Volume 3C
Protected Species Survey Report 2020

1. Introduction

1.1 Background

1.1.1 Wood Plc have been commissioned by ScottishPower Renewables to undertake protected mammal surveys including otter (*Lutra lutra*), water vole (*Arvicola amphibius*) and badger (*Meles meles*) in relation the Whitelee Windfarm Extension – Solar PV, Green Hydrogen Production and Battery Storage Facilities' ('the Project'), immediately west of Whitelee Wind Farm located at Eaglesham Moor and within the administrative boundary of East Ayrshire ('the Site').

1.3 Relevant Legislation and Guidance

Otter

1.2.1 Otters are classed as European Protected Species (EPS) and are fully protected under Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended in Scotland). It is therefore an offence to deliberately or recklessly:

- Kill, injure, capture or harass an otter.
- Disturb an otter whilst it is occupying a holt (underground den) or other place it uses for shelter or protection, or while it is rearing or otherwise caring for its young, or in any way that impairs its ability to survive or breed, or significantly affects the local distribution or abundance of otters.
- Obstruct access to an otter breeding site or resting place, or otherwise prevent their use.

1.2.2 And whether or not deliberate or reckless:

- To damage or destroy an otter breeding site or resting place. This means that if otters could be affected in these ways by a development, and no action is taken to prevent it, an offence may be committed.

Water vole

1.2.3 The water vole receives partial protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended in Scotland). This legal protection is currently restricted to the water vole's places of shelter or protection and doesn't extend to the animal itself. It is therefore an offence to intentionally or recklessly:

- Damage, destroy or obstruct access to any structure or place that water voles use for shelter or protection.
- Disturb a water vole while it is using any such place of shelter or protection.

1.2.4 Knowingly causing or permitting any of the above acts to be carried out is also an offence.

1.2.5 In certain circumstances, the Wildlife and Natural Environment (WANE) [Scotland] Act 2011 permits derogation of disturbance and/or destruction of water vole places of shelter by NatureScot for development purposes.

1.2.6 A licence may be granted to enable activities that would otherwise be an offence in relation to water voles and their burrows. However, granting of such a licence would be subject to:

- The conduct authorised by the Licence will give rise to, or contribute towards the achievement of, a significant social, economic or environmental benefit.
- No other satisfactory solution.

Badger

1.2.7 Badgers are fully protected under the Protection of Badgers Act 1992 amended by the Wildlife and Natural Environment (Scotland) Act 2011, which makes it offence to:

- Take, injure or kill and badger.
- Possess or cruelly ill-treat a badger.
- Interfere with a badger sett.
- Sell and possess a live badger.
- Mark and ring a badger.

1.2.8 Interfering with a badger sett includes:

- Damaging or destroying a set or any part of it.
- Obstructing access to a sett.
- Disturbing a badger whilst it is in a sett.
- Causing or allowing a dog to enter a badger sett.

1.2.9 Should such actions be undertaken, despite having no intention to do so, they would still be considered an offence.

1.2.10 The 1992 Protection of Badgers Act defines a badger sett as "any structure or place which displays signs indicating current use by a badger". A sett in an occupied territory is therefore classified as being in current use even if it is only used seasonally or occasionally by badgers, and it is afforded the same protection as an inhabited sett.

1.2.11 Badger are a common and widespread species whose protection is owing to past persecution rather than current rarity. Badgers are mentioned in several habitat action plans within the Ayrshire LBAP[1] and are widespread in Ayrshire with East Ayrshire holding a moderate population, perhaps 100 social groups, mainly dispersed over lowland eastern farmland and woodland, Ian Hutchinson/Scottish Badgers (pers. comm).

