

Appendix 6.3: Protected Species Survey Report

EDF Energy Renewables Ltd

Appendix 6.3: Protected Species Report Dunside Wind Farm

Final report

Prepared by LUC

June 2023



EDF Energy Renewables Ltd

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Project Number
 11838

Version	Status	Prepared	Checked	Approved	Date
1.	Draft for internal review	K. Watson	H. Embleton	S. Jackson-Matthews	01.03.2023
2.	For client/legal review			L. McGowan	09.05.2023
3.	Client/legal review			Legal	15.05.2023
4.	Final	K. Watson	H. Embleton	S. Jackson-Matthews	22.05.2023

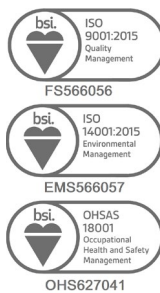
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Introduction

1.1 This appendix details the methods and results of the protected species surveys (except bats and badgers) undertaken to inform the Environmental Impact Assessment (EIA) of the proposed Dunside Wind Farm (hereafter referred to as the 'Proposed Development').

1.2 This report should read in conjunction with **Chapter 6: Ecology** and **Chapter 7: Ornithology** of the Environmental Impact Assessment (EIA) Report and the following Appendices:

1.3 This appendix supports the EIA in addition to the following EIA Report Appendices:

- **Appendix 6.1:** Desk Study and Legal Context.
- **Appendix 6.2:** Habitats and Vegetation (including National Vegetation Classification) Survey Report.
- **Appendix 6.4:** Bat Survey Report.
- **Appendix 6.5:** Badger Survey Report (Confidential).
- **Appendix 6.6:** Outline Restoration and Enhancement Plan (OREP).
- **Appendix 6.7:** Shadow Habitat Regulations Assessment.
- **Appendix 6.8:** Peat Condition Assessment.

1.4 This appendix is supported by the following figures:

- **EIA Report Figure 6.1:** Ecology Survey Area.
- **EIA Report Figure 6.6:** Protected Species Plan.
- **Appendix A:** Photographs.

Scope

1.5 LUC was appointed by EDF Energy Renewables Ltd to complete a suite of ecological surveys, including protected species surveys, to inform an EIA of the Proposed Development.

1.6 In March 2022 LUC submitted a Scoping Report¹ (on behalf of the Applicant) as a means of agreeing the full scope of surveys relevant to the EIA. This included undertaking a suite of protected species surveys as described below within the Study Area between April 2022 and September 2022.

1.7 Avian species are outwith the scope of this report and assessed in **Chapter 7: Ornithology** of the EIA Report.

Site Overview

1.8 The Site is located within the Lammermuir Hills, within the administrative boundary of Scottish Borders Council. The northern Site boundary is also the boundary between the Scottish Borders and East Lothian. The Site is approximately 6 km north of the settlement of Westruther and 7 km to the west of the settlement of Longformacus (to the nearest indicative turbine location).

1.9 The Site consists of a varied topographic setting of heavily managed moorland dominated by heather, with numerous river valleys, steep sloping hillsides and gently sloping hilltop areas which predominately drain into the Dye Water catchment (a tributary of the River Tweed). The Dye Water flows to the east through the centre of the Site and joins the Whiteadder Water downstream of the Site. Notable hills within the Site include: Meikle Law (468 m AOD) in the north-west; Byreclough Ridge (440

¹ LUC (2022) Dunside Wind Farm Project. Environmental Impact Assessment – Scoping Report Ecology

m AOD) in the north, Dunside Hill (437 m AOD) in the south-east, and Wedder Lairs (486 m AOD) in the west. The main land uses are sheep grazing and moorland managed for grouse shooting with the adjacent land to the north-west used for renewable energy production (the operational Fallago Rig Wind Farm).

1.10 The majority of the habitats within the Site have been influenced to varying extents by grazing pressure, recent and historical burning and artificial drainage. The Proposed Development is described in greater detail within **Chapter 3: Development Description** within the EIA Report.

Terminology and Study Areas

1.11 The following terminology will be used throughout this Technical Appendix:

■ Site

- All land within the red line boundary (as shown in **EIA Report Figure 6.1**).

■ Proposed Development

- The whole physical process involved in the construction, operation and decommissioning of a Wind Farm at the Dunside Site (i.e. not associated with a particular piece of land).
- Comprises a windfarm of up to 15 turbines wind farm and associated infrastructure. A detailed description of the Proposed Development is included **Chapter 3**).

■ Study Area

- The Study Area for protected species is defined as the red line boundary plus the appropriate buffer, in line with good practice guidelines. The Study Area is illustrated in **EIA Report Figure 6.1**.

Scope

1.12 The following species surveys were undertaken between April 2022 and September 2022:

- Otter
- Water vole

1.13 The Scoping Report also identified the potential requirement for pine marten, red squirrel, reptiles and great crested newt surveys. The Phase 1 habitat survey (See **EIA Report Appendix 6.2**) undertaken did not identify suitable habitats for great-crested newts, therefore these were scoped out. The habitats within the Study Area were suitable for reptiles and the assumption was made that these species were likely to be present at low levels. Standard mitigation measures have been adopted within the project to safeguard the species; therefore further survey was not required. Due to the lack of suitable woodland habitat within the Site, pine marten and red squirrel are considered unlikely to be present and further survey was not required.

