

Appendix 7.1 Ecological Desk Study

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Appendix 7.1 Ecological Desk Study

Introduction

Overview

ITP Energised was appointed by Energy Isles to undertake an ecological desk study at an area of land in north Yell, Shetland (hereafter referred to as the 'site'). This report describes the methods used to gather and record ecological baseline information for the site and details the results.

The ecological desk study was undertaken to inform a planning application for a proposed wind farm development on the Site.

Good Practice Ecological Guidance

As part of the desk study, cognisance has been taken of the following good practice guidelines:

- Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2018).

Methods

An ecological desk study was carried out using a range of publicly available information sources in order to provide an understanding of the ecological context of the site and wider area.

In terms of nature conservation designations, the desk study identified international and national statutory designations, such as Special Areas of Conservation (SACs), Special Sites of Scientific Interest (SSSIs), National Nature Reserves (NNRs) or Marine Nature Reserves (MNRs) within 5km of the Site boundary. Local Nature Reserves (LNRs) as well as non-statutory designations, such as Local Wildlife Sites (LWS), Sites of Interest for Nature Conservation (SINCs) or woodland areas included on the Ancient Woodland Inventory (AWI), were identified within a 2km distance from the site boundary.

Existing records for protected or otherwise notable species (e.g. SBL) were identified with a 2 km distance of the site boundary. Only records from within the last 10 years were considered relevant to the study.

Data sources included the following online databases:

- National Biodiversity Network Atlas (NBN Atlas, 2017);
- Scottish Natural Heritage Sitelink (SHN, 2018);
- Scottish Natural Heritage Ancient Woodland Inventory (2010); and
- Shetland Biodiversity Records Centre (pers. comm., Harvey, 2019).

Biodiversity Action Plans

Scottish Biodiversity List

Scottish Ministers created the SBL (Scottish Government, 2013) in 2005 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 GB or UK level that are present in Scotland;
- species with populations present (resident, wintering or breeding) in five or fewer 10 km 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.

Biodiversity Duty Report

The Biodiversity Duty Report for Shetland Islands Council 2015-2017 sets out how the Council has complied the biodiversity duty for the period 1 January 2015 until 31 December 2017 (Shetland Islands Council, 2018). There is no updated version yet available.

Local Biodiversity Action Plan

The Shetland Island's Local Biodiversity Action Plan (LBAP), "The Living Shetland Project" (Shetland Islands Council, 2019), identifies locally important habitats and species and highlights and promotes actions to conserve them. The LBAP was developed with a range of partner organisations to coordinate its development and implementation.

The LBAP aims to:

- translate national targets for habitats and species, as specified in the uk biodiversity action plan, into effective action at the local level;
- stimulate effective local working partnerships to ensure that programmes for biodiversity conservation are developed and maintained;
- raise awareness of the need and responsibilities for biodiversity conservation and enhancement in the local context;
- identify biodiversity resources and priorities in the local area;
- identify targets for species and habitats important to the local area, including both the rare and the common, according to local circumstances;
- ensure that delivery mechanisms for conservation and enhancement of biodiversity resources are promoted and understood at the local level; and
- provide a local basis for monitoring progress in biodiversity conservation.

Non-avian Biodiversity Action Plan documents (Shetland Islands Council, 2019) of relevance to this study:

- arable plants;
- arctic char;
- bumblebees;
- freshwater;
- hawkweeds;
- oysterplant;

- strandline;
- ungrazed areas; and
- woodlands.

The Council may make Tree Preservation Orders to protect individual and groups of trees considered important for amenity or for their cultural or historic interest. The consent of the Council is required to undertake any works to trees protected by a Tree Preservation Order (Shetland Islands Council, 2019).

Desk Study Ecological Baseline

Non-Avian Nature Conservation Sites

Four non-avian designations, across four sites of international or national importance, are present within 5 km of the site boundary; see Figure 7.1 and Table 1, below.

Table 1 - Non-Avian Designated Sites

| Name | Distance and direction from site. | Designation | Reason for Designation |
|--------------------------|-----------------------------------|-------------|--|
| Fetlar to Haroldswick | In SW corner of Site boundary | MPA | <p>The site has been selected for the following species:</p> <ul style="list-style-type: none"> ▪ black guillemot (<i>Cephus grylle</i>). <p>The site has been selected for the following habitats:</p> <ul style="list-style-type: none"> ▪ Circalittoral sand and coarse sediment communities; ▪ horse mussel (<i>Modiolus modiolus</i>) beds; ▪ kelp and seaweed communities on sublittoral sediment; ▪ maerl beds; and ▪ shallow tide-swept coarse sands with burrowing bivalves. <p>For more information visit: https://apps.snh.gov.uk/sitelink-api/v1/sites/10409/documents/56 (accessed December 2018)</p> |
| East Mires and Lumbister | 1.9 km S | SAC | <p>Annex I habitats that are a primary reason for selection of this site:</p> <ul style="list-style-type: none"> ▪ Blanket bogs <p>For more information visit: http://jncc.defra.gov.uk/ProtectedSites/SACselection/sac.asp?EUCode=UK0019795 (accessed December 2018)</p> |
| | | SSSI | <p>The site has been selected for the following:</p> <ul style="list-style-type: none"> ▪ Blanket bog; and ▪ Breeding bird assemblage <p>For more information visit: https://apps.snh.gov.uk/sitelink-</p> |

