RWE Renewables UK Onshore Wind Ltd

Eredine Wind Farm
Further Environmental Information

Appendix 6D: Outline Habitat Management Plan

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Report for

Finlay Burns
Development Project Manager - Scotland
RWE Renewables UK Ltd

Main contributors

Alastair Miller
Danny Flenley

Issued by

.....
Alastair Miller

Approved by

.....
Graham Burt-Smith

WSP Environment & Infrastructure Solutions UK Limited

Amber Court, Newcastle Business Park
Scotswood Road
Newcastle Upon Tyne
NE4 7YQ
United Kingdom

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1. Introduction

1.1 Purpose of this Report

1.1.1 Eredine Wind Farm is proposed to be constructed approximately 4.5 kilometres (km) south-west of the town of Inveraray and approximately 17km north-east of Lochgilphead, within Argyll and Bute Council district (central Ordnance Survey [OS] grid reference: NM 98796 04735) hereafter referred to as 'the Development Site' as shown in **Annex A**, **Figure 6D.1**.

1.1.2 Following submission of Eredine Wind Farm EIA Report (2024), consultee responses were received in response to the Section 36 application. The FEI Report provides further information in response to comments from consultees, including details of the proposed removal of turbines 3, 5, 7, 11 and 20 and associated infrastructure from the Proposed Development. This revised design is hereafter referred to as the Revised Development.

1.1.3 This outline Habitat Management Plan (oHMP) forms a Technical Appendix to the Revised Development **FEI Report, Chapter 6: Ecology**. It should also be read in conjunction with the **EIA Report, Chapter 10: Ecology**. A detailed HMP, which will include specific prescriptions and confirmation of the peatland restoration location(s), will be agreed with Argyll & Bute Council (ABC), in consultation with Forestry & Land Scotland (FLS), NatureScot and Scottish Environment Protection Area (SEPA), prior to the commencement of construction of the Revised Development.

1.1.1 This document sets out the strategy the Applicant proposes to ensure habitat management measures are implemented to mitigate effects on identified ecological features (both non-avian and avian). Recognising the requirement of National Planning Framework 4 (NPF4), Policy 3 that "*development proposals will contribute to the enhancement of biodiversity, including where relevant, restoring degraded habitats*", this Appendix also sets out the strategy for delivering additional biodiversity improvements across the Development Site.

1.1.2 The oHMP provides a summary of the rationale, objectives, baseline conditions, restoration opportunities and scope of habitat management works to offset predicted loss of peatland habitats from within the Development Site, alongside additional enhancement measures.

1.1.3 No significant adverse impacts were predicted for ecological or ornithological features within **Chapter 10: Ecology** or **Chapter 11: Ornithology** respectively. Nevertheless, the oHMP will provide a mechanism to meet the requirements of NPF4 which sets out requirements for development to deliver positive effects for biodiversity.

1.2 Rationale

1.2.1 During the development phase of the Proposed Development, the Applicant minimised any potential ecological impacts; firstly, by designing it to avoid or limit ecological impacts wherever practicable (see **EIA Report Chapter 3: Design Evolution and Alternatives**), and secondly, by undertaking to employ industry best environmental practice during wind farm construction and operation (see **EIA Report Chapter 10: Ecology** and **EIA Report Chapter 11: Ornithology**).

1.2.2 As noted within **Chapter 6:Ecology** of the FEI Report and **Appendix 6C**, it is predicted that 0.12 hectares (ha) of peatland habitat would be permanently lost, with an additional 0.51ha with potential to be affected by temporary habitat loss/modification, as a result of the Revised Development.

1.2.3 This document outlines criteria for identifying and delivering compensatory peatland habitat restoration measures with regard to NatureScot (2023) guidance. The aim would be to contribute a greater area than that which is predicted to be affected by the Revised Development, providing additional enhancement to the surrounding landscape. This approach aligns with NPF4 policies, which are relevant to development proposals on peatland, carbon-rich soils and priority peatland.

1.2.4 Combined effects (direct loss, temporary loss and indirect modification) on priority peatland communities (only M19a) totals 0.63ha. Through the application of NatureScot's guidance of a 10:1 offset, it is planned that 6.3ha of peatland will be restored across the Development Site. In addition, a further 23.9ha of priority peatland habitat will be restored in order to deliver a 'significant level of enhancement' under NPF4. Combined, this will result in peatland restoration of 30.2 ha.

1.2.5 Peat management and reinstatement during and following construction is detailed separately in a Peat Management Plan (PMP) (**FEI Report Technical Appendix 7A**) and a Construction Environmental Management Plan (CEMP) will be submitted prior to construction to ABC and agreed with all necessary consultees. The CEMP will detail the methods and techniques to be employed across the whole of the Revised Development to ensure compliance with legislation, construction best practice and the mitigation measures.

1.2.6 Habitat networks will be improved across the Development Site, with broadleaf riparian planting, low density broadleaf planting along forestry edges and targeted planting of willow (*Salix sp*.). These measures will be complemented by an ongoing programme of targeted deer control within the Development Site. These interventions will provide ecological enhancement for a variety of species including black grouse, improving nesting and foraging habitat, whilst installation of artificial nest platforms for divers (*Gavia sp*.) will help contribute to improved breeding success of these species.

1.3 Habitat Management Plan Delivery and the Planning Framework

1.3.1 A number of stakeholders will be involved in the formulation and agreement of the Habitat Management Plan (HMP) including (but not necessarily limited to) the Applicant, FLS, ABC, NatureScot and Royal Society for Protection of Birds (RSPB).

