

Appendix 8.4 Bat Activity Survey Report



ORKNEY'S COMMUNITY WIND FARM - FARAY

Bat Activity Survey Report

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Summary

Following the results of ongoing ecology and ornithology surveys undertaken between April and July 2019, ITP Energised (ITPE) was appointed by Orkney Islands Council to undertake active season surveys for bats (*Chiroptera* spp.) at the proposed wind farm development on the island of Faray.

Previously an extended Phase 1 habitat survey and Preliminary Roost Assessment (PRA) had indicated that structures and habitats within the Site held Low suitability for use by bats.

A field survey programme was undertaken in August 2019, during which dusk and dawn walked transects were completed between north and south vantage points on two consecutive survey nights. The transect route passed the majority of structures with bat roost potential and the vantage points overlooked the structures. This enabled the surveyors to observe any bats emerging from, or re-entering, potential roost features as well as recording general foraging and commuting behaviour.

No bats were seen or heard during a total of 22 hours (11 hours with two observers) of survey.

The transect survey results, combined with the findings of the desk study, indicate that there are no roosting bats present on Faray and, as such, the Proposed Development is unlikely to have significant impacts on bat species.

1. Introduction

1.1 Overview

Following the results of ongoing ecology and ornithology surveys undertaken between April and July 2019, ITP Energised (ITPE) was appointed by Orkney Islands Council to undertake active season bat surveys for the proposed wind farm development ('the Proposed Development') on the island of Faray, located 1.5 km west of Eday and 2.5 km southeast of Westray (hereafter referred to as 'the Site'). The Site has central Ordnance Survey Grid Reference HY 52995 36846. The surveys were conducted to confirm presence or absence of bats within the development boundary as shown on Figure 1.

1.2 Site Description

The Site is an uninhabited island located 1.5 km to the west of Eday (north-west of Fersness Bay) and south-east of Westray, lying between the Sound of Faray to the east and Rapness Sound to the west. Several drainage ditches run across the island, in addition to a few small, unmodified burn channels rising from the wetter areas. The shoreline comprises primarily rocky exposures and cliffs, with some beaches also present (south-eastern side of the southern tip; and in several locations along the western coastline). A number of abandoned dwellings are present, the majority of which have lost their roofing, but some of which are reasonably watertight and are used for agricultural storage.

The island is used for livestock (sheep) grazing, with a number of field enclosures present, to either side of a central track. At the time of survey, 200 head of sheep were on the island; however, this has historically been up to 850 animals.

1.3 Development Proposal

The bat surveys were undertaken to inform a planning application for the development of a wind farm on Faray ('the Proposed Development').

1.4 Background

An extended Phase 1 habitat survey and Preliminary Roost Assessment (PRA) carried out on 31st of May 2019 (ITPE, 2019) identified a number of structures on the island in different states of disrepair, varying from an old school house used for storage to collapsed former houses and farm buildings; their locations are shown on Figure 8.4.1. The structures were found to have thick stone walls and either full or partial rooves. The structures and surrounding habitat were assessed as having 'Low' suitability for roosting bats. Although bats are scarce on Orkney as a whole, and rare away from known roost sites in Kirkwall and Hoy, following discussions with NatureScot (formerly Scottish Natural Heritage, SNH) on 23 July 2019, it was decided to undertake bat activity surveys in conjunction with storm petrel surveys in order to establish absence/presence of roosting bats on the island.

2. Legislation and Guidelines

An overview of relevant legislation and guidance is provided below.

2.1 Legislation

Relevant legislation and guidance documents have been reviewed and taken into account as part of this ecological assessment, as referenced in this report (a full description of pertinent nature conservation legislation is presented below).

2.1.1 Generally applicable legislation

2.1.1.1 The Habitats Regulations

In Scotland, the Habitats Directive is translated into specific legal obligations by the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). This piece of legislation is usually known as the Habitats Regulations. The Habitats Regulations cover the requirements for:

- Special Areas of Conservation (SACs) and SPAs, which are sites that are important for threatened habitats and species on a European level; making a network of sites designated together and known collectively as the Natura2000 network;
- Species requiring strict protection – i.e. species protected as ‘European Protected Species’ under the Conservation (Natural Habitat &c) Regulations 1994 (as amended); and
- Other aspects of the Habitats Directive including the management, surveillance and reporting for sites in order to ensure the favourable status of species and habitats are maintained.

