Environmental Impact Assessment Report

Teindland Wind Farm

Volume 3

TA A6.2: Protected Mammal Survey

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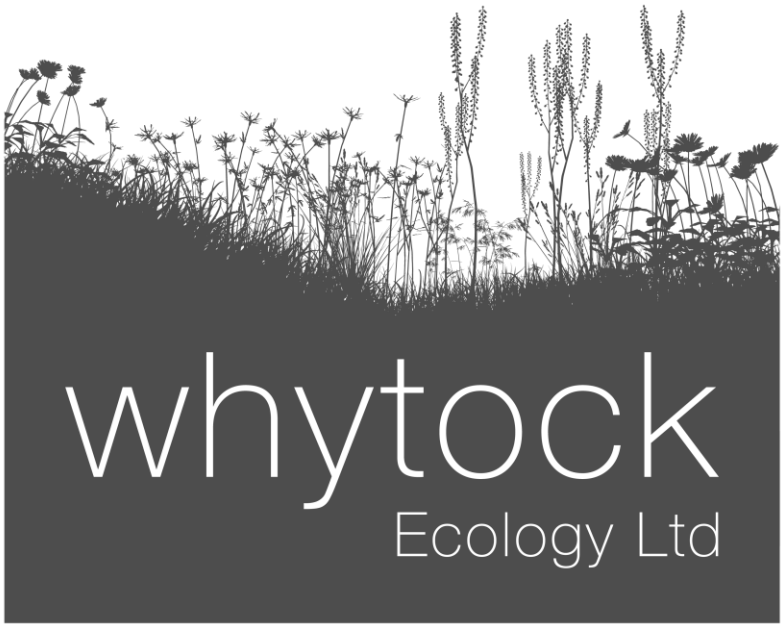
Technical Appendix A6.2: Protected mammal survey



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Introduction

The proposed Teindland wind farm is located approximately 10km to the south east of Elgin, Scotland (grid reference: NJ 293 541). A protected mammal survey has been carried out to inform the planning and design stages of the proposed development. The site, including a 50m buffer for all protected mammals was surveyed except for otters, where the survey buffer was 200m. The survey area is dominated by plantation forestry but also contains a variety of acid flushes and smaller amounts of native woodland and scrub communities. The site boundary and survey area can be seen in Figure 1.

Protected species survey methods

The protected species surveys were carried out over five days between the 12th and the 16th of August 2024. The methods for surveying each species are outlined below.

Otter

Survey methodology for otters followed guidance provided by The New Rivers and Wildlife Handbook (RSPB et al., 1995), Chanin (2003) "Monitoring the Otter" and Liles (2003) "Conserving Otter Breeding Sites". The site was searched for all areas of suitable habitat and any signs of otter activity, all of which were recorded. Field signs for otters include:

- Spraints
- Couches (lying-up areas)
- Holts (permanent places of rest and shelter)
- Feeding remains
- Footprints
- Slides

Where otter spraint are recorded, they were classed into an age category based on the following characteristics:

- **Fresh** – Moist, strong smell and deposited within a few days prior to the survey
- **Recent** – Dried, but intact. Likely deposited within a week or two prior to survey
- **Old** – Dried, fragmented and lacking distinct form. Usually deposited greater than two weeks prior to survey.

Red squirrel

Red squirrels were searched for throughout the site using methods detailed in Gurnell *et al.,* (2009). In brief, areas of suitable habitat were identified and were subsequently searched for observations, dreys, feeding signs and droppings.

Water vole

As water vole is a protected species, all signs of presence including burrows, tracks, footprints or droppings were searched for to show presence/absence of the site and its surroundings following Strachan *et al.,* (2011). These signs were searched for in suitable habitat, mainly at the sides of streams and any watercourses, particularly those which showed adequate foraging and burrowing opportunities.

Badger

Both badgers and their setts are protected under the Protection of Badgers Act 1992 as amended by the Wildlife and Natural Environment (Scotland) Act 2011. Badgers were surveyed for throughout

the site following standard methodology (Harris *et al.*, 1989), this included searching for setts, latrines, tracks, footprints, snuffle holes and hair. All signs were recorded with a GPS and a grid reference taken. Pictures were also taken and any information relating to the species activity and indicators of recent use.

Table 1: Badger sett classification

Sett type	Description
Main	Often contains several entrances, large spoil heaps and lots of signs of recent and regular use.
Annexe	Often located within c. 150m of a main sett with paths connecting them. Annexe setts can contain multiple holes but fewer in number than mains setts. Signs of regular use.
Subsidiary	Often four or less entrances and located and signs show irregular use
Outlier	Comprises one or two entrances which lack clear connectivity to other setts. Used infrequently and can show few or old signs of use.