1.3.1 Proposals have sought wherever possible to align with the scope and objectives of FLS's East Loch Awe Land Management Plan[1], which covers the areas of Eredine, Brenchoillie and Ardchonnel Forests.

1.3.2 It is anticipated that the HMP will be a live document that will be further modified pre- and post-construction, taking account of any design changes and priorities within the Development Site, and in response to ongoing monitoring outcomes. New opportunities for habitat management and enhancement may become apparent during this pre- and post-construction period and during the lifetime of the Revised Development.

1.3.3 The HMP also includes measures that will allow key consultees the opportunity to monitor its success and will set out the mechanism for the Applicant undertaking any remedial action where necessary. The HMP would operate for the 35-year life span of the Revised Development. The success of the HMP would be monitored over this period, with input from core delivery partners.

1.3.4 The HMP will be funded and delivered by the Applicant and will be overseen by an HMP Steering Group. The purpose of the Steering Group will be to review progress and

[1] https://forestryandland.gov.scot/what-we-do/planning/active/east-loch-awe

effectiveness of the HMP on at least an annual basis, and to modify or add to the content of the HMP if necessary. The formal membership and format of the Steering Group is yet to be agreed, however, the organisations noted will be invited to participate in this process. This Steering Group will be chaired by the Applicant, or its representative.

1.4 Structure of the Outline Habitat Management Plan

1.4.1 This oHMP is intended to be a practical, succinct document and provides:

- A brief baseline summary of the Development Site characteristics as a general background (**Section 2**);
- Details of the aims and objectives (**Section 3**);
- Habitat management measures detailing proposed prescriptions/actions (**Section 4**);
- Details of implementation including partnership working, funding and duration (**Section 5.1 – 5.3**); and
- Details of indicative monitoring prescriptions needed to evaluate success or otherwise of the implementation of management(**Section 5.4**).

2. Baseline

2.1 General Site Description

2.1.1 The Development Site is located between two large areas of open water, which include Loch Fyne (a sea loch) to the south of the Development Site and Loch Awe (a freshwater loch) to the north of the Development Site. The Development Site comprises an area of 31.46km^2 which is roughly oblong-shaped, orientated in a south westerly to north easterly direction.

2.1.2 The highest elevation within the Development Site is at Beinn Dearg, coordinates E 202400, N 705000, at 482 metres Above Ordnance Datum (AOD) in the south-east of the Development Site. High elevations are also found at Beinn Dubh Airigh (460m AOD, coordinates E 195912 N 703492) and Beinn Laoigh (435m AOD, coordinates E 196850, N 701160), in the west and south-west of the Development Site respectively. The remainder of the Development Site is predominantly on a high plateau (generally above 300m AOD), decreasing in elevation towards the base of the Abhainn a' Bhealaich valley in the north-west at approximately 250m AOD.

2.1.3 The Development Site is dominated by conifer plantation, of varying ages, mainly composed of densely planted Sitka Spruce. A few small compartments of Lodgepole Pine are present. Typically, the afforested land on the Development Site has been mechanically furrowed for planting to improve drainage in poor draining land. Windblown mature conifers are common across the plantation areas, most common on steeper ground, climatically exposed woodland edges and in areas of boggy ground. Some areas of conifer plantation were planted in blanket bog and consequently, the trees in these areas are comparatively stunted due to waterlogging and acidic groundwater conditions.

2.1.4 The main open habitat within the Development Site is a matrix of blanket bog and upland heathland, with the greatest extent present across the upper slopes of its the southern area. This area includes steep slopes, rock outcrops and cliffs and deeper peat. These open ground areas have a high ecological value and support a range of important species, with similar areas adjacent to the Development Site boundary.

2.2 Land use and existing management

2.2.1 The Development Site is situated within the East Loch Awe Land Management Plan (LMP) (FLS, 2025) area (see **Plate 2.1**), which comprises a landscape scale of 9,697 ha, stretching from the east side of Loch Awe in the west to the slopes above Loch Fyne in the east. Sitka Spruce is the dominant productive species; however, there are areas of more diverse tree species and age structure varies across the Development Site. A road network exists across the plan area, which has enabled age restructuring to be carried out across most of the mature forest.

2.2.2 The primary objectives of the LMP are: commercial timber production, Plantation on Ancient Woodland Site (PAWS) restoration, renewable energy, landscape re-appraisal in association with restructuring, including a review of management prescriptions with reference to forest resilience in relation to climate change.