The Habitats Regulations have been most recently amended in 2012.

2.1.1.2 The Convention on Biological Diversity (CBD)

The CBD was adopted at the Earth Summit in Rio de Janeiro, Brazil in June 1992, and came into force in December 1993. It was the first global treaty to provide a legal framework for biodiversity conservation. The treaty has three primary goals:

- The conservation of biological diversity;
- The sustainable use of its components; and
- The fair and equitable sharing of the benefits arising from the use of genetic resources.

Signatories are required to create and enforce national strategies and action plans to conserve, protect and enhance biological diversity.

The UK Government ratified the convention and published the UKBAP in 1994 and to compliment the UKBAP, separate biodiversity strategies for each of the devolved governments have been subsequently developed, including the Scottish Biodiversity Strategy, launched in 2004.

2.1.2 Bat-specific legislation

All bat species within Scotland are fully protected, primarily through their status as European Protected Species under the Conservation (Natural Habitat &c) Regulations 1994 (as amended), which transposes the Habitats Directive into domestic law. They are also protected under the Wildlife and Countryside Act 1981 (as amended) and The Nature Conservation (Scotland) Act 2004. It is an offence to intentionally or recklessly:

- Capture, injure or kill a wild bat;
- Harass a wild bat or group of bats;
- Disturb a wild bat in a roost (any structure or place it uses for shelter or protection);
- Disturb a wild bat while it is rearing or otherwise caring for its young (this would be a 'maternity' roost);
- Obstruct access to a bat roost or to otherwise deny the animal use of the roost;
- Disturb such a wild bat in a manner that is, or in circumstances which are, likely to significantly affect the local distribution or abundance of that species; and
- To disturb a wild bat in a manner that is, or in circumstances which are, likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young.

It is also an offence to:

- Damage or destroy a breeding site or resting place of such an animal (whether or not deliberately or recklessly); and to
- Keep, transport, sell or exchange, or offer for sale or exchange any wild bat (or any part or derivative of one) obtained after 10 June 1994.

2.2 Biodiversity Priorities

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. All nine bat species found breeding in Scotland are included on the SBL as species identified for conservation.

The common pipistrelle (*Pipistrellus pipistrellus*) is specifically noted on the Orkney LBAP as a Priority Species under biodiversity Theme 1: Greenspace (Orkney's Biodiversity Steering Group, 2018), though the brown long-eared bat (*Plecotus auritus*) and Nathusius' pipistrelle (*Pipistrellus nathusii*) are also noted as of conservation concern on the islands.

2.3 Good Practice Ecological Guidance

As part of the protected species survey, recognisance has been taken of the best practice guidelines/survey method publication *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016).

3. Methods

3.1 Desk Study

As part of the Phase 1 Habitat survey a desk study was undertaken to collect baseline information from the National Biodiversity Network (NBN) Atlas (NBN Atlas, 2019) and also included a data request from Orkney Wildlife Information & Records Centre (OWIRC). This included any recent records of bats from within the period 2009-2019 and within 10 km of the Site boundary.

3.2 Field Survey

Following the results of the PRA, bat activity surveys were conducted on the nights of 26 and 27 August 2019, with both dusk and dawn transect surveys conducted each night. Surveys were conducted by suitably qualified and experienced ecologists: Allan Taylor ACIEEM (an ecologist with over 14 years of combined conservation and consultancy experience) and Newton Harper (a field ecologist with over 25 years-worth of conservation and consultancy experience). The transect surveys were undertaken in the centre of the island during the storm petrel surveys (see separate survey report). The transect route passed by the majority of structures on the island which were identified as having potential for use by roosting bats. A vantage point location at the north and south end of the transect route enabled the surveyors to observe any bats emerging from, or re-entering suitable roost features.

Transect surveys were conducted at dusk and dawn, with surveyors watching and listening for bats emerging or returning to roosts and/or foraging over the island. Recommended timings under Bat Conservation Trust (BCT) guidelines were adhered to and surveys were undertaken in accordance with the BCT survey guidelines (Collins, 2016).

