

Otter Survey for Beaw Field Wind Farm



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Summary

A proposal for a wind farm development has been made by the Applicant for Beaw Field Wind Farm, in Yell, Shetland. As part of this proposal, Alba Ecology Ltd. was commissioned to conduct an otter survey.

Field survey work was undertaken in August 2015 once the final design layout had been agreed. Field work included surveying all terrestrial, riparian and watercourses within the Study Area.

A single otter field sign was located within the Study Area. There was no other evidence of otters within the Study Area at the time of the survey. Additional otter signs (feeding signs, footprints, spraints and a possible couch) were recorded as incidental records across the wider area of the Application Boundary during other ecological surveys.

Whilst occasionally present within the Study Area, the survey evidence suggests that the proposed Beaw Field Wind Farm will not significantly impact or disturb otters as no important otter resting or breeding sites (couches/holts) were recorded. A series of recommendations are made.

Introduction

Alba Ecology Ltd. was commissioned by the Applicant to conduct a protected terrestrial mammal survey at Beaw Field Wind Farm as part of the Environmental Statement. Given the geographical location and habitats present, and in consultation with SNH, the protected mammal survey focussed solely on determining the potential presence of Eurasian otter (*Lutra lutra*).

The Study Area includes the Development Footprint plus a 250m buffer around all infrastructure (including turbines, borrow pits and construction compounds etc.) except the access tracks which had a buffer of 100m (**ES Volume 2: Figure 1.1**). This was in accordance with SNH advice (SNH Scoping Response of 08/05/15).

The Study Area included parts of Evra Water, Swarta Shun and Litla Water, the northern part of the Burn of Hamnavoe and its tributaries, part of Green Burn and Mossy Hill, Atlis Hill and Sandwater Knowe (**ES Volume 2: Figure 1.1**).

Additional otter signs were recorded as incidental records across the wider area of the Application Boundary during other ecological surveys in 2015.

This document reports the findings of the otter survey undertaken by Alba Ecology Ltd. in August 2015.

Aims and objectives

The objectives of the otter survey were to:

- determine the potential presence of otter within the Study Area; and
- assess if the wind farm construction and operation were likely to significantly impact or disturb otter.

Legal Protection

An estimated 90% of the total British otter population are resident to Scotland (SNH, 2015) with Shetland being one of the Scottish population's strongholds (Strachan, 2007). The Scottish population of otters is of international importance (SNH, 2015).

The Yell Sound Coast SSSI and SAC, part of which is located 1.3km away from the Application Boundary, supports a nationally and internationally important population of breeding otters. When designated, it was estimated that the site supported up to 25% of the Shetland population (SNH, 2006). The areas within the SSSI contain some of the greatest concentrations of otters in Shetland, as measured by holt density. The habitat of these areas, which determines their suitability for otters, is mainly low rocky coastlines backed by areas of peaty moorland with numerous sources of fresh water. During initial discussions, SNH agreed that none of the proposed development works were likely to impact on the Yell Sound Coast SAC otter feature and so no dedicated surveys within the SAC were necessary.

Otters are classified as European Protected Species and are fully protected under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). This lists a number of offences in relation to otters and the places in which they live. It is an offence to deliberately or recklessly:

- capture, injure or kill an otter;
- harass an otter or group of otters;
- disturb an otter in a holt or any other structure or place it uses for shelter or protection;
- disturb an otter while it is rearing or otherwise caring for its young;
- obstruct access to a holt or other structure or place otters use for shelter or protection or to otherwise deny the animal use of that place;
- disturb an otter in a manner that is, or in circumstances which are, likely to significantly affect the local distribution or abundance of the species; and
- disturb an otter 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 (note that this does not need to be deliberate or reckless to constitute an offence).

Methods

The otter survey was conducted in August 2015 by experienced otter surveyors Donald Shields and Peter Cosgrove of Alba Ecology Ltd. The otter survey was conducted using established standard methods (Chanin, 2003; SNH, 2015) within the defined Study Area. These methods involve a systematic survey of terrestrial, aquatic and riparian habitats looking for places otters use for shelter, resting and protection (such as couches, lying-up sites and holts), or for signs of activity (such as spraints, feeding remains or footprints) (Chanin, 2003; Sargent 2003; SNH, 2015) as per SNH Scoping comments.

The otter survey took place during suitable weather conditions (i.e. after a prolonged dry period), so that otter field signs (spraints, sheltering or resting places etc.) would have had time to build up, be relatively visible and would not have been washed away.

Limitations

The main limitation of this type of otter surveys is recognised to apply to most ecological surveys. The surveys undertaken were sampling techniques, not absolute censi. Results give an indication of numbers and activities of species at the particular times that surveys were carried out. Species occurrence changes over time; so the results presented in this report are snapshots in time (specifically August 2015). Nevertheless, surveys were undertaken during a period of the year when otter activity would likely be high and visible. Most of the survey reaches were easily accessible. Consequently, survey coverage was very good across the Study Area.

