire Council.

The proposed development would comprise of 13 wind turbines with associated infrastructure including access tracks, crane hardstandings, borrow pits, substation compound and temporary construction compounds.

The assessment has been undertaken in line with best practice guidance[1] published by the Scottish Environment Protection Agency (SEPA) and wind farm construction good practice guidance.

The work has been undertaken by a team of Geotechnical Engineers and Geologists, some of whom have over 17 years' consultancy experience in undertaking peat management and geological assessments. The team was led by a Chartered Hydrogeologist with 30 years' consultancy experience and specialising in the assessment of soils, geology and water for renewable power projects in Scotland.

1.2 Proposed Development

The centre of the proposed development is located on NGR NN 87737 02889 and covers an area of approximately 1,474ha (the site). See **Figure 10.2.1**.

The proposed development would comprise 13 three-bladed horizontal axis turbines up to 149.9m tip height with a combined rated output in the region of approximately 65MW. The proposed development would include associated infrastructure including turbine foundations, crane hardstandings, new access tracks, underground cabling, a substation compound including a control building and up to 35MW of battery storage, up to two borrow pits and three temporary construction compounds (as shown on **Figure 10.2.2**).

Full details proposed development are provided in **Chapter 3: Description of Development** of the EIA Report.

1.3 Objectives

This Outline PMP outlines the overall approach of minimising disruption to peatland, and it aims to ensure that all further opportunities to minimise peat disturbance and extraction would be taken during detailed design and construction of the proposed development.

This Outline PMP has been developed to demonstrate that peat has been afforded significant consideration during the design phase of the proposed development, and would be afforded significant consideration should consent be granted. Specifically, it shows with the benefit of site specific peat probing data, how areas of deeper peat have been avoided where technically feasible and how shallow deposits of peat and soils can be safeguarded and used to support the long-term habitat restoration and management proposals provided in **Technical Appendix 8.4: Outline Habitat Management Plan**.

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

1.4 Role of the Peat Management Plan

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

Stage 1: Environmental Impact Assessment (EIA)

This report forms the Outline PMP and is submitted as part of the EIA Report. From this initial report the PMP will be developed further into a Stage 2 Pre-Construction PMP.

Stage 2: Post Consent / Pre-Construction

The peat mass balance calculations may be further developed prior to the works commencing, following detailed ground investigation or further survey works required to inform detailed design, or that may be required under planning consent conditions.

Stage 3: Construction Stage

Actual peat volumes excavated during construction will be recorded against the overall predicted volumes. Within micrositing allowances, the alignment and design of tracks, turbine and infrastructure foundations and associated construction methods will be reviewed to avoid/minimise peat disturbance as much as possible considering the more detailed information available once construction commences. A regular review and update of the peat mass balance table will be undertaken by the appointed Principal Contractor (PC) and monitored by the Environmental Clerk of Works (EnvCoW) on-site and made available to regulators as required.

1.5 Legislation and Guidance

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

- National Planning Framework for Scotland 4 (NPF4) (Scottish Government, February 2023)[2];
- Scottish Government, Scottish Natural Heritage, SEPA (2014) 'Peat Survey Guidance; Developments on Peatland: Site Surveys'[3];
- SEPA Regulatory Position Statement - Developments on Peat (Scottish Environment Protection Agency, 2010)[4];
- NatureScot (July 2024), Good Practice During Wind Farm Construction.[5];

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

[3] Scottish Natural Heritage (SNH), SEPA, Scottish Government & James Hutton Institute. (2014)' Peat Survey Guidance; Developments on Peatland: Site Surveys'.

[4] Scottish Environment Protection Agency. 2010. Regulatory Position Statement – Developments on Peat

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

- Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and the Minimisation of Waste (Scottish Renewables and SEPA, 2012) [6];
- The Waste Management Licensing (Scotland) Regulations 2011[7];
- Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments (Scottish Government, January 2017) [8]; and
- Floating Roads on Peat - Report into Good Practice in Design, Construction and Use of Floating Roads on Peat with reference to Wind Farm Developments in Scotland (Forestry Commission Scotland & Scottish Natural Heritage, 2010) [9].

Requirements of National Planning Policy 4

The intent of Policy 5 (Soils) of National Planning Policy 4 (NPF4)[2] is "*to protect carbon rich soils, restore peatlands and minimise the disturbance of soils from development*".

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

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

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

- *essential infrastructure and there is a specific locational need and no other suitable site;*
- *the generation of energy from renewable sources that optimises the contribution of the area to greenhouse gas emissions reductions targets;*
- *small-scale development directly linked to a rural business, farm or croft;*
- *supporting a fragile community in a rural or island area; or*
- *restoration of peatland habitats".*

And [5(d)] confirms *"that where development on peatland, carbon-rich soils or priority peatland habitat is proposed, a detailed site specific assessment will be required to identify:*

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

Policy 5 also confirms that the site specific (above) assessment [5(d)] "*should inform careful project design and ensure, in accordance with relevant guidance and the mitigation hierarchy, that adverse impacts are first avoided and then minimised through best practice. A peat management plan will be required to demonstrate that this approach has been*

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

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

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

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

followed, alongside other appropriate plans required for restoring and/ or enhancing the site into a functioning peatland system capable of achieving carbon sequestration".

This Stage 1 Outline PMP considers the protection and safeguarding of peat and seeks to fulfil the requirements of Policy 5(d) with further detail on peatland habitat and peatland restoration provided in **Technical Appendix 8.4: Outline Habitat Management Plan.**

Mitigation Hierarchy

SEPA[4] has published guidance regarding the mitigation hierarchy for developments on peat which is summarised below:

- Prevention – avoiding generating excess peat during construction (e.g. by avoiding peat areas or by using construction methods that do not require excavation such as floating tracks);
- Re-use – use of peat produced on-site in restoration, provided that its use is fully justified and suitable;
- Recycling / Recovery / Treatment – modify peat produced on-site for use as fuel, or as a compost / soil conditioner, or dewater peat to improve its mechanical properties in support to re-use; and
- Storage – applying the SEPA guidance, storage of peat up to a depth of 2 m is not classified as a waste and, however clarification should be sought from the waste regulator prior to re-use and care must be taken to ensure that it does not cause environmental pollution.