

European Offshore Wind Deployment Centre Environmental Statement

Appendix 11.1: Bats Technical Report



1	BATS ENVIRONMENTAL IMPACT ASSESSMENT TECHNICAL REPORT	2
1.1	Introduction.....	2
1.1.1	Consultation	2
1.2	Baseline Information	2
1.3	Impact Assessment	3
1.4	Mitigation and Monitoring.....	5
1.5	Summary	5
1.6	References	5

1 BATS ENVIRONMENTAL IMPACT ASSESSMENT TECHNICAL REPORT

1.1 Introduction

- 1 This section will review the information available for bats that are present in the Aberdeen Bay area with the focus being on bats that could be present in the offshore area beyond the high water mark. All bat species found in Scotland are classified as European Protected Species and are fully protected under the Conservation (Natural Habitats) Regulations 1994 as amended. This lists a number of offences in relation to bats and the places which they live.
- 2 Surveys for any bat roosts and feeding areas will be carried out to inform the onshore environmental impact assessment. These surveys will be conducted using qualified surveyors at the proposed substation and cable landfall and the results will be presented in the onshore Environmental Statement.
- 3 The impacts considered in this report are all related to the operational phase and are listed as:
 - physical impacts from direct collision or flying close proximity to wind turbine blades
 - indirect impacts, changing foraging behaviour of bats by attraction to lights and increased risk of physical impacts from collision.

1.1.1 Consultation

- 4 During meetings with SNH bats occurring in offshore were not raised as being a particular cause for concern.

1.2 Baseline Information

- 5 Seventeen species of bat are found in the UK, six of which are known to occur in north-east Scotland. Three of these species are considered to occur commonly (common pipistrelle, Soprano pipistrelle and the Brown long-eared bat) one species (Daubenton's bat) fairly common and two are considered uncommon (Natterer's bat and Whiskered bat) (SNH, 2009). A brief description of the six species found in Scotland is given below. A single sighting in the north-east Scotland of the Nathusiu's pipistrelle has also been recorded hence a brief description of this species is also given.
- 6 **Common pipistrelle (*Pipistrellus pipistrellus*) and Soprano pipistrelle (*Pipistrellus pigmaeus*)** - Due to the similarity of the two species Soprano pipistrelle was not discovered until the 1990s but has since been found to be common and widespread throughout the UK, including north-east Scotland. Both species occur throughout mainland Britain and some inner Hebridean Islands. They occur in most habitats but particularly riparian woodland and parkland. Both species will forage up to 5 km from their roosts and are the most frequently recorded species along the Aberdeenshire coast.
- 7 **Nathusiu's pipistrelle (*Pipistrellus nathusii*)** - A previous migrant species. It has only been classified as a resident in the UK since 1996. To date only one recorded sighting has been made in the in north-east Scotland. Two

recorded sightings from oil platforms suggest that this species may be a very scarce migrant. The range and status of this species is current unclear.

- 8 **Brown long-eared bat (*Plecotus auritus*)** - This species is widespread in mainland Britain and also occurs in some inner Hebridean Islands, the species of bat is less common than the pipistrelles particularly along the coast. Brown long-eared bats roost in old houses and forage within 1.5 km from their roosts which are invariably near to thick woodland. Consequently they are scarce along the coast.
- 9 **Daubenton's bat (*Myotis daubentonii*)** - Occur throughout mainland Britain as far north as Sutherland and possibly on some of the larger Inner Hebridean islands. Although widespread in north-east Scotland, Daubenton's bats are closely associated with fresh water and avoid urban habitats. Roosts are in mature deciduous trees and rarely in houses. In the north-east of Scotland the species occurs along the Ythan as well as Deeside and Donside, however, the species is rare or scarce near the coast.
- 10 **Natterer's bat (*Myotis nattereri*)** - Natterer's bats are found throughout most of the British Isles. Recent records have extended its range in Scotland north to the Great Glen fault. This is a very rare bat in north-east Scotland with few records reported. It does forage widely and over a wide variety of habitats including grassland, but it prefers semi-open woodland often coniferous.
- 11 **Whiskered bat (*Myotis mystacinus*)** - Very rare with just one record in north-east Scotland. It is found throughout England and Wales and even in southern Scotland and throughout Ireland.