The route of the transect, including start/end points, is shown on Figure 1 and the dates and times of each survey and survey conditions are summarised in Table 1. Dusk transects began 15 minutes before sunset and

continued for two and a half hours after sunset. Dawn transects began two and a half hours before sunrise and concluded at 15 minutes after sunrise. During the surveys, surveyors noted any bat passes or potential roosting behaviour. The surveys were recorded using Batbox Duet Frequency Division detectors and Tascam DR-07 recorders.

Table 1: Bat survey details

Date	Survey Type	Sunset / sunrise time	Start time	End time	Temp(°C)	Precipitation	Wind (F)
26/08/2019	Dusk transect	20.30	20.15	23.00	11	Nil	0
27/08/2019	Dawn transect	05.58	03.28	06.13	12	Nil	2
27/08/2019	Dusk transect	20.27	20.12	22.57	13	Nil	3
28/08/2019	Dawn transect	06.01	03.31	06.16	14	Nil	3

3.2.1 Survey Limitations

The bat surveys were limited by overnight access to the island, with the activity surveys being combined with a storm petrel survey. While each of the actual individual surveys were carried out according to current recommended guidelines, and took place during appropriate weather conditions, the effort was limited to one season, i.e. summer, rather than one visit per season (spring, summer and autumn), as would normally be the case for a habitat identified to have low bat suitability. It should also be noted that a dusk to dawn survey, i.e. conducted within the same period of night, is considered to comprise a single site visit: each location was therefore subjected to two surveys.

Due to the relative isolation of the island, habitat connectivity is highly fragmented, with the closest major landmass, Westray, over 500m to the north and the Orkney mainland, where bat roosts have been recorded, over 16 km to the south-west. These distances are significant, especially when considering expanses of open water of over 5.5 km wide would have to be crossed from any stepping-off point from the Orkney mainland, even when using islands in between as “stepping stones”.

The guidelines (Collins, 2016; explanatory note “a” to Table 8.3) allow for professional judgement to be applied in determining an appropriate level of survey effort for a low suitability site. When considering the resources available to bats and habitat connectivity to known roosts on the main island, the survey effort, comprising two consecutive overnight surveys, is therefore considered sufficient for determining presence/absence of bats on the island.

4. Ecological Baseline

4.1 Desk Study

Bats have very limited presence on the Orkney Islands (BCT, 2015). Only common pipistrelle has been recorded as resident on Orkney mainland (SNH, 2015; BCT, 2019), though other species have been identified as vagrants, e.g. brown long-eared bat recorded on North Ronaldsay, far beyond its breeding range, in 2006 (Scottish Bats, 2014). Nathusius’ pipistrelle and brown long-eared bat are also included in the LBAP (Orkney’s Biodiversity Steering Group, 2018), which notes bat roosts being present within some of the mainland settlements, such as Finstown.

While bat presence has been confirmed on the islands, no records of bats were identified within the Site or a wider 10 km search area.

4.2 Field Survey

A total of 22 hours of bat activity surveys were undertaken during suitable conditions for bat activity (still, dry and warm). No bats seen or recorded during the survey.

5. Discussion and Conclusions

No bats were seen or heard during any of the transect surveys. With weather conditions at dawn and dusk being ideal for bats to be active (foraging, commuting and/or roosting), had bats been present, then they would have been detected or observed.

These results, combined with the results of the desk study, indicate that there are no roosting bats present on Faray. With limited foraging and roosting resources available, bat residence on Faray is considered highly unlikely and, as such, the Proposed Development is unlikely to have any significant impacts on bat species.

6. References

Collins J (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 3rd Edn, Bat Conservation Trust, London. Available at: <https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-developmentprojects#mitigation-and-compensation-methods> (accessed September 2019).

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Figure 1: Bat Transect Route

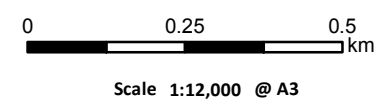


KEY

- Site Boundary
- Survey Area
- Transect routes

Bat survey points

- N
- S



Orkney's Community Wind Farm Project - Faray

Figure TA8.4.1 Bat Surveys

Bat Survey Locations

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