
Chleansaid Wind Farm

ESB Asset Development UK Limited

Appendix 8.2: Terrestrial Mammals



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1 INTRODUCTION

1.1 Background

- 1.1.1 This Technical Appendix has been prepared to accompany **Chapter 8** of the Environmental Impact Assessment Report (EIAR) for the proposed Chleainsaid Wind Farm (hereafter ‘Proposed Development’).
- 1.1.2 It presents detailed methodologies and results of desk studies and field surveys completed to establish baseline conditions with regards to protected and notable terrestrial mammals (excluding bats which are considered separately in **Technical Appendix 8.4** in Volume 2 of the EIAR).
- 1.1.3 It should be read with reference to the following Figures, presented in Volume 3 of the EIAR:
- **Figure 8.1:** Non-Ornithological Statutory Designated Sites for Nature Conservation.
 - **Figure 8.4:** Desk Study Terrestrial Mammal Results.
 - **Figure 8.5:** Terrestrial Mammal Field Survey Results.
- 1.1.4 **Annex 1** provides the scientific names for the terrestrial mammal species regarded in this Technical Appendix.

1.2 Site Overview

- 1.2.1 The ‘site’, as shown by the red line boundary in **Figures 8.1, 8.4 and 8.5**, encompasses the ‘turbine area’ and ‘the access area’, and lies 13 km north-east of Lairg, and immediately north of the settlement of Dalnессie, in Sutherland. The site largely comprises open bog, heathland and acid grassland habitats, which continues to the north and east, and is fringed by commercial forestry to the west and south-west. Sròn Leathad Chleainsaid is a named hill located along the northern boundary of the turbine area. The Allt nan Con-uisge is a watercourse which flows in the western part of the turbine area. The River Brora marks the south-eastern extent of the turbine area. There are no other waterbodies on-site, although there lochans outside the boundary of the turbine area, with the closest, Loch na Fuaralachd and Loch Beag na Fuaralachd located in forestry to the south-west, and Loch Coire na Bruaiche to the east.

1.3 Key Guidance

- 1.3.1 Survey methodologies and subsequent interpretation of results have made reference to the following key pieces of guidance:
- NatureScot (2021a). *Standing Advice for Planning Consultations – Otters*¹.
 - NatureScot (2021b). *Standing Advice for Planning Consultations – Badgers*².
 - NatureScot (2021c). *Standing Advice for Planning Consultations – Pine martens*³.

¹ <https://www.nature.scot/doc/standing-advice-planning-consultations-otters> (Accessed 10th November 2021).

² <https://www.nature.scot/doc/standing-advice-planning-consultations-badgers> (Accessed 10th November 2021).

³ <https://www.nature.scot/doc/standing-advice-planning-consultations-pine-martens> (Accessed 10th November 2021).

- NatureScot (2021d). *Standing Advice for Planning Consultations – Red squirrels*⁴.
- NatureScot (2021e). *Standing Advice for Planning Consultations - Water voles*⁵.
- NatureScot (2021f). *Standing Advice for Planning Consultations – Wildcats*⁶.
- NatureScot (2020) *General pre-application/ scoping advice for onshore wind farms*⁷.

1.3.2 Additional pieces of guidance and peer reviewed literature have also been referred to and are referenced where relevant.

1.4 Target Species

1.4.1 Target species for consideration are:

- Otter.
- Badger.
- Pine marten.
- Red squirrel.
- Water vole.
- Wildcat⁸.

2 METHODOLOGY

2.1 Desk Study

2.1.1 A desk study was undertaken to obtain existing records of protected and notable terrestrial mammals within the site and surrounding area.

2.1.2 Key desk study sources, search areas and information obtained are summarised in **Table 8.2.1**.

2.1.3 Available EIA documentation (based on updated terrestrial mammal surveys carried out from April 2020 to September 2020) for the proposed Strath Tirry Wind Farm application (20/05067/FUL)⁹ which is currently in planning has also been reviewed. The Strath Tirry Wind Farm site is approximately 3.6 km south-west of the turbine area, and is adjacent to the access area.

⁴ <https://www.nature.scot/doc/standing-advice-planning-consultations-red-squirrels> (Accessed 10th November 2021).

⁵ <https://www.nature.scot/doc/standing-advice-planning-consultations-water-voles> (Accessed 10th November 2021).

⁶ <https://www.nature.scot/doc/standing-advice-planning-consultations-wildcats> (Accessed 10th November 2021).

⁷ <https://www.nature.scot/doc/general-pre-application-and-scoping-advice-onshore-wind-farms> (Accessed 10th November 2021).

⁸ The nearest wildcat priority area is “Strathpeffer”, which is approximately 40 km to the south. As a precaution, wildcat has been included as a target species.

⁹ <https://wam.highland.gov.uk/wam/applicationDetails.do?activeTab=documents&keyVal=QLJ6KUIHIDP00> (Accessed 10th November 2021).

Table 8.2.1: Desk study sources.

