Ben Aketil Wind Farm

Technical Appendix 7.6: Outline DRAFT Habitat Management Principles

avian ecology

CONTENTS

1 INTRODUCTION

1.1.1 This document has been prepared to accompany the Ben Aketil Wind Farm ('proposed development') Environmental Impact Assessment Report (EIAR).

1.1.2 It presents outline habitat management principles to be finalised in consultation with NatureScot, The Highland Council (THC) and additional relevant stakeholders following receipt of planning consent and implemented as a Habitat Management Plan (HMP) in accordance with a suitably worded condition of consent. The final details of the habitat management measures to be implemented, including specific locations, extents and method statements would be subject to the requirements for any detailed site investigations and input by relevant specialists.

1.1.3 The finalisation of the HMP would be completed prior to the end of the first year of operation of the proposed development, after which the HMP would be implemented and remain in place as agreed, and monitored for effectiveness, for the remaining operational lifetime of the proposed development as consented (anticipated to be 35 years).

1.1.4 It is recommended that the finalisation and implementation of the HMP be contracted to a reputable, experienced and independent individual and/or organisation.

1.1.5 The following terms are used within this document:

- Planning Boundary – the blue line Feorlig Estate boundary as shown in **Figure 1**; and,
- Developable Area – the red line boundary as shown in **Figure 1**, hereafter the 'Site'.

2 STRUCTURE OF THE HABITAT MANAGEMENT PLAN

2.1.1 There will be four Aims and related Objectives of the HMP, to be achieved through the implementation of management prescriptions and habitat creation practices outlined herein.

2.1.2 The success of management prescriptions and habitat creation in achieving the aims and objectives of the HMP will be monitored, with the results reported to an advisory group, in accordance with timings and protocols to be agreed with NatureScot and THC. The HMP, once finalised, will be a live document, with the habitat management measures implemented being adaptive throughout the lifetime of the proposed development in response to the findings of ongoing monitoring.

2.1.3 It is intended that the HMP will complement the Peat Management Plan for the proposed development, with the combined aim of preserving and enhancing notable habitats at the Site.

3 AIMS AND OBJECTIVES

3.1.1 The following four proposed Aims, and associated Objectives, of the HMP are defined in this section:

- Aim 1: Enhancement of Peatland Habitats;
- Aim 2: Enhancement of Riverine Habitats;
- Aim 3: Enhancement of Opportunities for Otter; and,
- Aim 4: Reduction in Attraction Risks for Eagles.

3.1.2 It is proposed that the Aims, Objectives and management prescriptions outlined herein will be further refined in consultation with NatureScot and THC (and additional relevant stakeholders) following pre-

construction baseline surveys (if required) and/or site investigation works and specialist input as necessary.

3.2 Aim 1: Enhancement of Peatland Habitats

Objective 1: Promote Improved Structural Diversity of Blanket Bog

3.2.1 Objective 1 will complement the Peat Management Plan and mitigation commitments made within the EIAR in relation to the use of excavated soils and peat in Site restoration and rehabilitation at the end of the construction period.

3.2.2 Modification of the peatland within the Site is noted as being principally via drying of the peat by burning, drainage and heavy grazing.

3.2.3 The Site is currently primarily grazed by cattle and sheep, though it is also likely that there is some grazing pressure from deer, with evidence of both roe and red deer recorded within the Site.

3.2.4 Opportunities for habitat improvement to be considered include the following:

- Management of grazing by livestock and deer in sensitive areas (see below);
- Ditch-blocking to promote re-wetting where appropriate; and
- Re-profiling of peat hags, and hydroseeding if necessary and appropriate.

3.2.5 Rewetting measures, such as ditch blocking, are most successful on relatively flat areas where water flow is slower. On this basis, a preliminary peatland restoration search area, containing areas potentially suitable for peatland habitat improvement/restoration works, has been identified from topographical basemaps, National Vegetation Classification (NVC) survey results and aerial photography; shown in **Figure 1**. Specific locations and extents within this search area where effective restoration will possible, and specific methods to be used, will be determined following more detailed survey and investigation by hydrological and ecological specialists during the construction phase, and will be defined in the HMP to be agreed by NatureScot, THC and other relevant stakeholders.

3.2.6 All blanket bog is a conservation priority in the UK. The NVC survey identified the principal blanket bog habitats within the Site as M17 *Trichophorum germanicum – Eriophorum vaginatum* blanket mire, and M19 *Calluna vulgaris – Eriophorum vaginatum* blanket mire, plus sub-communities of both habitats.

