

Appendix 8.3 Ecological Desk Study Report – May 2020

Contents

Introduction	1
Legislation	1
Biodiversity Priorities	2
Methods	2
Results	3
References	7
Figure 8.3.1: Nature Conservation Designations	8

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Introduction

Overview

ITPEnergised (ITPE) was appointed by Orkney Islands Council to undertake an ecological desk study at the Orkney's Community Wind Farm Project - Hoy located in the south-east of the island of Hoy, Orkney (hereafter referred to as 'the site'). The site is centred on British National Grid (BNG) ND 27973 93844.

This report describes the methods used to gather and record ecological baseline information for the Site and summarises the findings of the desk study.

Site Description

The Site covers an area of 488 hectares and comprises moorland with coastal pastures in the east and south, similar habitats are present north of the Site, with glacial terrain (hill and valley) in the north-west of the island.

The Site lies within a sloping landscape with a ridge running its full northern extent at an elevation of approximately 180m AOD. The Site drops to elevations of approximately 10m AOD at the eastern extents of the Burn of Ore and the access track. The land to the south of the site rises back up to c.150m AOD at Binga Fea.

The Burn of Ore flows from west to east across the southern extent of the Site, with three small tributaries joining from the north.

Development Proposal

The ecological desk study was undertaken to inform a future planning application for the proposed Orkney's Community Wind Farm Project - Hoy ('the Proposed Development').

Legislation

Full consideration has been given to all relevant nature conservation legislation when carrying out this assessment. This includes the following:

- The Conservation of Natural Habitats and Wild Flora and Fauna (the Habitats Directive) 1992 (92/43/3EEC);
- Directive of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (2009/147/EC);
- The Ramsar Convention 1975;
- The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended);
- The Conservation of Habitats and Species Regulations 2010;
- Wildlife and Countryside Act 1981 (as amended);
- The Nature Conservation (Scotland) Act 2004 (as amended); and
- The Wildlife and Natural Environment (Scotland) Act 2011 (as amended).

Biodiversity Priorities

Scottish Biodiversity List

Scottish Ministers created the Scottish Biodiversity List (SBL) (Scottish Government, 2013) to satisfy the requirements under Section 2(4) of the Nature Conservation (Scotland) Act 2004, assist public bodies in carrying out conservation of biodiversity, as well as to provide the general public with information regarding conservation within Scotland. The SBL comprises species and habitats listed using both scientific and social criteria. Only scientific criteria are considered relevant to this report. They include the following:

- All UK Priority Species present in Scotland;
- Species which Scotland has an international obligation to safeguard;
- All species defined as nationally rare at a UK level that are present in Scotland;
- Species with populations present (resident, wintering or breeding) in 5 or fewer 10km squares or sites in Scotland;
- All species that are endemic to Scotland;
- Any sub-species or race that is widely recognised and accepted by the scientific (or other relevant) community and that is endemic to Scotland, if it also meets one of the other criteria; and
- Natural and semi-natural habitats that are known to be particularly important for supporting assemblages of plant or animal groups that are data deficient, such as fungi, bryophytes, lichens, algae and invertebrates.

Local Biodiversity Reporting

The Orkney Local Biodiversity Action Plan (LBAP) is a targeted action plan for the period 2018 – 2022 (Orkney's Biodiversity Steering Group, 2018). The LBAP addresses biodiversity planning in Orkney through the following four themes: greenspace, farmland, peatland and the marine environment.

Methods

The ecological desk study was carried out using a range of publicly available information sources to provide an understanding of the ecological context of the Survey Area.

In terms of nature conservation designations, the desk study identified international and national statutory designations, such as Special Protection Areas (SPAs), Proposed Special Protection Areas (pSPA), Special Areas of Conservation (SACs), Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and Scottish Wildlife Trust (SWT) Reserves within 5km of the Site boundary. Only ecological (biological) features are considered relevant to the present study. Any Local Nature Reserves (LNRs) were identified within a 5km distance of the Site boundary and non-statutory designations, such as Local Nature Conservation Sites (LNCS), Sites of Interest for Nature Conservation (SINCs), RSPB Important Bird Areas (IBA) or woodland areas included on the Ancient Woodland Inventory (AWI), were identified within a 2km distance of the Site boundary.

Existing records for protected or otherwise notable species (e.g. LBAP priority species) were identified with a 5km distance of the Site boundary and extended to 10km for roosting bats. Only records from the last 10 years were considered relevant to the study.

Data was requested from the Orkney Wildlife Information and Records Centre (OWIRC) and is shown below in Table 2 which also include publicly available records from the following online databases:

- Scottish Natural Heritage SiteLink (SNH, 2020);

- NBN Atlas (NBN Atlas, 2020); and
- MAGIC: Nature on the Map (Magic, 2020).