[1] https://www.east-ayrshire.gov.uk/Resources/PDF/P/Planning-SoE-Chapter-3-Ecology-&-Nature-Conservation.pdf

1.3 Methodology

1.3.1 A survey of the Site and 200m buffer was undertaken on 24-25 September 2020; and 25-26 November 2020.

Field Survey Methodology

Otter Surveys

1.3.3 The survey comprised a walkover assessment of all water features, associated banks, and up to 20m from bank tops within the developable area and associated 200m buffer (**Figure 3C6.1**, Volume 3C of EIA Report). This comprised the following watercourses within the northern area: Collorybog Burn, Drumtree Water and tributary of Drumtree Water; and stretches of the following watercourses within the southern area: Howe Burn, Pochweer Burn, Dunton Water, unnamed watercourses and Rough Hill Burn.

1.3.4 During the otter survey, all areas of potentially suitable otter habitat were inspected for field signs indicating the presence of the species, as well as features that may be used as resting sites. The location of each field sign was recorded using a Global Positioning System (GPS) and documented on a field recording sheet. Field signs were recorded by type, location, condition, and age. Otter field signs are described in Chanin (2003)[2] and Kruuk (2006)[3] and include resting sites (couches and/or holts), spraints, prints and feeding remains. Descriptions of these and other field evidence terms are described below.

- Holt – an underground feature where otters shelter and rest. These features can be in the form of tunnels along the edge of riverbanks, underneath tree root plates or heather root matrices, underneath boulder piles, and even man-made structures such as drains or embankments.
- Couch – These are typically above ground resting sites that can be used for sleeping or grooming. They can be located on the banks of watercourses, ponds or lochans, and are occasionally found further inland in thick vegetation or reed beds. Rolling places, where the otter dries and grooms its fur after leaving the water, may also be used as couches. Couches can be difficult to find and are best identified by the presence of other field signs, such as spraints. For ease of description, couches have been categorised into the following categories within this report.
- Couch (covered) – Resting sites providing cover from above, however lack a distinct underground tunnel system, e.g., below overhanging peat turves.
- Couch (open) - Resting sites that do not provide overhead cover, such as lying out sites in rushes or heather.
- Spraints: These are otter faeces, which are often located on prominent features within the channel or river bank, such as in-stream boulders. They may also be located both outside or inside the entrance to holts or couches. Spraints are typically identified by their distinct aromas and presence of fish remains.
- Resting Site – collective term for holts and couches used in the Habitats Regulations.

[2] Chanin P (2003). Ecology of the European Otter. Conserving Natura 2000 Rivers, Ecology Series No. 10. English Nature, Peterborough.
[3] Kruuk, H. (2006). Otters- Ecology, Behaviour and Conservation. Oxford University Press, New York.

- Feeding signs: This includes the remains of prey, which can be located at favoured feeding areas. Remains of fish and skinned amphibians, such as frogs, can indicate the presence of otter.
- Prints: Otters have unique footprints, often located in soft mud, silt or sand banks.
- Paths: These are routes that otters use to traverse across land, often between watercourses and resting places.
- Play areas/ slides: These are located in areas where otters travel down a steep, often grassy, bank, sliding down on their tummy.

1.3.4 Features that surveyors considered to support suitable habitat potential as resting sites, but where clear signs were lacking, were recorded as 'potential resting sites' and categorised as above.

Water vole Surveys

1.3.4 A water vole survey was undertaken alongside the otter survey, following the standard methodology described in the Water Vole Conservation Handbook (Strachan and Moorhouse 2006). Water vole surveys focussed on the riparian zone and up to 20m from the water's edge on all suitable watercourses within the site and up to 100m beyond the development area, where access was available.

1.3.4 Water vole survey involved searching for field signs such as prints, faeces/latrines, feeding stations, burrows, nests, and runways in vegetation.

Badger Surveys

1.3.4 Badger survey was based on methods described in Scottish Badgers (2018)[4], which involved searching for field signs including setts, badger faeces in dung pits, evidence of foraging, badger paths, hair and footprints. The survey included all field boundaries, watercourses, paths and other linear features within the Site and an additional 200m buffer.

1.3.4 Habitat was assessed in terms of its overall value by taking into account the number of and quality of habitat features of importance to badgers as well as those habitat features which are of importance to the viability of individual groups.

