Scawd Law Wind Farm

Additional information: Volume 2
Outline Habitat Management Plan

February 2025

Fred. Olsen Renewables

Contents

List of Abbreviations

Abbreviation	Description
BSG	Biodiversity Steering Group
cm	centimetre
CSM	Common Standards Monitoring
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
AIR	Additional Information Report
FMMP	Fish and Macroinvertebrate Monitoring Plan
FORL	Fred.Olsen Renewables Limited
ha	hectares
HMP	Habitat Management Plan
JNCC	Joint Nature Conservation Committee
LU	Livestock Units
NPF4	National Planning Framework 4
NVC	National Vegetation Classification
OHMP	Outline Habitat Management Plan
SAC	Special Area of Conservation
SBC	Scottish Borders Council
SBL	Scottish Biodiversity List

Glossary

Term	Definition
Baseline	The existing conditions that prevail against which the effects of the Proposed Development are compared.
Environmental Impact Assessment Report	A document reporting the findings of the Environmental Impact Assessment and produced in accordance with the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017

Mitigation	Measures, including any process, activity or design to avoid, reduce, remedy or compensate for potential negative effects of a development.
The Proposed Development	The proposed Scawd Law Wind Farm development as described in Chapter 4 of the EIAR.
The Proposed Development Area	The development area within the red line site boundary (application area) as shown in Volume 3a of the EIAR, Figure 1.2 Site Layout.

1. Introduction

Natural Power Consultants (Natural Power) has produced an Outline Habitat Management Plan (OHMP) for the proposed Scawd Law Wind Farm (hereafter referred to as 'the Proposed Development') on behalf of the developer, Fred Olsen Renewables Limited (FORL). This OHMP builds on the information within the Environmental Impact Assessment Report (EIAR) and is submitted as part of the Additional Information Report (AIR). In line with the National Planning Framework 4 (NPF4), significant biodiversity enhancements have been proposed (see Figure 4.2.1, Appendix A). Restoration measures outlined within this document cover both mitigation for habitats that will be lost as a result of the Proposed Development as well as additional habitat enhancements. The impact assessment details can be found in the following documents:

- Scawd Law Wind Farm EIAR (2023)[1]; Chapters 7 (Ecology), 8 (Ornithology) and 9 (Hydrology, Geology and Hydrogeology); and
- Scawd Law Wind Farm AIR Volume 3 (2024)[2]; Chapters 3 (Ornithology), 4 (Ecology) and 5 (Hydrology, Geology and Hydrogeology)

This OHMP should be considered a draft document that is subject to change. The Habitat Management Plan (HMP) will be finalised as part of a planning condition, to be agreed with statutory consultees post consent. More detail on the prescriptions which will be implemented to deliver these objectives, and the monitoring methods which will be used to measure their success will be included in the final HMP. Once finalised, the HMP will remain a working document that may require changes to be made over its lifetime.

The developer will be responsible for implementing the HMP.

2. Baseline description

The Proposed Development is located within an upland landscape and the site is comprised of a mosaic of wet and dry modified bog and heath in the more level areas on the hill tops in the north of the Proposed Development Area (see Figure 4.1 in the AIR Volume 3 Chapter 4: Ecology[2]). These habitats are only represented in small patches elsewhere as acid grassland becomes more prevalent. On the steeper slopes of the hillsides dry heath and continuous bracken are more widespread. Small flushes and areas of marshy grassland are present along small header streams that ultimately flow into the Gatehopeknowe Burn. Access to the Proposed Development is off the B709 and runs north then east around the Tweed Valley Forest Park towards Glede Knowe. Habitats present along the access route consist mainly of semi-improved acid grassland and marshy grassland which changes to unimproved acid grassland as the access route nears the Proposed Development.

The Moorfoot Hills Special Area of Conservation (SAC) is adjacent to the Proposed Development Area to the north. This site is designated for its blanket bog and dry

[1] Natural Power (2023) Scawd Law Wind Farm EIAR.
[2] Natural Power (2024) Scawd Law Wind Farm AIR.

heath habitat. The River Tweed SAC lies c. 2.5 km to the south of the Proposed Development and is designated for Atlantic salmon, brook lamprey, river lamprey, sea lamprey, otter, and vegetation dominated by water-crowfoot.