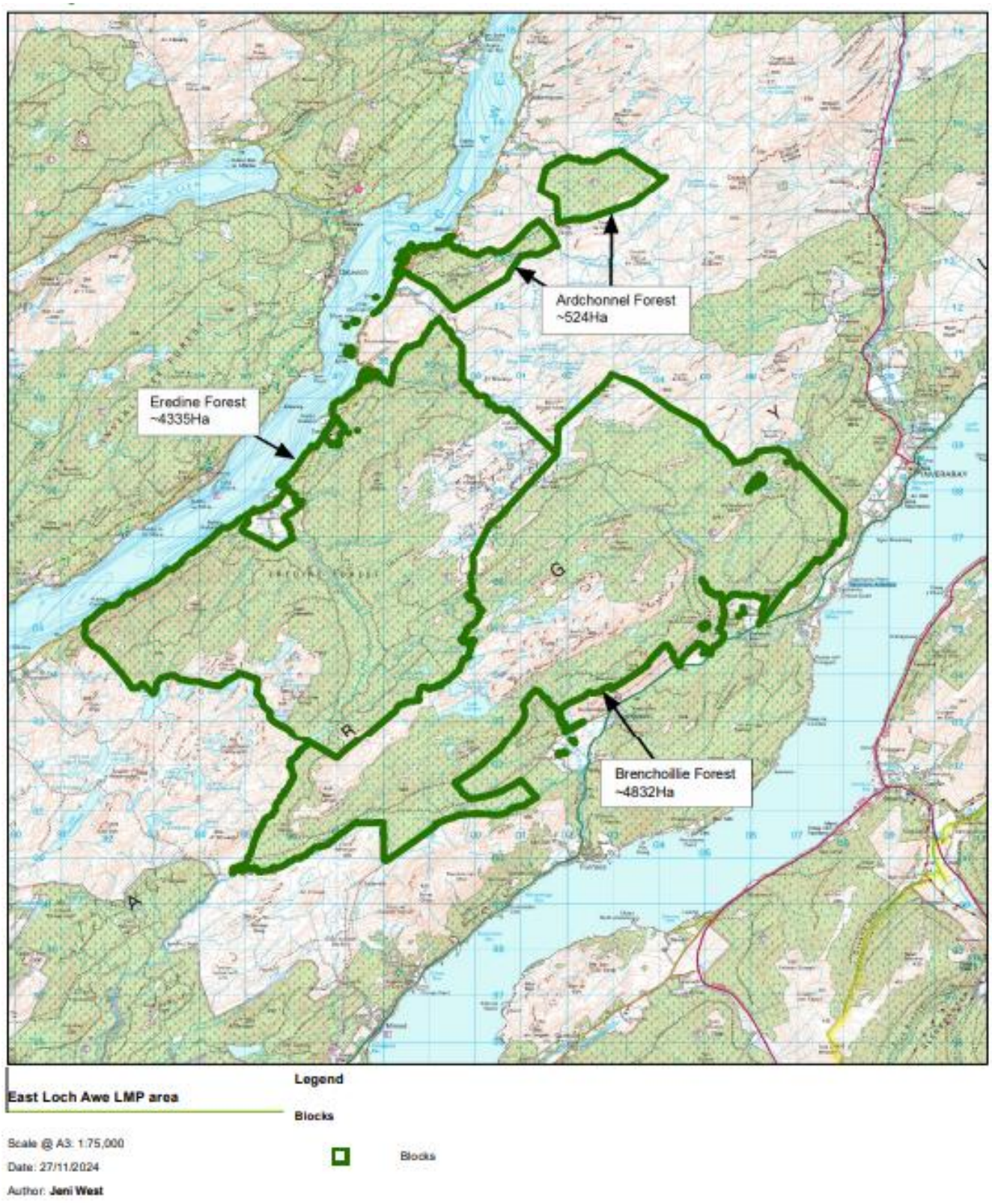

Plate 2.1 East Loch Awe LMP Area

2.2.3 Sheep grazing: The LMP reports that there is no sheep grazing within the LMP Area (which includes the Development Site); however, sheep trespass is considered an ongoing problem across the wider LMP area. Sheep and deer impacts during forest establishment are recognised by FLS to have played a role in areas of poor tree establishment.

2.2.4 Deer management: FLS report that deer control is undertaken within the LMP area. The forest has fairly limited connectivity with adjacent woodland and has a good internal environment and infrastructure for deer control. Trial enclosures on the upper slopes indicate the potential for habitat improvement and regeneration of native woodland where deer numbers are reduced. According to the LMP, many areas on the lower slopes show medium deer impacts with significant regeneration of vulnerable species. On the upper slopes trial enclosures indicate that deer (and sheep) grazing has a significant impact on regeneration and biodiversity. In addition to potential higher activity in these more secluded areas.

2.2.5 The LMP recognises that effective deer control within the Brenchoillie management area needs to be carried out in conjunction with a third-party estate due to the retention of sporting rights by the estate.

2.3 Existing Conditions

2.3.1 The identification of candidate management areas, determination of likely habitat types and the suitability for restoration has been informed by the following:

- Site visits;
- Aerial imagery and Ordnance survey (OS);
- Peat depth surveys;
- National Vegetation Classification (NVC) survey data (presence of mire communities) (See **EIA Report Technical Appendix 10B**);
- Peatland condition (i.e. presence of historical drainage, erosion features, sheep grazing/trampling etc.) based on the Peatland Condition Assessment (PCA) (See **EIA Report Technical Appendix 10B)**;
- Presence of designated sites;
- Land ownership boundaries; and
- East Loch Awe LMP, including forestry planting areas/areas recently clear-felled and unstocked.

Habitats

2.3.2 As identified in **EIA Report Technical Appendix 10B** (Phase 1 Habitat, NVC and PCA), a large proportion of the blanket bog within the Development Site is considered to be modified through historic drainage and erosion. Peatland Condition Areas and the predicted effects of the Revised Development on these are presented in **FEI Report Technical Appendix 6C**.

2.3.3 Large parts of the Development Site comprise conifer plantation of varying ages, mainly composed of densely planted Sitka Spruce and a few small compartments of Lodgepole Pine. Plantation was recorded on both deep (blanket bog) and shallow peat (wet heath communities).

2.3.4 Open habitat, particularly in the southern area of the Development Site, has a number of large erosion features comprising hagg/gully complexes up to ca 2m in height. Smaller erosion features (ca. 0.5 m in height) were also recorded. Conditions in these areas are favourable for active restoration of peatland habitats and are considered likely to regenerate naturally, following active measures to reduce peat erosion. The implementation of

restoration proposals within these areas would therefore be likely to result in downstream ecological benefits resulting from decreased erosion and run-off within local catchments.