3.2.7 M17 mire is of great ecological and conservation value, and is an important habitat for invertebrates as well as nesting waders such as dunlin and greenshank. However, the M17 habitat at the Site is generally of poor quality with hagging noted in some locations. In some areas of the Site M17 is noted to be transitioning from more typical sub-community M17b to a drier community of M19 *Calluna vulgaris – Eriophorum vaginatum* or M20 *Eriophorum vaginatum* blanket mire; likely derived from the drying of peat by burning (some areas of M17 show evidence of muirburn), drainage and grazing.

3.2.8 The M19 mire community occurs throughout the Site on drier peats than M17 mire and may be present as a result of repeated burning of the bog and heavy grazing. Such modifications of the bog, particularly due to repeated burning, can eventually produce the more heavily modified and poorer quality M20 *Eriophorum vaginatum* mire habitat. Cessation of burning and removing grazing can be effective to restore such habitats[1].

[1] Averis, A., Averis, B., Birks, J., Horsfield, D., Thompson, D. and Yeo, M. 2004. An Illustrated Guide to British Upland Vegetation. Joint Nature Conservation Committee, Peterborough.

3.2.9 The NVC survey results identified that the habitats within the proposed bog restoration search area are a combination of M17 and M19 blanket bog, showing evidence of burning and with drainage ditches throughout apparent from a review of the aerial imagery (see **Figure 1**). This, coupled with the comparatively shallow gradient of the slope in this area, mean it is likely to provide potential for bog restoration via ditch blocking and cessation of burning, and prevention of further drying of the more intact areas of bog.

3.2.10 Livestock grazing within the Site and access for deer are likely to continue throughout the operational lifetime of the proposed development and, as such, habitat management principles to be further detailed and implemented will comprise a sensitive grazing regime and protection, via reduced stocking density and/or an environmentally sensitive means of exclusion, of areas being actively managed. The objective will be to manage grazing densities within management areas at a sustainable density for blanket bog and heathland habitat, to prevent overgrazing and encourage and maintain a good overall habitat condition. Further targeted deer management is not currently proposed as part of the HMP.

3.2.11 The core area of the Site, to the south of the operational Ben Aketil Wind Farm, is noted from the habitat survey results to be heavily modified bog. There are no obvious ditches in this part of the Site, though it is extensively drained by gullies and headwaters of tributaries of the River Caroy, and so modification is likely to be principally via grazing and burning. There may also be opportunities within this area to aid peatland recovery via cessation of burning and controlled grazing regimes in discrete areas.

3.2.12 The success of the habitat improvement and peat restoration activities would be monitored on a regular basis for an ongoing period during the operational phase of the proposed development. The details will be included in the HMP to be agreed with THC, NatureScot and other relevant stakeholders.

3.3 Aim 2: Enhancement of Riverine Habitats

3.3.1 SEPA's River Basin Management Plan website[2] confirms there are two classified watercourses within the Site. The Red Burn, which tributes through the Site to the north and the Caroy River, which tributes through the Site to the south are both classified as having good ecological status and high access for fish migration.

3.3.2 Many of the smaller watercourses surveyed within the Site were noted to comprise ephemeral peaty headwaters within grazed open moorland, unlikely to hold much water during drier periods and therefore of limited suitability for juvenile fish. However, there is good habitat for juvenile fish (fry and parr stages) in the Caroy River and in some of its tributaries. The Red Burn, the Rageary Burn and the Aketil Burn also have some deeper sections which are capable of supporting low numbers of adult fish, and wooded sections providing good bankside cover, though the steep gradient in these locations reduces the suitability.

3.3.3 Among impacts to fish fauna identified in the Skye Fisheries Trust Fisheries Management Plan[3], those considered to be particularly relevant at the Site level include:

- over-grazing and trampling by livestock - which affects spawning redds leading to compacted ground and increased siltation, which reduces oxygen; and

[2] SEPA River Basin Management Plan, available at https://www.sepa.org.uk/data-visualisation/water-environment-hub (last accessed 15/07/2022)

[3] Skye Fisheries Trust (2010) Skye Fisheries Management Plan. Available at https://www.wrft.org.uk/files/Skye-Fishery-Management-Plan-2010.pdf (last accessed 19/07/2022)

- riparian habitat management – with the exception of a section of the Rageary Burn and a section of the Aketil Burn bankside habitat is bare and there is a lack of cover for fish.

3.3.4 As such, opportunities to enhance and/or create fish habitats by way of the management of grazing, creation of fish cover and riparian planting will be identified in consultation with the Skye Fisheries Trust.

3.3.5 Prescriptive measures for inclusion within the HMP will then be agreed with NatureScot, THC and additional relevant stakeholders.

Objective 1: Management of Fish Cover

3.3.6 Opportunities to increase habitat complexity for fisheries within watercourses within the Planning Boundary will be identified in consultation with the Skye Fisheries Trust and the Skye and Lochalsh Rivers Trust, with prescriptive measures agreed with NatureScot, THC and additional relevant stakeholders.