Based on the assessment provided in Chapter 7 of the EIAR[1] it is predicted that the Proposed Development will have a low negative and not significant effect on wet and dry modified bog. These habitats are listed as priority habitats on Annex 1 of the Habitat's Directive and the Scottish Biodiversity List (SBL). Wet and dry modified bog habitats (combined) cover 48.72 ha which makes up 6.12% of the Proposed Development Area.

Modified bog habitats are represented by M19 and M20 blanket mire National Vegetation Classification (NVC) communities as well as some areas of M25 mire community on peat over 0.5 m in depth and a very small proportion of M3 bog pool community. Modified bog habitats at the Proposed Development contain numerous drainage ditches that will be drying out the peatland habitats present.

The Proposed Development Area supports an upland bird community of waders and raptors as well as protected mammals, including otters and bats. The Gatehopeknowe Burn, which flows from the Proposed Development to the River Tweed SAC to the south contains suitable habitat for salmon and lamprey.

This OHMP includes measures to compensate for impacts from the Proposed Development as well as provide biodiversity enhancements.

3. Habitat Management Plan

3.1 Aims

The principal aims of the OHMP will be:

- To enhance biodiversity within the Proposed Development Area; and
- To restore blanket bog habitats outwith the Proposed Development.

To ensure the overall OHMP aims are successfully achieved, the OHMP will be implemented throughout the lifetime of the Proposed Development as a 'live' document; with regular reviews and amendment, where deemed necessary.

3.2 Objectives

The following objectives are proposed in order to address the above aims:

- Objective 1: Increase the native woodland habitat of the land holding through planting of a riparian broadleaf woodland to benefit biodiversity;
- Objective 2: Enhance species diversity around Hope Head through livestock grazing management to benefit biodiversity;
- Objective 3: Enhance species diversity in the south around Pyat Hill through livestock grazing management to benefit biodiversity;

- Objective 4: Increase the population size of common rock rose (*Helianthemum nummularium)* around Pyat Hill to benefit the northern brown argus butterfly (*Aricia artaxerxes*).
- Objective 5: Increase the water level of degraded and modified bog habitats to improve the quality of bog habitat in locations outwith the Proposed Development Area.

Further detail of proposed prescriptions which will be undertaken to fulfil the objectives, is provided in Section 3.3.

The final HMP will include detailed monitoring methods and a timetable for both management prescriptions and monitoring surveys. An outline schedule for the first 10 years of operation is provided in Table 3.1. As the lifetime of the Proposed Development could extend up to 35 years and the HMP is considered a live document, it is proposed that a review of the objectives and the success of management measures in the first 10 years is undertaken in year 10, before a proposed schedule of future management measures and monitoring is agreed.

The results of monitoring and any recommendations will be included in a summary report after each monitoring year and shared with the following stakeholders who will form part of the Biodiversity Steering Group (BSG):

- The Applicant (FORL);
- The landowner; and
- Scottish Borders Council (SBC).

Following drafting of the monitoring reports the BSG will be able to respond and discuss recommendations for the revision of the HMP where necessary.

3.3 Management prescriptions

The prescriptions designed to meet the Objectives, listed in Section 3.2, are discussed in further detail in the following sections.

Objective 1: Riparian broadleaf planting

Creation of additional riparian woodland along the Gatehopeknowe Burn, shown in Figure 4.2.1, will increase habitat diversity and create a wildlife corridor and suitable habitat for a variety of species, including plants, fungi, mosses and lichens, otters, bats and birds. Riparian woodland is also beneficial to freshwater species, creating shade to help prevent water temperatures from increasing which is known to have a negative effect on freshwater fish and their spawning habitats. In addition, broadleaf planting along rivers can act in favour of flood management and riverbank stabilisation.

A planting plan will be completed and implemented at the beginning of the operational phase of the Proposed Development with the exact planting coupes, stocking density and species mix, agreed prior to planting, based on a detailed site survey by a forester.

A range of native broadleaf tree and shrub species suitable to the site specific conditions will be used.

Saplings will be protected against damage through appropriate measures such as tree guards, stock-, deer- or rabbit-proof fencing, and will be adequately weeded until established (approximately 10 years from planting).

The site survey would be completed during construction to confirm the stocking density, species mix and appropriate protection measures. Tree planting would then be undertaken during the first planting season post-construction.