| Name | Distance and direction from site. | Designation | Reason for Designation |
|---------|-----------------------------------|-------------|--|
| | | | api/v1/sites/587/documents/1 (accessed December 2018) |
| Breckon | 1.9 km NE | SSSI | <p>The site has been selected for the following freshwater habitats:</p> <ul style="list-style-type: none"> Eutrophic loch <p>The site has been selected for the following coastlands:</p> <ul style="list-style-type: none"> Machair; Sand dune; and Maritime cliff. <p>The site has been selected for the following vascular plants:</p> <ul style="list-style-type: none"> Bog orchid (<i>Hammarbya paludosa</i>) <p>For more information visit: https://apps.snh.gov.uk/sitelink-api/v1/sites/256/documents/1 (accessed December 2018)</p> |

The desk study did not identify any areas of Ancient Woodland within the 2 km desk study search area.

The desk study did not identify any further statutory designated sites of national or international importance within 5 km of the site or statutory local sites and non-statutory nature reserves or Ancient Woodland Inventory woodlands within a 2 km distance of the site boundary.

Information Consultation

Flora

Data received from the Shetland Biological Records Centre (pers. comm., Harvey, 2019) indicated the presence of a range of notable bryophytes (eight species) and vascular plants (10 species) of local or national importance, within 2 km of the site; see Table 2, below.

Table 2 - Shetland Biological Records Centre Non-avian Records from within 2 km of the site

| Common Name | Scientific Name | Details |
|-------------------------|----------------------------------|--|
| Bryophytes | | |
| Great mountain flapwort | <i>Harpanthus flotovianus</i> | One record, 2011; Muskra Loch, Cullivoe, east of Site, on stony loch shore |
| River thyme-moss | <i>Pseudobryum cinclidioides</i> | One record, 2011; Muskra Loch, east of Site |
| Dense fringe-moss | <i>Racomitrium ericoides</i> | One record, 2008; Colvister Quarry, south-east of Site |
| St Kilda hook-moss | <i>Sanionia orthothecioides</i> | Two records 2010; one west of Gossa Water, one by Herring Geo, north of Site |

| Common Name | Scientific Name | Details |
|---------------------------------------|---|--|
| Vascular plants | | |
| Small adder's-tongue | <i>Ophioglossum azoricum</i> | One record, 2015; Sillock Geos, North Neaps, north of Site |
| Frog orchid | <i>Coeloglossum viride</i> | One record, 2015; North Neaps, north of Site |
| Bog orchid | <i>Hammarbya paludosa</i> | Seven records, 2010-2016; near Bena Water, north-east of Site |
| <i>Whorl-grass</i> | <i>Catabrosa aquatica</i> | Three records, 2010-2014; x2 at Kirk Loch, north-east of Site; x1 at Brekon north-east of Site |
| Slender-leaved pondweed | <i>Potamogeton filiformis</i> | Two records, 2010, 2015; at Kirk Loch, north-east of Site |
| Early orache, <i>Atriplex praecox</i> | Early orache, <i>Atriplex praecox</i> | One record, 2015; Cullivoe, east of Site |
| Autumn gentian | <i>Gentianella amarella</i> subsp. <i>Septentrionalis</i> | Six records, 2011-2016; x4, at Breckon, north-east of Site; x2 at Brough, east of Site |

Terrestrial Animals

Protected or otherwise notable species potentially occurring within 2 km of the site and or relevance to this study, are shown in Table 3, below.

Table 3 - Existing Species Records from within 2km of the Site

| Common Name | Scientific Name | Legal/Conservation Status |
|-------------|--------------------|---|
| Otter | <i>Lutra lutra</i> | Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). Wildlife and Countryside Act 1981. SBL (listed for avoidance of negative impacts) |

No other appropriate records were available for non-avian species within the search area and within the 10-year search timeframe (including fish records for the watercourses and waterbodies).

References

CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management. Available online at: https://www.cieem.net/data/files/Guidelines_for_Ecological_Impact_Assessment_in_the_UK_and_Ireland_2018.pdf (accessed December 2018).

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