1.3 Impact Assessment

- 12 It is recognised that bats may be impacted by wind farms; with evidence from a number of onshore wind farms indicating that bats have a higher mortality rate due to wind farms than birds do. Although direct collisions with the wind turbines do occur, a higher mortality rate arises due to barotraumas caused by sudden changes in air pressure causing lethal lung damage. The impacts considered in this report are all related to the operational phase and are listed as:
 - physical impacts from direct collision or flying close proximity to wind turbine blades
 - indirect impacts, changing foraging behaviour of bats by attraction to lights and increased risk of physical impacts from collision
- 13 Bats have been recorded foraging around offshore wind farms. Studies undertaken in Sweden to explore potential impacts on migrating bats discovered that non migratory bats also occurred foraging around the wind turbines as far as 10 km from shore (Ahlén et al., 2007).
- 14 There is no evidence to suggest the offshore area of Aberdeen Bay is used by bats, the decreasing availability of insect prey with increasing distance from the shore reduces the likelihood of bats foraging beyond the coastal environment.
- 15 Although there are a number of species that are likely to be found in the terrestrial environments of north-east Scotland, there is no evidence to

suggest that any of these bat species currently utilise the offshore areas for foraging or migration corridors. There are no known flyways across Aberdeen Bay and there is no evidence to suggest migration of Scottish bats to, or from other European countries.

- 16 Unlike other offshore areas where bats have been found to forage offshore, such as Sweden, Aberdeen Bay does not have any known migration corridors or flyways that are actively used by bats to travel across Aberdeen or to migrate to other parts of Europe, such as Scandinavia.
- 17 It is only when the EOWDC has been built and is operational that there would be any risk to bats that are flying in, or through, the development area. From the results of literature review there was a lack of any studies which have identified the presence of bats in Aberdeen Bay beyond the high water mark.
- 18 The threat to populations of bat species present in the north-east Scotland from collisions is shown in Table 1. Both species of pipistrelle (common and soprano) are ranked as having a medium collision risk, all the other four species were considered to have a low risk of collision. The population threat from collisions to all bat species found in the north-east Scotland is low. Although this threat may be revisited by the UK statutory nature conservation agencies depending upon the scale of future wind farm developments particularly those situated onshore.

Table 1 The risk of collision fatalities affecting bat populations (table adapted from Natural England 2009)

Species	Relative Population Size and Status	Risk of Collision	Population Threat
Common pipistrelle	Common	Medium	Low
Soprano pipistrelle	Common	Medium	Low
Brown long-eared bat	Common	Low	Low
Daubenton's bat	Common	Low	Low
Natterer's bat	Fairly common	Low	Low
Whiskered bat	Locally distributed	Low	Low

- 19 During the operational phase of the proposed EOWDC the addition of aviation and navigational safety aids such as lights could act as attractants to insects which in turn may attract predators such as bats from the mainland, however it is known that bats generally avoid artificial lighting (Boshamer and Bekker 2008). Also Aberdeen Bay is frequently used for mooring vessels used to supply the oil and gas industry. These vessels are lit by powerful lights and easily visible from the shore and there have not been any records of bats foraging around the lights of these boats.
- 20 The addition of permanent lights offshore may influence the foraging flights of bats, although there is no evidence to suggest that lights that are currently present offshore Aberdeen Bay have attracted bats.

- 21 There are no foreseeable impacts from the construction phases or decommissioning phases.
- 22 The risk of collision is considered to be negligible once the EOWDC has been constructed and is operational. Although there have been reports of bats discovered on oil and gas infrastructure offshore, there is no evidence for any significant movement, or permanent distribution, of bats in offshore waters in the Aberdeen Bay area and therefore the impact of the EOWDC on the bats is considered to be negligible.

1.4 Mitigation and Monitoring

- 23 No additional mitigation for the offshore works is planned for bats.
- 24 If any environmental risk to bats is identified in any subsequent land-based surveys and following the advice of SNH, post monitoring surveys could monitor the EOWDC area to assess if there are any bats that are foraging or moving through the site.

1.5 Summary

- 25 Six species of bats are thought to occur in north-east Scotland, although only three of them are common species. The bats are not expected to use the waters of Aberdeen Bay for feeding and there are no known flyways or migration corridors in the area. Once the proposed EOWDC is operational there is the small possibility that the EOWDC could attract insects and bats offshore due to the small lights required for safety reasons on the wind turbines. The evidence suggests a lack of bats in the offshore waters of Aberdeen Bay. Impacts from the construction, operation and subsequent decommissioning of the EOWDC on bat species are considered to be negligible.
- 26 A thorough survey for bat species and their associated roosts will be undertaken as part of the environmental surveys carried out for the onshore Environmental Impact Assessment to look at the impact of the onshore works.

1.6 References

Ahlén, I., L. Bach, H. J. BaagØe, and J. Pettersson. 2007. Bats and offshore wind turbines studied in southern Scandinavia. Swedish Environmental Protection Agency, Stockholm, Sweden, Report 5571:1–35.

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