Peatland Resource

2.3.1 As stated in **FEI Report Chapter 6: Ecology** and the outline Peat Management Plan (**FEI Report Technical Appendix 7A**), the Revised Development has been designed to minimise impacts on the Development Site's peat resource, commensurate with the need to take into account other environmental effects and technical design constraints. However, much of the Development Site is underlain by peat, with this imposing limits on the scope to avoid peat altogether. As such, part of the proposed management of peat resource at the Development Site will involve reuse of peat excavated in the construction of the Revised Development (detailed further in **FEI Report Technical Appendix 7A**).

2.3.2 In addition to this, the Development Site offers opportunities for extensive peat resource management and enhancement (over and above the mitigation measures proposed for the Revised Development), via restoration of currently eroded areas of peat. Degraded parts of the Development Site are visible primarily as hagged areas (either vegetated or bare), with degradation of the Development Site's peat resource having occurred both via natural erosion and as a consequence of forestry related drainage, as evidence by the extent of hagged and gully complexes across the Development Site.

Terrestrial/Aquatic Species

2.3.3 The following species were confirmed as being present on the Development Site, but no significant effects were predicted during construction or operation of the Revised Development:

- Otter (*Lutra lutra*) - Surveys identified evidence of otter activity along watercourses within the Development Site, including the Abhainn a' Bhealaich and various named and unnamed tributaries; the Douglas Water and its various named and unnamed tributaries, as well as various lochans. A total of 2 resting places were identified (see **FEI Report Technical Appendix 6A**).
- Bats – Surveys indicate that at least five bat species utilise habitat within and around the Development Site: common pipistrelle, soprano pipistrelle, *Pipistrellus* species, brown long-eared bats, and bats of the genera *Myotis* (see **FEI Report Technical Appendix 6B**).
- Badger (*Meles meles*) – Historical records of badger were provided by the FLS with a potential sett present within the Development Site boundary (this was located within a area that has since been clear-felled); and two further badger setts within 2km of the Development Site boundary; the historical sett location was checked during habitat walkover surveys or protected species surveys and no badger sett was recorded (see **EIA Report Confidential Appendix 10C**).
- Pine marten (*Martes martes*) - A pine marten scat was recorded during habitat surveys in open habitat within the south west of the Development Site, and records provided by FLS confirm presence within the Development Site (see **EIA Report Confidential Appendix 10C**).
- Red squirrel (*Sciurus vulgaris*) – Red squirrel are present within the wider forest, which is known as a Red Squirrel Stronghold (see **EIA Report Confidential Appendix 10C**).

- Fish - Suitable salmonid habitat including suitable spawning habitat was recorded. No salmon (*Salmo salar*) were found in any of the surveys. Populations of brown trout (*Salmo trutta*) are likely resident due to the presence of downstream barriers (**EIA Report Appendix 10E**).

Birds

2.3.4 A range of bird species were recorded utilising the Development Site or wider area (see **FEI Report Chapter 5: Ornithology**). Species of special value included:

- Black grouse (eight territories within the Development Site boundary) [BoCC Red list];
- Black-throated diver (one pair) [WCA Sch. 1, Birds Directive Annex 1, BoCC Amber list];
- Red-throated diver (at least three pairs utilising different lochans) [WCA Schedule 1, BD Annex 1];
- Golden eagle (two territories) [WCA Sch. 1, BD Annex 1];
- White-tailed eagle (39 flights recorded from 2019 to 2021, including an adult pair once); [WCA Sch. 1, BD Annex 1, BoCC Amber list];
- Osprey (22 flights by a single bird and one flight by two birds during Vantage Point (VP) surveys) [WCA Sch. 1, BD Annex 1];
- Whooper swan (seen on three lochans; one bird feeding close to Loch Dubh-ghlas in June 2020). [WCA Sch. 1, BoCC Amber list];

2.3.5 No significant effects in terms of the EIA Regulations were predicted following the application of mitigation, including the habitat management measures described in this plan.

3. Aims and Objectives

3.1 Management Aims

3.1.1 The four main aims of this oHMP are:

- Aim 1: To restore and enhance on-site peatland habitats;
- Aim 2: To increase native woodland coverage and enhance connectivity through broadleaf planting and/or natural regeneration;
- Aim 3: To increase low-lying willow scrub coverage; and
- Aim 4: To enhance habitat for notable species of breeding birds including black grouse and divers.

3.2 Objectives

3.2.1 Proposed management objectives for the Development Site are presented in **Table 3.1**.

Table 3.1 Management Objectives

Aim	Ref	Objective
1	1.1	To reduce the development of bare peat and discourage further loss and degradation of peatland by reprofiling and revegetating hagg and gully complexes.
	1.2	To halt progressive erosion by blocking hagg and gully complexes with surface bunds, raising the water table and allowing revegetation of pools.
	1.3	To halt progressive peat drying and erosion through a programme of ground smoothing and drain-blocking to raise the water table.
	1.4	To remove self-seeded sitka spruce, which contributes to drying out of peatland habitats.
2	2.1	To provide improved habitat with benefits for a variety of species including black grouse, freshwater fish and otters by planting low density native broadleaf trees along watercourses and forestry edges.
3	3.1	To increase the willow scrub resource, improve site biodiversity through planting and installation of deer exclosures to protect planting

Aim	Ref	Objective	
			areas and limit suppression of growth by deer.
4	4.1	To increase the availability of suitable foraging habitat for black grouse.	
	4.2	To increase the availability of safe nesting locations for diver species on lochs and lochans.	

4. Restoration & Enhancement Measures

4.1 Proposed measures

4.1.1 The proposed restoration, enhancement and monitoring measures reflect the different requirements of the variable Development Site conditions, general land use and features to be enhanced. The following proposed measures are illustrated in **Annex A**, **Figure 6D.1** and are discussed in further detail in the following sections:

- Peatland restoration – gully-blocking with surface bunds, reprofiling, revegetation, ground-smoothing, drain/furrow blocking and removal of conifer regeneration;
- Native woodland coverage riparian and non-riparian broadleaf planting;
- Scrub planting and natural regeneration;
- Deer management; and
- Artificial diver raft installation.