Additionally, surveyors undertaking ornithology and ecology surveys also kept a watching brief for otter signs during their work in 2015. No important resting sites were noted during those surveys either, with only occasional spraint and footprint signs recorded within the wider Application Boundary.

Results

The Study Area was dominated by degraded peatland habitats (**ES Volume 2, Chapter 11: Ecology**). Along the watercourses there were strips of riparian grassland usually about 2-5m wide either side of the stream. These were made up of heath rush (*Juncus squarrosus*), soft rush (*Juncus effusus*) and grasses particularly common bent (*Agrostis capillaris*). There was often a thick layer of moss and some forb species such as tormentil (*Potentilla erecta*).

There was a single otter sign located within the Study Area (**ES Volume 2: Figure 11.5; Table 1**). Despite a thorough survey of the Study Area during August 2015 no other otter field signs were recorded. An additional seven otter signs were recorded as incidental records during other ecological surveys in the wider Application Boundary area, including spraints, footprints, feeding signs and a possible slide and couch (Table 1).

Location	Record
Migga Dale HU 468 812	Spirant
Burn of Aris Dale HU 481 828	Spraint
Burn of Hamnavoe HU 498 824	Spraint (Photograph 1)
Mill Burn HU5331582489	Footprints
Mill Burn HU5329882453	Spraint and footprints
Mill Burn HU5329182439	Footprints
Burn of Horsewater HU 53016 81808	Possible slide and couch
Burn of Hummelton HU 52930 82407	Fish remains, possible otter sign (Photograph 2)

Table 1: The location of otter signs recorded within the **Study Area (in bold)** and incidental records across the wider Application Boundary in 2015.

The single otter sign located in the Study Area was located just south of Migga Dale, where the main, existing track turns north towards Aris Dale. It is near the western end of the route of the proposed main access track.

The incidental records were mostly located to the far east of the Application Boundary area, concentrated around Mill Burn near the Loch of East Yell. The possible slide and couch was on the Burn of Horsewater more than 750m away from the Development Footprint.



Photograph 1: An old otter spraint at Burn of Hamnavoe HU 498 824



Photograph 2: Fish remains. A possible otter feeding sign at HU 52930 82407

Discussion

All watercourses, terrestrial and riparian habitats within the Study Area were fully surveyed where safely possible to do so for otter signs. The survey yielded a single otter field sign in August 2015. There were an additional seven incidental records of otters recorded during other ecological surveys. The survey evidence suggests that the Development Footprint, whilst occasionally used by otters for foraging, is not important for resting, foraging or breeding and so the Proposed Development is not likely to significantly impact on or disturb otters. However, otters can be highly seasonal in terms of their use of an area. Consequently, although there is no evidence that would suggest the Study Area is important for otters that does not preclude their occasional use of the Study Area and so pre-construction surveys should be conducted immediately around the Development Footprint before any construction work commences.

Otters can be impacted by development in several ways, not just by the direct loss of their shelters or holts, but also through habitat destruction, disturbance and pollution which could also affect their food supply (SNH, 2015). Although few signs of otters were recorded in the Study Area, it is occasionally used by otters. Therefore, it is important to minimise the impacts of the development on otters by considering them carefully through the pre-construction and construction phases of work. Pre-construction otter surveys should be a planning condition.

Most natal holts are situated away from watercourses by female otters to specifically avoid the attention of male otters, which can kill cubs. For this reason, it is important that such pre-construction surveys are undertaken on all habitats around the Development Footprint and not just those along riparian watercourse habitats.

Recommendations

- An otter survey should be carried out immediately prior to the commencement of any construction work.

- To ensure the otters are not negatively impacted during construction work, an independent and experienced Ecological Clerk of Works (ECoW) is proposed for the construction phase of Proposed Development to provide advice and keep a watching brief for otters. They should be extra vigilant during the summer months as otters breed during these months in Shetland (Strachan, 2007).
- Construction staff should be informed of the potential risk to otters and asked to report any sightings or potential holts, so that appropriate mitigation can be undertaken. An ECoW should provide a simple toolbox talk which raises awareness of site-specific ecological sensitivities, including otters, with construction staff. All new staff should undergo an ecological induction and be made aware of the ecological sensitivities on the Site and (legal) implications of not complying with agreed working practices.
- Where roads cross watercourses suitable bridge/culverts should be designed to allow safe coursing places for otters. Best practice design for otters should be taken forward at all moderate and large water-crossings. The 'otter friendly' engineering works described in the Design Manual for Roads and Bridges (Highways Agency, 2013) should be adopted. This includes allowing for the easy and safe passage of otters under rather than over bridges and culverts by leaving spaces for ledges and providing ramps at either end of bridges and culverts. If otters are prevented from using bridges or culverts during inclement weather because they are poorly designed, for instance during high rainfall/spate events, the individuals may have to cross access tracks or roads, which increases their likelihood of road traffic mortality.

References

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