During the monitoring surveys (as included in Section 3.4 Monitoring) the extent of failures will be recorded. Annual management will be undertaken as required in years 2-5 to facilitate the success of planting:

- Following monitoring, replacement of failed trees may be required in October - March, to maintain the minimum survival rate of 75% after operational monitoring year 5;
- During the monitoring year 3 or 5 (depending upon growth of the whips), all tree guards will be checked, maintained and replaced or removed as required ;
- Weed control (physical or chemical as appropriate); and
- Fence/tree guard maintenance/replacement.

Objective 2: Livestock grazing management around Hope Head

A reduction in livestock grazing will be implemented on the hill tops around Hope Head in the north east corner of the Proposed Development Area, see Figure 4.2.1, which is mainly covered by unimproved acid grassland. By reducing grazing intensity, heath and/or herb species would become more abundant and biodiversity will be increased. The increase in the structural diversity of the vegetation will benefit invertebrates, mammals and upland waders.

Grazing would be stopped between October and June (inclusive) in each year of this HMP (35 years). This will allow the build-up of a litter layer over the winter period and prevent overgrazing of dwarf shrubs when the grass is not growing or palatable vegetation is in short supply during the winter months[3]. It will also benefit herb species which flower in spring and ground nesting birds in the early summer.

Guidance[4] for appropriate stocking levels is based on Livestock Units (LU). A ewe equates to *c.* 0.15 LU, therefore as a rule of thumb 1 livestock unit is equivalent to 6.67 ewes. Unimproved upland grassland typically supports 0.15–0.25 LU per hectare (ha) per year which equates to 1-1.67 ewes. With the absence of winter grazing the acid grassland may sustain the higher level of grazing 0.75 LU/ha in the summer months. This equates to a maximum of 5 ewes per ha. The area proposed for grazing management is 60.25 ha and therefore can support 301 ewes.

[3] Sutherland, W.J. & Hill, D.A. (1995) Managing Habitats for Conservation. Cambridge University Press.

[4] https://www.fas.scot/downloads/tn686-conservation-grazing-semi-natural-habitats/Published September 2024

In order to control grazing in the proposed area an additional c. 500 m of stock fencing would be added to extend existing fencing along Redscar Cleuch to Redscar Law, see Figure 4.2.1.

Regular monitoring of vegetation (as included in Section 3.4 Monitoring) will identify if the grazing management is achieving the aim of increasing diversity. If the aim is not being achieved the stocking density will be reviewed and adjusted as required.

Objective 3: Livestock grazing management around Pyat Hill

Reduction in livestock grazing would also be implemented on fields on Pyat Hill in the south of the site, see Figure 4.2.1. These fields contain a variety of habitats; unimproved acid grassland, semi-improved acid grassland, unimproved calcareous grassland, bracken and scrub. These habitats have different grazing limitations and management requirements. In general, reducing grazing intensity will benefit biodiversity by increasing the structural diversity of the natural vegetation, making the areas more attractive to invertebrates, birds and mammals.

The grazing will be managed in a way that a variety of sward heights are present in the growing season and an average vegetation height of at least 5 cm is kept. This will provide habitats and foraging ground for invertebrates and ground-nesting birds and let plants flower and seed.

Guidance[4] for appropriate stocking levels is based on Livestock Units (LU). A ewe equates to *c.* 0.15 LU, therefore as a rule of thumb 1 livestock unit is equivalent to 6.67 ewes. Calcareous grassland typically supports 0.4 LU per hectare per year[5] which equates to 2.67 ewes. The area proposed for grazing management is 45 ha and therefore can support 120 ewes.

Regular monitoring of vegetation (as included in Section 3.4 Monitoring) will identify if the grazing management is achieving the aim of increasing diversity. If the aim is not being achieved the stocking density will be reviewed and adjusted as required.

Objective 4: Common rock rose planting

Data from the desk study carried out for the EIAR[1] included records of the northern brown argus which is present in the local area of the Proposed Development. The food plant of the northern brown argus is common rock rose and this was recorded in base-rich grassland habitats on steeper slopes where rock was more exposed, primarily on the steep sided valley of Gatehopeknowe Burn and on the south facing slope of Pyat Hill.

The primary recommended means of habitat management for rock rose is a managed grazing regime that creates short turf conditions favourable to seed germination. Therefore, the grazing management proposed in Objective 3 will be beneficial to the enhancement of the existing rock rose population.