4.2 Peatland restoration

4.2.1 The following peatland restoration proposals will provide a variety of benefits to the peatland habitats within the Development Site, the assemblage of species that depend upon them and the associated ecosystem benefits e.g. the carbon storage and downstream water quantity and quality.

4.2.2 Suitable areas for peatland restoration comprise actively eroding peatland features with only limited vegetation cover and historically drained peatland across the Development Site. The extent of these areas would be subject to refinement prior to completion of the final HMP but management proposals will aim to stabilise, revegetate and restore the hydrology of peatland habitat across the Development Site.

4.2.3 Identified peatland erosion features and areas of self-seeded conifer regeneration on Priority peatland with opportunity for restoration have been mapped and are illustrated on **Annex A**, **Figure 6D.1**. These areas are sufficient to deliver a 10:1 offset of impacted peatland (**6.3 ha**), as well as an additional significant enhancement area of **23.9 ha** have the potential for recovery through a programme of restoration measures dependent on the type of erosion or modification identified.

4.2.4 It should be noted that there could be opportunity, through further discussion with FLS at the detailed design stage, to deliver forest to bog restoration within the Development Site, which could potentially allow for the delivery of more targeted restoration areas within the Development Site.

4.2.5 As peatland restoration methods are evolving, best practise methods at the time of restoration works will be used and determined in consultation with FLS and NatureScot.

4.2.6 **Plates 4.1 – 4.5** illustrate peatland modification and erosion features within the Development Site.

Plate 4.1 Peatland being drained and actively eroding north of Lochan Gaineamhach [NM 99999 04486]

Plate 4.2 Actively eroding gullies west of Loch Garbh [NM 98408 03298]

Plate 4.3 Actively eroding peatland, gullies and haggs west and north of Lochan Gaineamhach NM 99743 04199 and NN 00198 04595

Plate 4.4 Self-seeded conifer (Sitka Spruce) encroachment on blanket bog [NM 98853 03659]

Hag, gully and peat bank reprofiling

4.2.7 There are extensive erosion features across the Development Site. The primary aim of restoring these features is to prevent further erosion of the peat at the faces (stopping peat erosion and encouraging revegetation in conjunction with slowing the flow of water). The following best practice measures (NatureScot 2022) will be considered:

- *Ensure the cause of continued erosion has been addressed; in this case halting or slowing the flow of undercutting watercourses;*
- *Roll back the vegetation of removed turves, preserving the root structure;*
- *Remove and reprofile the underlying peat to 30-35^{o} (sometimes 40-45^{o} can work if site conditions allow);*
- *Hags > 2 m need to re-profiled with machinery from above AND below to ensure that the slope has adequate vegetation to recover;*
- *Work the gully bottom edge. Leave the toe intact but manage the new flow channel away from the toe (baffles or spur surface bunds can be used);*
- *Ensure turves are laid bridging the break in slope at the top of the hag to prevent slumping which occurs as water gets behind them and washes them down the slope.*
- *Ensure turves used have sufficient depth to them as they will be on a relatively highly draining surface and so they need to have a root system that can hold together long enough to allow new growth; and*
- *Larger, wetter turves are better. Turves can be harder to handle when dry. Using 30-45 cm turves has been successful. Heather dominated turves stretch better, but heather dies off more than grass.*

Adapted from NatureScot (2023) – Peatland Action Technical Compendium

Surface bunding

4.2.8 Surface bunding may be required to impede and/or disrupt surface flow over larger areas of bare peat (such as a wide, shallow gully, or large bare peat pans) that leads to water loss. Surface bunds will allow water retention and the creation of smaller pools (larger pools should be avoided due to the greater disturbance of wind/wave action).

- Cell bunding (See **Plate 4.6**) could be considered on larger bare peat surfaces and involves joining up of surface bunding to create cells which hold back water on the surface. Within the Development Site, the use of coir logs would be suitable.
- Gully bunds/blocking (See **Plate 4.7**) might be considered in shallower gullies to slow/disrupt surface water flow, comprising peat turves, coir logs, heather bales.

Plate 4.6 Example of cell bunding using coir rolls (restoration site in the Yorkshire Dales)

Plate 4.7 Example of gully bunds within revegetated peat filled gulleys (restoration site in the Yorkshire Dales)

Gully/drain-blocking

4.2.9 Outside the commercial forestry plantation, in the open areas within the Development Site, there is little evidence of any extensive man-made artificial drains. However, there are extensive eroding gully complexes where it is envisaged that a combination of restoration techniques (dependent on peat depth, drain depth, slope and access etc) will be required. It is anticipated that deeper eroding gullies would be restored through a combination of blocking and reprofiling techniques, using conventional surface bunds (peat turves, coir logs, timber dams etc.) (See **Plate 4.7** and **4.8**), or other agreed measures, and these would be combined with reprofiling of the gully edges.

4.2.10 The aim in these areas will be to block l drainage features (eroding gulleys) in order to reinstate a more natural hydrology and retain more water on a peatland. Damming will help the creation of shallow bog pools and allow excess water to seep out of these pools across the peatland.