Results

Nature Conservation Designations

Two designations covering one geographical area of international and national importance, Hoy SAC and SSSI, is located west of the Proposed Development. The Proposed Development site is within a Local Nature Conservation Site (LNCS) and a second LNCS lies directly east. Details of these sites can be found in Table 1 below and are shown on Figure 8.3.1.

For the purposes of brevity, all features presented here are relevant to terrestrial ecology. Records pertinent to ornithological interests are included within Chapter 7: Ornithology.

Table 1 – Designated Sites within 5km of the Proposed Development

Site	Designation	Distance to Site	Reasons for Designation
Hoy	SAC	Directly W of site	Annex I habitats that are a primary reason for selection of this site: <ul style="list-style-type: none"> ▪ Vegetated sea cliffs of the Atlantic and Baltic Coasts; ▪ Natural dystrophic lakes and ponds; ▪ Northern Atlantic wet heaths with <i>Erica tetralix</i>; ▪ Alpine and Boreal heaths; and ▪ Blanket bogs (* if active bog) * Priority feature. Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: <ul style="list-style-type: none"> ▪ European dry heaths; ▪ Petrifying springs with tufa formation (<i>Cratoneurion</i>) * Priority feature; ▪ Alkaline fens; and ▪ Calcareous rocky slopes with <i>chasmophytic</i> vegetation.
	SSSI		The Site is designated for the following ecological features: <ul style="list-style-type: none"> ▪ Blanket bog; ▪ Dystrophic loch; ▪ Upland assemblage; and ▪ Upland oak woodland.
Hoy and North Walls SSSI Moorland Fringes	LNCS	Within Site boundary	This large site stretches from Lyrawa Hill in the north to the lower slopes of Binga Fea in the south, occupying the hill slopes east of the Hoy SSSI. Throughout, the major habitat of these hills is blanket bog on deep peat, with a lesser amount of wet heather moorland on thinner peat on steeper slopes. Bog plants are typically common cottongrass (<i>Eriophorum angustifolium</i>) and heather (<i>Calluna</i>

Site	Designation	Distance to Site	Reasons for Designation
			<p><i>vulgaris</i>), with deergrass (<i>Trichophorum germanicum</i>), bog asphodel (<i>Narthecium ossifragum</i>) and <i>Sphagnum</i> mosses. Valleys with swift-flowing burns cut through the hills, and here there is greater variety of habitat including native willows (<i>Salix</i> sp), other trees and bracken (<i>Pteridium aquilinum</i>). In places these burns are edged by marshes and calcium-rich springs, these supporting a greater variety of flowering plants different from those found on peat bog and heath.</p> <p>Special Habitats: Upland heath*, blanket bog*, crowberry heath, upland flushes, fens and swamps*, upland birchwood*, upland willow scrub, conifer plantation, burns and canalised burns, oligotrophic and dystrophic lakes*, maritime cliff and slope*, and Coastal saltmarsh*.</p> <p>Special Wildlife:</p> <p>Mountain hare (<i>Lepus timidus</i>)*, otter (<i>Lutra lutra</i>)*, common toad (<i>Bufo bufo</i>), common hawk dragonfly (<i>Aeshna juncea</i>), black darter dragonfly (<i>Sympetrum danae</i>), large red damselfly (<i>Pyrrosoma nymphula</i>), common blue damselfly (<i>Enallagma cyathigerum</i>), meadow grasshopper (<i>Chorthippus parallelus</i>), moss carder bee (<i>Bombus muscorum</i>)*, aspen (<i>Populus tremuloides</i>), grey willow (<i>Salix cinerea</i>), tea-leaved willow (<i>Salix triandra</i>), rowan (<i>Sorbus aucuparia</i>), downy birch (<i>Betula pubescens</i>), field gentian (<i>Gentianella campestris</i>)*, heath cudweed (<i>Gnaphalium sylvaticum</i>)*, small adder's-tongue (<i>Ophioglossum azoricum</i>)*, juniper (<i>Juniperus communis</i>)*; mud sedge (<i>Carex limosa</i>), broad-leaved cottongrass (<i>Eriophorum latifolium</i>), bog orchid (<i>Platanthera</i> sp), alpine bearberry (<i>Arctous alpina</i>)*, and great sundew (<i>Drosera anglica</i>)*.</p> <p>* Nationally important habitats and species.</p>
Crockness	LNCS	Directly E of site	<p>An area mainly of blanket peat, sub-divided into several enclosures. Dominant plants are bog cotton and heather, with crowberry and sphagnum mosses. Peat cutting, drainage and grazing have affected parts of the site, and some of these are now drier heather moorland and others marshy grassland with rushes.</p> <p>Special Habitats: Upland heath*, Blanket bog.</p> <p>* Nationally important habitats and species.</p>

Protected or Otherwise Notable Species

Records of bat (*Chiroptera*) species, otter (*Lutra lutra*), harbour seal (*Phoca vitulina*) and grey seal (*Halichoerus grypus*) as well as four marine mammal species and five local important species of dragonflies and damselflies were recorded within 5km (10km for bats) of the site in last 10 years and are detailed in Table 2.