1.4 Field Survey Results

Otters

1.4.2 The otter survey identified evidence of otter activity along several watercourses within the Study Area (comprising the developable area and 200m buffer). The locations of all recorded field signs are presented in **Figure 3C6.1** of Volume 3C of the EIA Report; and further details including grid references and a detailed description are provided in Table C-A.1 (Annex A – Target notes).

1.4.3 Evidence of otter activity was recorded along a number of watercourses within the study area, including Drumtee Water, Collorybog Burn and Dunton Water (**Figure 3C6.2**, Volume 3C of EIA Report). Field signs observed comprised spraints, the greatest density which were recorded along the Drumtee Water and Dunton Water. Few signs were recorded away from the watercourses and immediate riparian zone.

[4] Scottish Badgers (2018). Surveying for Badgers: Good Practice Guidelines.

1.4.12 Two potential resting sites were recorded, one on the Dunton Water, and the other along Rough Hill Burn. Further details are presented in Annex A (Table C-A.1) and locations are presented on **Figure 3C6.2** of Volume 3C of the EIA Report.

Water vole

1.4.13 No water vole signs were recorded within the Study Area (comprising the developable area and 50m buffer).

1.4.13 Sections of all six of the watercourses present (upstream parts of Drumtee Water and Collorybog Burn, tributary of Drumtee Water, Soutors Burn and Greenfield Burn) contained suitable water vole habitat, with very low disturbance levels, abundant reed, sedge, herb and rush species, suitable bank substrates and shallow slow-flowing sections of water.

Badgers

1.4.13 No evidence of badger was recorded within the Study Area (comprising the developable area and 50m buffer) during the survey.

1.4.13 The soils present within the study area are generally poorly drained and are inherently of sub-optimal suitability for setting due to the likelihood of them becoming waterlogged. The plantation woodland areas adjacent to the Study Area was not surveyed in detail but, given the nature of the terrain and the soils, they are considered unlikely to support badger setts.

1.4.13 Forested areas and in the main expanses of open ground are assessed as low quality habitats in terms of badger foraging. Higher quality foraging habitat was generally restricted to the semi-improved and improved grassland habitats shown on **Figure 3B6.1** of Volume 3B of the EIA Report. It is assessed that due to the reduced foraging opportunities any badgers using this environment would be likely to live in smaller social groups and forage over very extensive areas, and as a consequence leave few field signs. Thus, areas within the study area, where no field signs were recorded, may be part of such extensive territories used for low-level foraging.

Annex A
Field Survey Target Notes

Table C-A.1 Otter field signs

TN	Field Sign	OS Grid Reference	Comments
1	Spraint	NS 50702 46998	Dry/intact
2	Spraint	NS 50839 46955	Dry/intact
3	Fallen tree	NS 50900 46926	Fallen tree over stream, no evidence of occupation
4	Fallen tree	NS 51099 47001	Fallen tree over stream, no evidence of occupation
5	Spraint	NS 50707 47485	Dry/intact
6	Spraint	NS 51225 47038	Dry/intact and jelly
7	Spraint	NS 51192 47030	Dry/intact
8	Spraint	NS 50147 46695	Fresh/intact
9	Spraint	NS 49977 46518	Dry/intact
10	Spraint	NS 51530 45298	Dry/intact
11	Spraint	NS 51678 45318	Fresh/intact
12	Potential resting site	NS 51763 45324	Run from watercourse to potential layup amongst tree roots and branches of conifer.
13	Spraint	NS 51851 45348	Dry/intact
14	Spraint	NS 51893 45355	Dry/intact
15	Spraint	NS 52143 45380	Dry/intact
16	Spraint	NS 52154 45378	Dry/intact
17	Slide	NS 52177 45378	Run/slide leading from reservoir to watercourse down southern bank from plantation
18	Potential resting site	NS 54977 45074	Potential layup within stunted conifers adjacent to stream

Annex B
Photos

Photo 1: Otter potential resting site under conifer (TN 18)

Photo 2: Otter potential resting site under young conifers (TN 18)

Photo 3: Otter potential resting site (TN 12)