Plate 4.8 Timber dam/sediment trap (restoration site in the Yorkshire Dales)

4.2.11 Stone dams may also be required in very deep gulleys with high flows of water (max 2m wide) (see **Plate 4.9**). They can also be used where mineral bunds were found to have washed away. Stone dams are used when gully erosion is down to the mineral layer (i.e., where there is no alternative), or where peat is less than 50cm deep. Peat or timber dams will not key into the surface and water will scour underneath either of these dams in such situations. The intention is to trap sediment, thus enabling growth of vegetation, slowing the flow of water and reduction of erosive forces, and ultimately raising the water table in the peat adjacent to the gully.

Plate 4.9 Stone dams within mineral/shallow peat gullies (site in the Monadhliath mountains)

Ground smoothing and Ditch blocking

4.2.12 There are several areas of previously afforested peatland within the Development Site that will benefit from restoration. In these areas, furrows that were created during forestry activities will be ground smoothed, blocked or dammed to raise the water table and stop erosion. In some places, ground smoothing may be sufficient, and will involve the following:

- *Stump flipping to peel off the shallow root systems from the underlying peat, flipping them over, followed by compressing them upside down into the furrows.*
- *Furrow reprofiling / blocking is similar to standard drain blocking and reprofiling, but with the added complexity of dealing with tree roots and stumps. It can only be carried out on sites with more rotten stumps and roots and is therefore not possible on recently harvested sites.*
- *Cross-tracking will involve an excavator driving back and forth over the ground so that the whole surface gets flattened, any mulch or brash is distributed, and any stumps or woody debris do not spring back up. Care should be taken not to compact the peat, altering the hydrological function in a negative way.*

4.2.13 Dependent on the site conditions, drain blocking using peat dams may also be required on main drainage channels and peripheral drains. The depth of furrows will dictate which technique to use. The following best practice measures will be considered:

- *Peat dams should be installed where drains are at their narrowest. A general rule is that dams need to be spaced so that the water always reaches the toe of the previous dam. Drains on steeper slopes need dams at short intervals. On sites with very shallow gradients (<1 degree), dams can be spaced more widely with a maximum spacing of 15m.*
- *Spacing may also depend on drain size and whether drain reprofiling is also being undertaken.*

- *Dams must be a sufficient width to ensure water cannot flow around the dam edge and re-join the same drain line.*
- *Where possible, dams should be constructed with a longer spur on the downhill side (an overspill channel) to encourage spreading out the flow laterally. Behind the dam, water needs to be encouraged to seep across the peatland, rather than creating large pools of water behind the dam. The use of swales can achieve this in most circumstances.*
- *The height of the dam should be slightly higher than the fall line of the drain so that water cannot flow or seep across the top of the dam.*

Adapted from NatureScot (2023) – Peatland Action Technical Compendium

Self-seeded conifer removal

4.2.14 There is a low density of non-native conifers (mainly Sitka Spruce) to the south of the existing forestry, which will be having a negative impact on the bog, adding to the dewatering of the blanket bog within the Development Site.

4.2.15 Regenerating conifers will therefore be removed within an area to be determined by hand clearance using chain saws. Trees will be cut below the lowest whorl in order to prevent any future growth and will be left on site but may require additional treatment dependent on size and density.

4.3 Scrub planting

4.3.1 Due to the deer browsing pressure across the Development Site, there is limited existing broadleaf trees, scrub or diverse ground flora across open ground, with the exception of self-seeded conifer and rowan (*Sorbus aucuparia*) on steeper slopes. There are however small pockets of low-lying eared-willow (*Salix aurita*) within the Development Site (See **Plate 4.10**), which have a compact low growing form. This species can colonise open ground, often acting as a pioneer plant, becoming established in damper conditions. These pockets of eared willow are considered ideal for expansion, enhancing connectivity of local scrub habitat, helping to connect woodland at a lower altitude and contributing to broader site biodiversity, as a valuable resource for invertebrate pollinators and songbirds.

4.3.2 Ground-truthing of the Development Site has helped identify small pockets of scrub growth and in places a richer ground flora that has evaded deer pressure. These areas have been targeted for additional low-density planting. Low density scrub/broadleaf planting areas and existing willow scrub are illustrated on **Figure 6D.1 (Annex A)** of the FEI Report.

4.3.3 Montane scrub creation will follow Montane Scrub Action Group (MSAG) guidance (Morris, T., unknown). Scrub planting will take place in agreement with FLS and, if possible, species will be sourced locally. Species to be planted will include higher altitude specialist species as well as other lower altitude species where there is connectivity with existing woodland. A mix of the following species would be considered appropriate:

- Eared willow;
- Downy Willow; and
- Rowan.

Plate 4.10 Example of low growing eared willow scrub on damp ground within the of the southern extent of the HMP area [NN 00060 03699] in proximity of the Allt nan Sgilleog; and varied ground flora on steeper ground to the east of the Development Site [NN 04077 05471] including blaeberry, primrose, dog's mercury and common dog-violet

Plate 4.11 Examples of low growing eared willow scrub on damp ground within the southern extent of the HMP area [NM 99539 03402and NM 99734 03558] north of Loch Leacann. Planting would be targeted within the lighter sward of purple moor grass

4.4 Broadleaf tree planting

4.4.1 Tree planting is proposed within approximately 13.9ha of identified habitat (See **Figure 6D.1, Annex A**) within the Development Site, comprising both riparian habitats along core watercourses and non-riparian planting primarily to benefit black grouse along forestry edges. This proposed new broadleaf tree planting is separate from the Wind Farm Forest Plan (see Appendix 2A, Section 1.8 of the FEI Report for details). Consideration has been given to the existing broadleaf corridors within the Development Site and wider environs, bolstering existing wooded nature networks along the Douglas Water to the east and the Abhainn a' Bhealaich to the north.