Pine marten

Pine marten survey methods were carried out in accordance with best practice guidance (Cresswell, 2012 and NatureScot, 2025a). The survey aimed to assess habitat suitability to support populations of pine marten. Suitable habitat included mature woodland and rocky crevices. Where suitable habitat was recorded, evidence of pine marten was searched for including feeding remains, scat, footprints, and dens. Suitable habitats were surveyed for evidence of pine marten by walking linear routes. Pine marten surveys also focused on access tracks and forest rides which can be frequently used by pine marten and where scats are most commonly found (Cresswell, 2012).

Wildcat

Survey methods for wildcats followed NatureScot Guidance (NatureScot, 2025b). These propose a hierarchical approach starting with a walkover survey to establish whether there are potential den sites within the Study Area. The walkover survey focused on searching for wildcat signs in woodland, stream banks, rocky habitats, rabbit warrens and areas of scrub.

Other notable species

A watching brief for other species of note was observed throughout all protected species surveys. This included but was not limited to, viviparous/common lizard *Zootoca vivipara*, adder *Vipera berus* and wood ants.

Limitations

The surveys were carried out at an optimal time of year, as such there are no significant limitations with regard to survey timings. As the survey area is dominated by plantation coniferous woodland, areas deemed to be unsafe such as areas of windfall or dense woodland could not be surveyed.

Protected species survey results

The protected species survey area is dominated by coniferous woodland plantation. There is a full range of age structures and conditions throughout including mature, immature and areas of felled woodland. Open areas were largely restricted to the buffer areas, though small pockets of wetland, and forestry tracks and clearings were scattered throughout. Protected species results are shown in Figure 2.

Otter

Watercourses were widely recorded throughout the survey area. They were rather uniform in nature throughout being either small (<2m wide) or medium (<4m wide) in size on steep to moderately inclined slopes covered in woodland. Steeper ravines are often dominated by native tree species or woodland. Watercourses not confined to steep ravines were predominantly surrounded by coniferous commercial forestry plantations.

Due to the watercourses being small to moderate in size, with slow flow and little volume, most watercourses are considered sub-optimal for permanent territories for otter within the survey area. Furthermore, they also offer limited potential for foraging opportunities for the species.

Evidence of otter was recorded where watercourses were slightly larger in size and contained some greater potential for foraging. This was in two locations; details are provided in table 2 below.

Table 2: Otter evidence recorded within survey area

Sign	Description	Grid reference
Spraint	Old - single dried fragmented spraint on large boulder at edge of watercourse	NJ2739952391
Footprint	Two footprints recorded in wet sand just under bridge.	NJ2958257163

No temporary or permanent places of rest were recorded within the survey area. Due to the low levels of evidence recorded and the overall unsuitability of the habitats within the survey area, it is considered that otters are likely to use watercourses within the survey area as transitory routes or occasional foraging sites.

Red squirrel

No sightings of red squirrel were recorded during the present surveys. Red squirrel feeding signs were recorded in three locations which were widely distributed throughout the survey area. As much of the survey area is coniferous woodland, suitable habitat is abundant. Suitable areas are largely confined to mature stands of Scot's pine where tree density is moderately low which provides a more natural ground cover to support diversity.

One possible old drey was located in the south of the survey area, however it could not be confirmed. Given the location of the site and the overall suitability of the habitats within it, red squirrel are considered resident within the survey area.

Recorded evidence of red squirrel found within the survey area can be found in table 3 below.

Table 3: Recorded evidence of red squirrel

Sign	Description	Grid reference
Feeding remains	Stripped cones found on forest floor	NJ3017153040
Feeding remains	Stripped cones found on forest floor	NJ3078154137
Feeding remains	Stripped cones found on forest floor	NJ2869155367
Drey	One possible old drey in semi-mature Scot's pine tree	NJ2999453166

Water vole

No suitable habitat for water vole was found within the survey area. Watercourses were predominantly located in dense coniferous forestry with shallow water or were steep and rocky in nature. There were also very few rush species, which is an important food source for the water vole in Scotland. Some sub-optimal areas were also found within the buffer zone in the west, however these were densely vegetated and too wet to provide suitable refuge in periods of spate.

No evidence of water vole was recorded during the present surveys.

Badger

For confidentiality purposes, field survey results for badger are discussed in Technical Appendix 6.3.

Pine marten

The habitat within the survey area provides optimal suitability to support breeding populations of pine marten. As the coniferous woodland is of plantation origin, there is a lack of mature trees that contain large cavities or crevices suitable for dens. This may be one of the limiting factors for breeding success within the survey area. Felled, or immature stands of woodland were not suitable for dens but will likely provide suitable foraging opportunities.

Suitable prey will be most abundant where mature stands of Scot's pine are found at low to moderate density with a diverse ground flora.

Evidence of pine marten was recorded in three locations throughout the survey area, details have been provided in table 5 below. All evidence was of scats on forestry roads (a particular trait for the species). No dens were recorded but they may well be present and not discovered where stands of woodland were dense or difficult to access.