3.3.7 Measures for improving and/or creating fish cover to be explored will comprise techniques such as placing boulders and wood debris in watercourse channels, which whilst providing refugia for both juvenile and adult fish can also provide opportunities for macroinvertebrates. Locations for placement of material will be chosen - and refugia sensitively designed - to avoid blocking free passage of fish and other wildlife.

Objective 2: Management of Bank Side Vegetation

3.3.8 Native riparian planting can deliver benefits for fisheries, including the casting of shade, maintenance of cool water temperatures, provision of cover and sources of food from in-falling litter and insects.

3.3.9 Riparian planting can also deliver opportunities for other wildlife, including foraging and commuting bats, terrestrial mammals (including otter), birds and reptiles. As such, prescriptive measures may incorporate additional objectives for other species but will remain sensitive to the potential for exacerbating potential impacts upon such species groups resulting from the wind farm development (e.g. mortality risks to bats through interaction with wind farm infrastructure). It is also important to avoid compromising underlying habitats, and so to avoid planting on sensitive habitats such as blanket bog and wet heath.

3.3.10 A search area for riparian planting has been identified on the basis of the results of fish habitat survey, NVC survey, protected mammal survey and assessment of aerial imagery; see **Figure 1**. This section of the River Caroy, adjacent to the bog restoration search area, sits between the Rageary Burn and the Aketil Burn, and is bordered along its banks by areas of U4 *Festuca ovina-Galium saxatile* grassland and mosaics thereof, rather than bog or heath. Aerial photography shows limited tree cover along the banks of this section of the river. The Rageary and Aketil Burns were noted as providing potentially suitable habitat for adult fish, and so riparian planting between the two watercourses to provide a corridor of bankside cover, but not overshading, would provide benefits for fish species.

3.3.11 Opportunities for riparian planting within the Planning Boundary will therefore be identified in consultation with the landowner, the Skye Fisheries Trust, Skye and Lochalsh Rivers Trust with prescriptive measures agreed with NatureScot, THC and additional relevant stakeholders.

3.4 Aim 3: Enhancement of Opportunities for Otter

3.4.1 Evidence of otter presence was recorded within the Site, and it is likely that otters which are resident in Loch Caroy use the watercourses in the Site for foraging. The steep-sided wooded gorges on the Rageary and Aketil Burns were noted as being potentially suitable for otter, particularly in view of their inaccessibility to disturbance from livestock and humans. An objective of the riparian planting will be

to enhance terrestrial biodiversity, with woodland and edge habitat suitable for species including otter providing a corridor between the Rageary and Aketil Burns.

Objective 1: Riparian Planting

3.4.2 Linked to Objective 2 of Aim 2 above, it is proposed that riparian planting to be prescribed will include both continuous and discontinuous shrub and tree dominated planting of broad-leaved species of local provenance, such as oak, alder, hazel, rowan, willow and birch. This will provide cover for commuting otters, and potentially rest sites in denser areas of planting. Additionally benefits for other biodiversity including fish will benefit otters by potentially increasing food resources.

3.5 Aim 4: Reduction in Attraction Risks for Eagles

3.5.1 Golden and white-tailed eagles are both regularly recorded in flight over the Site. There is no habitat within the Site suitable for nest locations for these species, but it is likely that they forage within and surrounding the Site throughout the year, with hares and carrion of sheep and deer all providing attractive food resources. The Environmental Statement for the operational Ben Aketil Wind Farm noted that in 2002 the amount of sheep carrion present was high relative to other comparable sites elsewhere in west Scotland, particularly around Ben Aketil where golden eagle activity was greatest. Presence of carrion may therefore act as an attractant and encourage eagles into areas where they could be at risk of collision with operational turbine blades.

Objective 1: Carrion Removal

3.5.2 Regular searches for carrion will be undertaken within an area extending to at least 200 m from the proposed development's turbine locations, with the frequency of these searches to be determined in consultation with NatureScot and THC. Any carrion found will be removed in order to reduce carrion availability which could otherwise attract scavenging birds of prey to the vicinity of the turbines over the lifetime of the proposed development.

4 MONITORING

4.1.1 A monitoring programme to include compliance checking of the implementation of prescriptive measures along with the monitoring of the effectiveness of such measures will be established and agreed in consultation with NatureScot, THC and additional relevant stakeholders.

4.1.2 The requirement for any updated baseline surveys to act as Year 0 for monitoring purposes would also be identified and undertaken at the appropriate time (such as, within the first year of operation of the proposed development and during the growing/ breeding season March to August, inclusive).

FIGURE 1: PROPOSED HABITAT MANAGEMENT AREA