4.4.2 Planting will comprise a combination of continuous and discontinuous shrub and tree-dominated planting. Native tree species appropriate for the Development Site will be agreed with FLS post-consent, but may include the following mix of broadleaved and conifer species:

- Downy birch *Betula pubescens*;
- Aspen *Populus tremula*;
- Alder *Alnus glutinosa*;
- Eared willow *Salix aurita*;
- Grey willow *Salix cinerea*;
- Hawthorn *Crataegus monogyna*;
- Rowan *Sorbus aucuparia*;
- Scots pine *Pinus sylvestris*; and
- Sessile oak *Quercus petraea*.

4.4.3 Such species will provide additional food sources for black grouse in the spring and winter, together with suitable cover from predation for both adults and broods, and will provide connectivity for the species between foraging, lekking and breeding habitats. Discontinuous areas of planting will ensure that extensive shading of existing food plants (e.g. grasses and bilberry, where present) for black grouse does not occur, with planted tree and shrub species being selected for their preference by black grouse.

4.4.4 During the establishment phase, trees will be protected in accordance with best practice guidance available at the time of planting, with the requirement for fencing being avoided as far as possible.

Planting methodology and maintenance

4.4.5 A local contractor (overseen by a suitably experienced ecologist) will be appointed to carry out the tree/scrub planting based on the following planting methodology:

- Prior to planting, a soil survey will be carried out to determine appropriate locations for tree planting; and the suitability of native broadleaf species in these locations will be determined by vegetation type;
- Plants will be of local provenance where possible, and densities would be around 2,500 trees per hectare, in clumps;
- Hand preparation will be used for all planting areas due to the proximity of watercourses;

- Planting will take place on suitable soils and vegetation communities in clumps and drifts;
- Trees will be staked and tubed to protect against deer and vole damage. Around five years after planting or when trunks reach a three-inch basal diameter, all tubes will be removed;
- Planting will aim to create a mosaic of native species in a random pattern of distribution;
- Hand weeding will be undertaken annually as required; and
- 'Beating up', the process of replacing newly planted dead or dying trees after an initial period of monitoring, will be undertaken the year after planting and in year five (although there may be a requirement in other years). Lost or broken stakes or tubes will be replaced.

4.5 Deer Management

4.5.1 In the context of the East Loch Awe Land Management Plan (FLS, 2025), deer and other damaging herbivore numbers are currently monitored and controlled by FLS wildlife management teams.

4.5.2 In order to ensure that deer browsing pressure can be maintained around proposed planting areas, a targeted programme of deer control within the Development Site will be implemented.

4.5.3 A targeted Deer Management Plan for the Development Site will therefore be prepared, which will focus on safeguarding the enhancement measures outlined in this Outline Plan until they are fully established. This Plan will encompass options such as deer fencing, deer control, or a combination of both. Habitat condition and deer numbers would be monitored annually or biennially to inform ongoing management requirements.

4.5.4 Targeted deer management commitments in this Plan would be implemented by FLS and funded by RWE. Specific details will be agreed in consultation with the relevant parties, including but not limited to FLS and NatureScot. It is anticipated that terms of reference of the Plan could be confirmed through planning condition.

4.6 Artificial nesting rafts for divers

4.6.1 Surveys undertaken to inform the EIA Report (2024) indicate that breeding attempts by black-throated and red-throated divers within the Development Site have often been unsuccessful (further details are provided in **FEI Report Chapter 5: Ornithology).**

4.6.2 Lack of successful breeding may be due to the unsuitability of lochs for natural nest sites, the risk of flooding or the risk of predation. Artificial nesting rafts will help combat these risks by providing a more secure nesting site, thereby enhancing the breeding resource within the Development Site for both diver species.

4.6.3 It is proposed that tethered floating rafts, covered in vegetation will provide suitable stable breeding habitat for both species. Different target lochs/lochans will be identified for both species; red-throated divers generally preferring smaller lochans.

4.6.4 Rafts will follow similar prescriptions outlined by Hancock (2000), measuring approximately 2m x 3m so they are suitable for both diver species and these would require at least three anchors. Where possible, rafts will be positioned in relatively sheltered and undisturbed locations in relatively deep water about 30m from the shore. Modifications may be required to standard designs to suit the circumstances of individual lochs/lochans.

4.6.5 Nest rafts will be installed post-construction and locations will be carefully chosen to reduce the risk of red-throated divers flying through the turbine array while commuting between nesting lochans and feeding habitat (the sea and larger waterbodies).

4.6.6 Five potential diver raft locations are presented in **Annex A**, **Figure 6D.1.**

5. Implementation

5.1 Management

5.1.1 It is envisaged that the HMP will be an evolving document and all alterations will be agreed with the Steering Group.

5.1.2 The oHMP outlines the necessary steps to be taken and that further developing of the management prescriptions above will be progressed following consultation with FLS, ABC, RSPB and NatureScot. The terms of reference need to be agreed, but the Applicant is expected to co-ordinate, deliver and drive the implementation of the HMP.

5.2 Partnership Working

5.2.1 The Applicant will implement the HMP with the help of a number of potential partners which are expected to include (but not be limited to) those listed in **Table 5.1**. It is envisaged that these partners will be involved from the earliest stages to ensure the effective delivery of the plan.

Table 5.1 Potential HMP Delivery Partners

Partner	Roles
FLS	• Advice, information, monitoring & technical input. • Integration of management plan outputs with East Loch Awe LMP. • Implementation of deer management, grazing reduction and predator control.
ABC	• Advice, information & technical input. • Integration of management plan outputs with Local Biodiversity Action Plan (LBAP).
NatureScot/ Peatland Action	• Advice, information, monitoring & technical input. • Licensing.
RSPB	• Advice, information & technical input on habitat restoration & species requirements. • Strategic linkage with other Wind Farm HMP objectives.
Argyll Estates	• Collaboration on deer control.
Local forestry planting contractor	• Tree planting.