1.14 Ornithology is outwith the scope of this report as this is assessed separately in **Chapter 7: Ornithology** of the Environmental Statement.

1.15 In addition, Phase 1 habitat survey and National Vegetation Classification surveys were also undertaken, the findings of these are provided in **EIA Report Appendix 6.2** and **Appendix 6.3**.

Methodology

Desk Study

2.1 A desk study was undertaken to inform protected species surveys. An account of the methodologies adopted, and findings, is provided in **Appendix 6.1: Legislation Context and Desk Study**, which also sets out the legislative provisions afforded to protected species.

Field Study

2.2 All protected species surveys were undertaken between April 2022 and September 2022.

2.3 Surveys were completed during accepted survey seasons, in appropriate weather conditions, and by experienced and, where necessary, licenced field ecologists. All survey data was collected on GIS-enabled field tablets to increase accuracy and facilitate robust interpretation.

2.4 All survey data was collected on GIS-enabled field tablets to increase accuracy and facilitate robust interpretation. Where field evidence was recorded, photographs (referred to as 'Images' within this Appendix) were taken for post-survey analysis. Images are presented in **Appendix A**.

2.5 Surveys sought to identify suitable habitat for, and, where appropriate, direct evidence of, protected species. Suitable habitat was considered to include opportunities for shelter/protection, habitation/rest, foraging and commuting. All surveys followed good practice methods as detailed below.

Otter

2.6 An otter survey was undertaken on all watercourses located within the Study Area in accordance with recognised best practice². Ecologists searched for evidence of suitable habitat for, and direct evidence of, otter. Watercourses were categorised into four suitability classifications based on a variety of characteristics including wet width, water depth, suitable foraging resources, suitable resting sites, and connectivity to suitable habitats. Descriptions of suitability categories are provided in **Table 2.1**.

Table 2.1: Water Course Suitability for Otter

Suitability	Description
Optimal	Typically larger, main watercourses (at least 1 m in wet width). These watercourses contain flow at all times of year (not just in spate) and will support foraging resources (such as amphibians and fish). Rocky banksides or vegetation overhangs will provide suitable resting places, and large boulders will provide ideal sprainting sites.
Sub-optimal	Generally a substantial watercourse, greater than 0.5 m in width. These watercourses will comprise stone and rock substrate, with occasional boulders. There may be limited resting opportunities, however, vegetation overhangs and occasional rocky crevices may be present.
Suitable	These watercourses may be sporadically used by otter, with connectivity to optimal or sub-optimal watercourses. The watercourses themselves will typically be no wider than 0.5 m, with a relatively shallow flow of water. Substrate may comprise stone and earth, and banksides may comprise grassland

² NatureScot (2016). Protected Species Advice for Developers: Otters [Online]. Available at: <https://www.nature.scot/sites/default/files/2018-09/Species%20Planning%20Advice%20-%20otter.pdf>. [Accessed February 2023].

Suitability	Description
Unsuitable	Generally will be a narrow channel, which may contain very little water. The channel may be very densely vegetated with limited suitability to support otter foraging resources.

2.7 Where resting sites were recorded, these were assessed for their potential to be used as a breeding or natal site. Resting sites were classified in accordance with descriptions detailed in **Table 2.2**.

Table 2.2: Otter Resting Site Classifications

Resting Site Type	Description
Natal Holt	A discreet holt site that is used by a bitch to birth cubs, where they will normally remain for up to three months, before being moved to a secondary holt. These sites are seldom located during surveys and they are rarely recorded without the aid of camera traps. It is generally accepted that most natal holts will contain bedding material and sprainting activity is minimal whilst occupied.
Holt	A cavity or hole on or adjacent to a watercourse. It may be in the ground, under tree roots, within rocks or caves; where it cannot be readily observed. If a holt is confirmed as active it usually contains field evidence such as spraint.
Hover	A bolt hole or ledge that provides temporary cover or a place to eat prey. It is not fully enclosed, and the back of the feature can normally be observed. There may be spraints, footprints and feeding evidence present.
Couch	An above-ground shelter normally used for lying-up and grooming. They may take the form of a depression in tall vegetation or may be covered in a vegetated grass 'roof'.
Breeding Site	An area of land in which otters breed. The site may be large, and it is usually more important to protect this site than an individual natal holt.

2.8 The assessment of resting site status was determined by the quality of the feature and the ability to provide key requirements for otters. This included cover and seclusion for an individual to sleep or rest, the provision of nursery or breeding habitat (including potential for natal holt), the supply of critical factors such as feeding resources (ponds, lochs and water features), freshwater for cleaning and drinking, and the provision of suitable seclusion away from disturbance.

2.9 This assessment was subjective and corroborated by the abundance of field evidence located in, or around, the features. Diagnostic evidence (such as spraints, urination "green" spots, spraint mounds, sign heaps, grooming hollows, footprints, paths, and slides) was interpreted to determine the status of the feature.