Key Source	Information Sought	Search Area
SiteLink ¹⁰	Proximity to statutory designated sites for nature conservation with protected/notable terrestrial mammal interests.	Within 10 km of the turbine area.
Highland Biological Recording Group (HBRG)	Existing records of protected and notable terrestrial mammal species and non-statutory designated sites.	Within 2 km of the turbine area.
Scottish Squirrels ¹¹	Existing records of red squirrels.	Within 2 km of the turbine area.

2.2 Field Survey

- 2.2.1 The Phase 1 habitat survey undertaken on 9th July 2020 (see Appendix 8.1: Habitats) was extended to include a systematic search of areas out to at least 100 m of the turbine area as access allowed, in order to identify signs indicating the presence or potential presence of terrestrial mammals as detailed in **Table 8.2.2**. A targeted terrestrial mammal walkover survey was then carried out on 25th and 26th August 2020 where a systematic search of the turbine area, plus a 100 m buffer (the ‘study area’), was undertaken.
- 2.2.2 The study area was extended to accessible areas within 200 m of the turbine area for otter and wildcat, and 250 m, as access allows, for pine marten in accordance with NatureScot guidance (2021a, 2021c and 2021f).
- 2.2.3 On 1st November 2021, a walkover survey was undertaken of the access area where a systematic search for the evidence of terrestrial mammals within areas out to 20 m either side of the track was undertaken.
- 2.2.4 As such, the ‘study area’ referred to within this Technical Appendix is the turbine area plus survey buffers defined above, and the access area.
- 2.2.5 Surveys were undertaken during weather conditions conducive to the survey of terrestrial mammals.

Table 8.2.2: Walkover survey methods.

Species	Method
Otter	The walkover survey sought to identify field evidence indicative of otter presence along watercourse stretches within the study area including spraints, paw prints, paths, slides, food remains, potential holts and other places used for shelter.
Badger	The walkover survey sought to identify field evidence indicative of badger within the study area including setts, mammal runs, paw prints, hair, snuffle holes, scratching posts and latrines. As the majority of the study area comprised open moorland habitats, typically unfavourable for badger sett creation and foraging,

¹⁰ <https://sitelink.nature.scot/home> (Accessed June 2021).

¹¹ <https://scottishsquirrels.org.uk/squirrel-sightings/> (Accessed 10th November 2021).

Species	Method
	search effort focused on linear habitat features, grassland habitats and woodland pockets.
Pine marten	<p>Pine martens are primarily found in woodland habitats, including conifer plantations. They will also venture into open habitats to hunt, particularly if prey is abundant. Dens are typically made in hollow trees, amongst rocks and boulders or in disused bird nests or squirrel dreys. A search was therefore made for potential den sites within woodland habitats and rocky outcrops within the study area.</p> <p>Pine martens can be territorial and will leave scats on tracks and notable features to mark their territory such as rocks, tree stumps, and intersections with linear features such as watercourses, fences and woodland edges. An examination of suitable features within the study area was therefore also made for potential pine marten scats.</p>
Red squirrel	The walkover survey sought to identify feeding signs and/or the presence of dreys within woodland in study area.
Water vole	The walkover survey sought to identify field evidence indicative of water vole presence along watercourse stretches within the study area including potential burrows, droppings, latrines, feeding stations, lawns, paw prints and sightings.
Wildcat	<p>Wildcats are mainly found along woodland edge and in mosaic habitats where there is woodland, scrub, rough grassland and moorland. They avoid high mountain areas. Features, including boulders, tree hollows, tree roots and dense scrub offer suitable locations for den sites, and burrows created by other species may also be used.</p> <p>The walkover survey sought to identify any potential den sites, and other signs, such as faeces, paw prints and sightings were also searched for.</p>

2.2.6 All field surveys have been completed by M. Wood who is a competent field ecologist and has considerable experience in the survey and identification of field signs of protected and notable terrestrial mammal species in Scotland.

2.3 Limitations

2.3.1 No limitations were encountered during the surveys.

3 RESULTS

3.1 Desk Study

3.1.1 This section provides details of existing records of protected and notable terrestrial mammal species identified within and in proximity to the site from desk study sources listed in **Table 8.2.1**.

Designated Sites for Nature Conservation

3.1.2 In review of Sitelink the site does not form a part of any statutory designated site for nature conservation.

3.1.3 **Table 8.2.3** provides a summary of statutory designated sites with qualifying terrestrial mammal interest located within 10 km of the turbine area and should be read with reference to **Figure 8.1**.

Table 8.2.3: Statutory designated sites for nature conservation.

SAC: Special Area of Conservation.

Designated Site	Distance and Direction from the Turbine Area	Qualifying Interests
Caithness and Sutherland Peatlands SAC	8.3km, east	Otter.

Non-statutory Designated Sites for Nature Conservation

- 3.1.4 The data request submitted to the HBRG identifies that the study area does not form part of any non-statutory designated sites for nature conservation with terrestrial mammal interests.
- 3.1.5 In further review of non-statutory designated sites, the study area is also not located within 2 km of any such site with terrestrial mammal interests.