5.2.2 Core delivery partners to whom agreements regarding the scope and responsibilities of the HMP need to be confirmed. Funding to implement the HMP objectives will be directed to local suppliers as far as reasonably practicable. This may include local forestry planting contractors, who may be well-placed to deliver some of the identified actions.

5.3 Funding

5.3.1 The implementation of the management plan will be funded by the Applicant and the funding commitment will span the operational life of the project; a period of 35 years.

5.4 Monitoring and Review

5.4.1 HMP prescriptions will be subject to monitoring to assess their effectiveness at achieving the overarching aims and objectives. The outcomes of the monitoring prescriptions will be used by the HMP Steering group (or key stakeholders) to adjust current objectives and their prescriptions, or to devise new aims and objectives.

5.4.2 It is critical that the habitat management process remains flexible, allowing alterations to prescriptions in response to the monitoring programme. The monitoring results for each year will therefore be analysed and presented in an annual report to be prepared by an appropriately qualified ecologist (or ecologists). Annual reports will include recommendations regarding any changes to management practices and/or monitoring requirements that may be considered necessary and will be presented to the Steering group.

5.4.3 The monitoring prescriptions associated with the activities described in **Sections 4.2 - 4.5** are summarised in **Table 5.2**.

Table 5.2 Indicative Scope of Monitoring and Target Outcomes

	Objective	Scope of monitoring prescriptions	Target
1.1	To reduce the development of bare peat and discourage further loss and degradation of peatland by reprofiling and revegetating hagg and gully complexes.	Following completion of surface bund installation, reprofiling, ground smoothing and any ditch blocking works, monitoring will include key parameters as set out within Common Standards Monitoring Guidance for Upland Habitats (JNCC, 2009) and Peatland Action Monitoring Strategy 2024-2030 (NatureScot, 2024). Monitoring will be carried out in the year following reprofiling and revegetation works and will take place annually for the first five years of operation of the Proposed Development. Thereafter, monitoring will be undertaken in years 10, 15, 20, 25, 30 and 35. Dipwells will be installed at a range of monitoring points where gully blocking is proposed. The number and location of such monitoring points will be determined at detailed design stage. Monitoring will be carried out for at least one year prior to gully-blocking works and will continue for at least five years hence. Monitoring of vegetation condition will be undertaken at all identified locations for conifer removal.	Core monitoring objective to establish whether restoration works are resulting in conditions favourable to the recovery of a functioning peatland habitat. Likely targets will relate initially to stability and revegetation of the target areas, followed by potentially longer-term change in peatland state that will encourage the re-establishment of some ecosystem functions. Several parameters could be measured that would be expected to be altered through restoration including: • fluctuation of annual water table level, • percentage Sphagnum cover, • presence of positive and negative indicator species, and • change in the extent of bare peat.
1.2	To halt progressive erosion by blocking hagg and gully complexes with surface bunds, raising the water table and allowing revegetation of pools.		
1.3	To halt progressive peat drying and erosion through a programme of drain-blocking and ground smoothing to raise the water table.		
1.4	To halt drying out of peatland habitats through removal of self-seeded conifer.		Target outcomes will follow condition monitoring of blanket bog (see below).
2.1	To plant native broadleaf trees along watercourses and non-riparian forestry edges to provide improved habitat and benefits for a variety of species including black grouse, freshwater fish and otters.	Hand-weeding will be undertaken annually and beating up will be undertaken the year after planting and in year 5 (although there may be a requirement in other years) to replace dead trees.	Planting will aim to create a mosaic of native species in a random pattern of distribution, providing improved cover and connectivity along existing vegetated gulleys and cleughs.
3.1	To increase the willow scrub resource and improve woodland connectivity through planting and protection of	Scrub planting areas would be monitored in year 1 after planting to identify any failures, with requirement for beating up, followed by biennial surveys in years 3, 5, 7 and 9 to	Planting will aim to create a wider network of scrub above the conifer crops, that provides connectivity with woodland (riparian, non-riparian and

	Objective	Scope of monitoring prescriptions	Target
	target areas to limit suppression of growth by deer.	determine successful establishment. Thereafter, monitoring would be undertaken on a five-yearly basis subject to review.	plantation) at lower altitudes across the Development Site.
3.2, 4.1	To increase the availability of suitable nesting and foraging habitat for black grouse.	Black grouse lek surveys will be undertaken to monitor the effect of broadleaf planting on the population. An updated baseline (Year 0) will be undertaken prior to commencement of construction works, with monitoring subsequently undertaken in Years 1, 3 and 5 of wind farm operation, then subsequently every five years subject to review. Monitoring in each year will comprise black grouse lek site surveys.	Clumped broadleaf planting along forestry edges and peatland restoration will aim to improve the network of suitable habitat across the Development Site, improving year-round foraging and nesting resource for black grouse and helping to the support the local population.
4.2	To increase the availability of safe nesting locations for divers (*Gavia*) species on lochs and lochans.	Diver surveys would be undertaken to determine territory occupancy, nest site and breeding success across the Development Site. An updated baseline (Year 0) will be undertaken prior to commencement of construction works, with monitoring subsequently undertaken in Years 1, 3 and 5 of wind farm operation, then every five years subject to review.	Increasing the number of suitable diver nest sites across the Development Site will support the local diver population. Monitoring success at identified locations will be reviewed in discussion with the Steering Group and where necessary, alternative locations identified.

6. References

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Annex A
Figures