Table 4: Recorded evidence of pine marten

Sign	Description	Grid reference
Scat	Intact scat on forestry track	NJ2823553393
Scat	Intact scat on forestry track	NJ2978853931
Scat	Intact scat on forestry track	NJ2999555361

Wildcat

No evidence, signs or sightings of wildcat were observed during the surveys. On the whole, the site is largely unsuitable for the species due to a lack of suitable places of rest. This is due to the dense plantations with few open areas, a lack of prey availability and shallow topography with few features suitable for natal dens or places of rest. Woodland with a more open structure close to woodland edges or clearings are preferred, and do exist in some areas such as in the north west of the survey area where the forestry borders farmland or to a lesser extent around the Cushley burn in the east of the survey area.

Other species

Several hairy wood-ant *Formica lugubris* nests were recorded within the survey area. These were located on sunny, south-facing bankings at the edge of forestry tracks or on south facing slopes at the western edge of the site boundary.

While hairy wood ant is not legally protected, it is good practice to avoid deliberately harming wood ants and their nests as they play an important role within woodland ecosystems.

The locations of all hairy wood-ant nests are provided in table 6 below.

Table 5: Recorded evidence of hairy wood-ants

Sign	Description	Grid reference
Nest	hairy wood ant nest	NJ2740153816
Nest	hairy wood ant nest	NJ2720754288
Nest	hairy wood ant nest	NJ2719754192
Nest	hairy wood ant nest	NJ2752653781
Nest	hairy wood ant nest	NJ2753753778
Nest	hairy wood ant nest	NJ2950653693
Nest	hairy wood ant nest	NJ2822653625
Nest	hairy wood ant nest	NJ2736253838

Recommendations

Otter

No specific mitigation for otter are necessary as no places of rest were found. Good practice involves pre-construction surveys 200m from any watercourses where infrastructure is proposed or construction activities are planned. Exclusion zones for any breeding holts or shelters should be 200m (down to 100m depending on the planned activities). There should be an exclusion zone of 30m where non-breeding places of rest are recorded.

Red squirrel

No specific recommendations for red squirrel are necessary unless disturbance of the identified drey is possible. A buffer of 50m should be applied to avoid disturbance during the breeding season (February to September inclusive) or a 5m buffer outwith the breeding season. If construction activities mean that avoiding disturbance or destruction of the drey is not possible, a NatureScot license will be required and suitable mitigation measures put in place, specific to the planned activities.

Prior to felling of any woodland, a pre-construction survey should be carried out by a suitably trained ecologist within the proposed area to check for dreys in all suitable habitat.

Pine marten

No specific mitigation for pine marten are necessary as no places of rest were found. Pre-construction surveys in all areas of suitable habitat should be carried out.

Badger

Mitigation will be required if any infrastructure or construction activity is likely to disturb or destroy badger or their resting place.

Specific measures include:

- Exclusion zone of 30m from any sett entrance
- A NatureScot license will be required if works need to take place within 30m of a badger sett entrance (or 100m for piling or blasting works).
- Avoid disturbance during breeding season (1 December to 30 June)

Due to the dense nature of the coniferous woodland, pre-enabling works/construction surveys for the species will be required surrounding proposed infrastructure.

Water vole

No specific mitigation for water vole as no suitable habitat was recorded. However, it is recommended that pre-construction surveys keep a watching brief for the species in all areas of suitable habitat.

Hairy wood-ant

Avoid direct disturbance of nest site where possible. Implement a 2m exclusion buffer surrounding identified nests. If unavoidable, translocation may be appropriate depending on suitable donor locations and proposed impact to the nest.

General mitigation measures

- Cap exposed pipe systems when contractors are off site, and cover or provide exit ramps from exposed trenches or holes, to prevent animals becoming trapped.
- A toolbox talk should be provided to all site personnel to provide information relating to onsite species, and appropriate actions in the event they come across them.
- Ensure standard pollution prevention measures are in place
- Pre-construction surveys should be carried out for all protected species by a suitably trained ecologist where infrastructure or felling is proposed.

Summary

Protected mammal surveys were carried out at the proposed Teindland wind farm in Summer 2024 by Rory Whytock ACIEEM. The survey area is dominated by commercial forestry plantations, acid/neutral flushes and a small number of native woodland and scrub communities.

Evidence of badger was recorded widely throughout the survey area, with active setts recorded in the north east. For confidentiality purposes, specific details relating to badger evidence have been provided in Technical Appendix 6.4 which supports this document.

Red squirrel signs were widely recorded throughout, though no sightings of the species were observed. One possible drey was identified, though could not be confirmed.

Otter signs were recorded within the survey area however they were sparsely distributed at very low frequency. Many of the watercourses are sub-optimal for the species as they are too small and have few suitable foraging opportunities.

Pine marten evidence was widely distributed throughout the survey area, with much of the habitat being suitable for the species.

The habitats on site are largely unsuitable for water vole and wildcat. No evidence of presence was noted in the present surveys for either species.

Hairy wood ants were noted anecdotally, though once noted, searched for on a more thorough basis. Though not a protected species, it is recommended that direct impacts are avoided and a two-meter exclusion zone around nests is recommended.

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