Table 2: Records of Protected or Otherwise Notable Species from within 5 km of the Site

Common Name	Scientific Name	Legal / Conservation Status	Records
Grey Seal	<i>Halichoerus grypus</i>	Wildlife and Countryside Act 1981 (as amended) Orkney LBAP	Two records in Weddell Sound located 2-3 km east of the Proposed Development.
Common seal	<i>Phoca vitulina</i>	Marine (Scotland) Act 2010. The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) also prohibit certain methods of catching or killing seals. The Protection of Seals (Designation of Haul-Out Sites) (Scotland) Order 2014. Orkney LBAP	Two records of common seal were identified in 2012, located 3.57km north-east of the site boundary.
Common dolphin	<i>Delphinus delphis</i>	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). Cetaceans in waters more than 12 nautical miles from land are protected under the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2017. SBL Orkney LBAP	A single record of common dolphin was recorded in 2017, located 650m east of the site boundary.
Common porpoise	<i>Phocoena phocoena</i>	Cetaceans in waters more than 12 nautical miles from land are protected under the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2017.	Two records of common porpoise were recorded in 2017, the closest located 1.81km south-east of the site boundary.
Minke whale	<i>Balaenoptera acutorostrata</i>	SBL	A single record of minke whale was recorded in 2015, located 1.82km east of the site boundary.
Risso's dolphin	<i>Grampus griseus</i>	Orkney LBAP	A single record of Risso's dolphin was recorded in 2012, 2.39km east of the site boundary.

Common Name	Scientific Name	Legal / Conservation Status	Records
Mountain Hare	<i>Lepus timidus</i>	Wildlife and Countryside Act 1981 (as amended) SBL Orkney LBAP	Qualifying species of Hoy and North Walls SSSI Moorland Fringes LNCS which overlaps the Study Area
Otter	<i>Lutra lutra</i>	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). SBL Orkney LBAP	Qualifying species of Hoy and North Walls SSSI Moorland Fringes LNCS which overlaps the Study Area. Recorded on Burn of Ore c1 km southeast of the track between T1 and T2 in 2011.
Bat species	<i>Chiroptera</i> species	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) SBL Orkney LBAP	A single record of a 'bat species' was identified on 8 th October 2016 approximately 1 km east of the site and again on 10 th October 2016 1.9 km east of the site. Between three and ten records of up to seven bats are recorded at North Walls between 2011 and 2018, all recorded between 4 km to 5 km south of T4. All species records were of common pipistrelle (<i>Pipistrellus pipistrellus</i>) or 'pipistrelle' or bat species.
Common Toad	<i>Bufo bufo</i>	Wildlife and Countryside Act 1981 (as amended) SBL	Qualifying species of Hoy and North Walls SSSI Moorland Fringes LNCS which overlaps the Study Area
Black darter	<i>Sympetrum danae</i>	Orkney LBAP	Recorded in Wee Fea in each year 2014-2018.
Blue-tailed damselfly	<i>Ischnura elegans</i>		Recorded in Wee Fea in each year 2014-2018.
Common Hawker	<i>Aeshna juncea</i>		Wee Fea pools south of track to T2 in Annual Dragonfly Walk, 25 July 2019 and recorded in Wee Fea in each year 2014-2018.
Common blue damselfly	<i>Enallagma cyathigerum</i>		Wee Fea pools south of track to T2 on Annual Dragonfly Walk, 25 July 2019 and recorded in Wee Fea in each year 2014-2018.

Common Name	Scientific Name	Legal / Conservation Status	Records
Large red damselfly	<i>Pyrrhosoma nymphula</i>		Wee Fea pools south of track to T2 on Annual Dragonfly Walk , 25 July 2019 and recorded in Wee Fea in each year 2014-2018.

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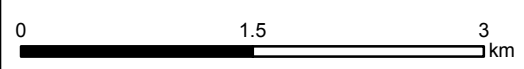
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Figure 8.3.1: Nature Conservation Designations



KEY

- Site Boundary
- Buffer (2km)
- Buffer (5km)
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest (SSSI)
- Local Nature Conservation Site (LNCS)



Scale 1:49,000 @ A3



Orkney's Community Wind Farm Project - Hoy

EIA Report Figure TA8.3.1

Nature Conservation Designations

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