Existing Terrestrial Mammal Records

HBRG

- 3.1.6 The data request submitted to the HBRG returned three records of protected and notable terrestrial mammal species from within the desk study search area (as defined in **Table 8.2.1**). Note, given the limited number of desk study records returned, records were not limited to post-2010, and those prior to 2010 were also regarded.
- 3.1.7 **Table 8.2.4** provides details of these records, and the locations of the records are shown in **Figure 8.4**.

Table 8.2.4: Desk study records from HBRG.

Species	Date	Grid Reference	Notes
Water vole	2009	NC 612 143	Remains of more than one water vole on a knoll. Considered to be a raptor plucking post.
Water vole	2009	NC 6013	No further details, other than the location being Dalchork Forest.
Water vole	2011	NC 6325 1645	Signs were burrows, droppings and feeding remains.

Scottish Squirrels

- 3.1.8 There are no red squirrel records within the desk study search area. The nearest red squirrel reported was >20 km from the turbine area, near the village of Golspie.

Strath Tirry Wind Farm Application

- 3.1.9 The terrestrial mammal surveys for the Strath Tirry Wind Farm carried out in 2020, reported evidence of otter (spraint principally associated with the Feith Osdail watercourse and a potential couch site) and pine marten (several scats). Exact locations of these records are not disclosed. Surveys found no evidence of badger, water vole or wildcat.

3.2 Field Surveys

3.2.1 Evidence of water vole was recorded at three locations within the study area, and details are provided of these records in **Table 8.2.5** and are shown in **Figure 8.5**. Photographs of evidence of water vole recorded are shown in **Annex 2**.

Table 8.2.5: Results of field surveys in 2020-21.

Species	Date	Grid Reference	Notes
Water vole	2020	NC 6089 1831	Droppings and runs through vegetation along a small watercourse in the north-west of the turbine area.
Water vole	2020	NC 60554 18709	Droppings and runs through vegetation along a small watercourse in the north-west of the turbine area, approximately 500 m from the water vole evidence at NC 6089 1831.
Water vole	2021	NC 58306 14066	Water vole seen, and droppings and burrow by a water-filled ditch, along the access area.

3.2.2 No evidence of any other protected and notable terrestrial mammal species was recorded.

3.2.3 However, the watercourses (particularly the River Brora and Allt nan Con-uisge) have potential to support foraging and commuting otter, particularly given the presence of otter in close proximity to the study area (from surveys which informed the Strath Tirry Wind Farm application).

3.2.4 Given the isolation from other suitable woodland habitats, disturbance (extensive clear-felling) of the forestry adjacent to the study area, and lack of desk study records, red squirrel are considered unlikely to be present. The possibility of pine marten using forestry adjacent to the study area cannot be entirely discounted, particularly given the presence of the species in close proximity to the study area (from surveys which informed the Strath Tirry Wind Farm application).

3.2.5 The exposed, open moorland/bog that covers the turbine area is considered sub-optimal for badgers, and no records of badger were reported from desk study sources. The species is therefore considered unlikely to use the study area.

3.2.6 Wildcat are considered to be absent from the study area, with a lack of suitable den sites (and lack of records from desk study sources).

4 REFERENCES

NatureScot (2020) *General pre-application/ scoping advice for onshore wind farms.*

NatureScot (2021a). *Standing Advice for Planning Consultations – Otters.*

NatureScot (2021b). *Standing Advice for Planning Consultations – Badgers.*

NatureScot (2021c). *Standing Advice for Planning Consultations – Pine martens.*

NatureScot (2021d). *Standing Advice for Planning Consultations – Red squirrels.*

NatureScot (2021e). *Standing Advice for Planning Consultations - Water voles.*



NatureScot (2021f). *Standing Advice for Planning Consultations – Wildcats.*

ANNEX 1 - SCIENTIFIC TERRESTRIAL MAMMAL NAMES

Table A1.1 provides common and scientific names of terrestrial mammal species regarded in this Technical Appendix.

Common name	Scientific name
Otter	<i>Lutra lutra</i>
Water vole	<i>Arvicola amphibius</i>
Pine marten	<i>Martes martes</i>
Wildcat	<i>Felis silvestris</i>
Badger	<i>Meles meles</i>
Red squirrel	<i>Sciurus vulgaris</i>

ANNEX 2 - PHOTOGRAPHS

Photo	Description
 A close-up photograph of a muddy area with scattered water vole droppings. The droppings are small, dark, cylindrical pellets. The surrounding vegetation includes brown reeds and green grasses.	<p>Photo 1</p> <p>Water vole droppings at NC 58306 14066.</p>
 A photograph showing a hand holding a green plant stem next to a dark, circular burrow in the ground. The burrow is surrounded by soil and some dry reeds. The hand is positioned on the left side of the frame.	<p>Photo 2</p> <p>Water vole burrow at NC 58306 14066.</p>