[5] P Chapman (2007), Technical Note 586. Conservation Grazing of Semi-natural Habitats. Scottish Agricultural College

However, if after monitoring for the first three years there are no signs of natural population expansion from the existing seed stock it is proposed that additional measures including seeding and planting of plug plants are used to expand the small, localised population of rock rose on the south slope of Pyat Hill. Seed and/or plug plants will be sourced from a reputable supplier of suitable local provenance.

Rock rose seeds may take some time to germinate due to their hard-coat dormancy and although a plant of dry habitats, seedlings are prone to drought. Sowing should therefore be scheduled in the autumn. Plug plants would be planted in May/June.

Objective 5: Bog restoration

Within the Proposed Development Area there is 48.72 ha of bog habitat of which 5.55 ha (11.4%) will be lost due to construction of the Proposed Development. In line with guidance[6] an area equivalent to a 1:10 ratio will be restored to compensate for the lost habitat, equating to 55.5 ha. An additional 10% of the site habitat will also be restored in order to provide additional habitat enhancement. This equates to a total area of 60.37 ha.

A Peatland Condition survey was completed in August 2024 to assess the Proposed Development Area for potential peatland restoration (Appendix A). The total area of land that could be eligible for restoration within the Proposed Development Area is very small, approx. 6.28 ha. Therefore, it is not possible to achieve the target of 60.37 ha through onsite restoration as it is considered that this isolated pocket of habitat does not have the capacity to provide the scope, scale or resilience required as it is an already isolated pocket of deeper peat. FORL is working with the Tweed Forum to identify 60.37 ha of land suitable for bog restoration within the wider area. This may consist of a portfolio of several areas of land in order to achieve the target of 60.37 ha.

When the areas of land have been confirmed they will be assessed for the most appropriate bog restoration methods. Prescriptions are likely to include:

- Ditch blocking;
- Ground smoothing; or
- Hag reprofiling.

At the time of planning condition discharge the final HMP will include more detail on the final locations for peatland restoration and the appropriate bog restoration methods.

3.4 Monitoring of the HMP

Once the details of prescriptions have been finalised, a programme of monitoring and reporting will be produced and agreed by the BSG. This is likely to include:

[6] NatureScot (2023). Advising on peatland, carbon-rich soils and priority peatland habitats in development management.

- Monitoring of native broadleaved woodland planting;
- Habitat monitoring (e.g. Common Standards Monitoring (CSM));
- Water level monitoring in areas of bog restoration;
- Butterfly monitoring;
- Ornithological monitoring; and
- Fish monitoring.

It is proposed that monitoring would be undertaken at reasonable intervals during the operational phase of the Proposed Development, including an initial baseline survey prior to management taking place. An outline schedule for the first 10 years of operational monitoring is provided in Table 3.1

3.3.1 Broadleaved woodland planting condition assessment

The riparian woodland will be monitored annually for the first five years and again in Year 10, to ensure there are no issues such as disease or invasive species. Further woodland monitoring will take place in Year 20, at which point some thinning operations may be required to encourage growth of the better trees and to create a more open woodland structure, encouraging regeneration of seedlings to begin the process of establishing a mixed age tree structure.

3.3.2 Vegetation monitoring

The primary assessment of the success of the prescriptions will be observed through repeated vegetation monitoring in the areas where the HMP has been implemented.

Vegetation monitoring will take place in April-July initially in years 1, 3, 5, 7, 9 and 10 following construction, after which the need for further monitoring will be reviewed.

Two different methods will be used in order to provide robust monitoring data:

- CSM; and
- Fixed point photography.

The combination of these different types of surveys will provide specific information on both target habitats and plant species and an overall indication of habitats present within the wider site.

The fixed point photographs will be taken at a series of locations (to be determined) overlooking each of the HMP areas. They will provide permanent records for comparison of the effectiveness of management works.

The CSM would broadly follow the methods as set out in the JNCC (2009)[7]. CSM allows a simple, quick assessment of feature condition, using criteria such as frequency of taxa which are indicators of favourable condition, cover of taxa which are indicators of unfavourable condition, etc. The monitoring will use a combination of walkover and fixed-point sampling survey methodologies (quadrats). The survey will

[7] JNCC, (2009) Common Standards Monitoring Guidance. Available at: http://jncc.defra.gov.uk/pdf/CSM_Upland_jul_09.pdf

aim to visually assess the vegetation present, determine the condition of vegetation communities using target indicator species, and identify any obvious effects of the HMP management prescriptions. Monitoring will include a record of sward height in the areas of grazing management. The location, distribution and number of quadrat locations will be designed prior to the survey.

3.3.3 Butterfly monitoring

Butterfly monitoring will be undertaken to provide data on northern brown argus numbers on Pyatt Hill.

Butterfly monitoring will take place in years 1, 3, 5 and 10 following construction, after which the need for further monitoring will be reviewed.

Monitoring will comprise single species transects and/or timed counts to count adult northern brown argus.

3.3.3 Ornithological monitoring

Ornithological monitoring will be undertaken to provide data on the bird community usage of the Proposed Development and HMP area.

Ornithological monitoring will take place in years 1, 3, 5 and 10 following construction, after which the need for further monitoring will be reviewed.

Monitoring will comprise; upland breeding bird surveys (utilising standard survey methods[8] and breeding raptor surveys[9].

3.3.4 Fish monitoring

A comprehensive fish and macroinvertebrate monitoring plan (FMMP) will be produced to monitor potential impacts from construction. The methods and monitoring locations utilised during construction will be utilised post-construction as part of the HMP to monitor the impacts of riparian planting on the Gatehopeknowe Burn.

Operational monitoring will take place in years 1, 5 and 10 following construction, after which the need for further monitoring will be reviewed.

3.3.5 Reporting and Review

The results of all monitoring surveys carried out as part of the HMP and any recommendations for further management or monitoring will be detailed in a report at the end of each year of monitoring. This will enable ongoing assessment of the efficacy of measures outlined in the HMP, in order to allow for adaptive management and to maximise the effectiveness of the HMP in achieving its aims. Monitoring reports will be shared with the BSG. Should changes to the management prescriptions be

[8] Brown, A.F. & Shepherd, K.B. (1993) A method for censusing upland breeding waders. Bird Study, 40, 189–195.
[9] Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. & Thompson, D. (2009) Raptors: A field guide to survey and monitoring. Scottish Natural Heritage.

required, these would be discussed and agreed with the BSG and a revised version of the HMP document would be produced.

3.5 Outline HMP Schedule

Table 3.1: Proposed operational management and monitoring years

Task	Construction	Operational year									
		1	2	3	4	5	6	7	8	9	10
Habitat creation, restoration and enhancement measures											
Tree planting area site survey and assessment	Y										
Bog restoration area site survey and hydrology assessment	Y										
Planting and fencing of the broadleaved woodland		Y									
Bog restoration measures (e.g. ditch blocking)		Y									
Habitat Management											
Beating-up, weed management & fence maintenance			Y	Y	Y	Y					Y*
Conservation grazing of habitat enhancement areas		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Rock rose seeding/planting					Y*						
Monitoring											
Broadleaved woodland planting – condition assessment		Y	Y	Y	Y	Y					Y
CSM of habitats and fixed-point photography		Y		Y		Y		Y		Y	Y
Butterfly monitoring		Y		Y		Y					Y
Ornithological monitoring		Y		Y		Y					Y
Fish monitoring	Y	Y				Y					Y
Reporting		Y	Y	Y	Y	Y		Y		Y	Y
Review						Y					Y

Source: Natural Power

Y = Year task will be undertaken

** = Habitat management measure may be required dependent on monitoring results*

4. Appendix A

334000 336000 338000 340000

642000 640000 638000

Project:

Scawd Law Wind Farm, Scottish Borders

Title:

Figure 4.2.1: Proposed Habitat Management Plan

Key

- Site boundary
- Proposed turbine
- Proposed permanent anemometry mast
- Proposed hardstanding
- Proposed access track
- Proposed substation
- Proposed construction compound

Proposed Habitat Management plan

- Riparian broadleaf planting
- Grazing management area (45 ha)
- Grazing management area - acid grassland enhancement (60.25 ha)
- Rock rose planting area (5.25 ha)
- New fenceline
- Existing fenceline

Scale @ A3:1:25,000

Coordinate System: British National Grid

0 0.25 0.5 0.75 1 km

N

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