2.10 Where spraint was recorded, it was allocated an age class in accordance with the following descriptions:

- Fresh: The spraint is still very moist and pungent and was likely to have been deposited within the last few hours or days.
- Recent: The spraint has become decayed but retains consistency and some odour. It is dry and colour is more faded. It is likely to have been deposited within the last week or two.
- Old: The spraint is desiccated and powdery having lost its shape and most odours. Usually remains are still evident and identifiable, usually by the abundance of fish-bone or scales. It is likely to have been deposited approximately a month ago (sometimes longer).

Water Vole

2.11 Surveys for suitable habitat for, and direct evidence of, water vole undertaken, following good practice survey methods³. Surveys were completed by competent field ecologists and all suitable watercourses and waterbodies within the Study Area were visited.

³ Strachan, R., Moorhouse, T. and Gelling, M. (2011). Water Vole Conservation Handbook. Third Edition. Wildlife Conservation Research Unit, Oxford.

2.12 Watercourses were classified for their suitability to support water vole depending on a variety of characteristics including bankside composition, substrate, water flow rate and bankside vegetation. Descriptions of watercourse suitability categories are detailed in **Table 2.3** below.

Table 2.3: Water Course Suitability for Water Voles

Suitability	Description
Optimal	These watercourses will typically have a very slow flow rate and will comprise peaty bankside and substrate. Banksides will also comprise tussocky vegetation, including rushes (a common food source of water vole). The watercourses will generally be deep to enable predatory escape.
Sub-Optimal	Typically, these watercourses will have a relatively slow flow rate. Banksides may be peaty but may not be very steep, therefore not allowing burrows to account for varying water levels. Rushes will be present, providing foraging resource.
Suitable	Banksides may comprise earth allowing for some burrowing. Herbaceous vegetation will generally be lacking, and invertebrates, amphibians and fish will be sparse. Flow rate will be slow to moderate; however, watercourse may comprise rocky substrate.
Unsuitable	Watercourses will comprise rock and stone substrate and banksides. The flow rate will be moderate or fast flowing and rushes will be absent from bankside vegetation.

2.13 Where watercourses were considered suitable, these were surveyed with the aim of identifying and recording presence of water vole. Ecologists searched for evidence of suitable habitat for, and direct evidence of water voles as follows:

- Burrows and tunnel systems.
- Runs, tracks and slides.
- Latrines (with droppings categorised as fresh, recent, or old).
- Feeding stations and remains.
- Physical sightings.

2.14 All survey evidence was collected and recorded using GIS-enabled field tablets for accuracy. Where appropriate field evidence was photographed for later analysis.

Other Observations

2.15 While surveys for other species were not specifically undertaken, incidental observations of other species were made, particularly where legislation protections were relevant. For example, ad-hoc sightings of reptiles, and amphibians were noted on GIS-enabled field tablets. Mountain hare were also recorded if field signs were identified across the Study Area.

Constraints and Limitations

2.16 All ecological surveys represent a snap-shot in time. Habitats and species assemblages are dynamic and change over time in response to a range of variables. Data presented in this report should not be considered a long-term interpretation of ecological data and should not be relied upon as such. Methods adopted within this report represent current good practice, but the data collected cannot be used to confirm the absence of a species from the Study Area. Faunal and floral assemblages are dynamic and can change over short periods of time. To that end, the Study Area's suitability to support protected species is considered, in addition to direct searches for evidence.

2.17 All surveys aimed to avoid periods directly following heavy rainfall, particularly for otter and water vole. This was to minimise the risk of surveying areas where evidence had been washed away and to reduce the health and safety risk of these surveys. Whilst weather conditions were generally optimal, occasional rainfall was unavoidable. It is considered unlikely that this rainfall will have caused a significant reduction in evidence being present and therefore is not considered to have had a negative effect on the assessment.

Baseline and Discussion

3.1 Detailed descriptions of protected species activity are provided in the following sections.

3.2 The habitats within the Study Area are generally broadly similar to those within the wider area. While the Study Area provides optimal conditions, and low levels of protected species evidence was identified, it should be recognised that a much wider habitat resource is available and that it, too, is likely to support similar populations of protected species.

3.3 When considering the data provided below, reference should be made to the following figures which are available at the end of this report:

- **EIA Report Figure 6.1:** Study Area.
- **EIA Report Figure 6.6:** Protected Species Survey Findings.
- **Appendix A:** Photographs showing examples of suitable habitats for protected species within the Study Area.

Otter

3.4 There are a number of watercourses and drainage ditches within the Study Area. The water courses and drainage channels within the Study Area generally provide suitable sheltering, commuting and foraging resources for otters. Dye Water flows through the centre of the Study Area, with several tributaries all feeding into the watercourse. This tributary is designated as part of the River Tweed SAC and qualifies for otter.

3.5 Three temporary resting up sites were identified along Dye Water and spraint was identified in a total of 36 points within the central section of the Study Area. No resting places were identified within the section of the River Tweed SAC that lies within the Study Area, however spraint was recorded at **Sites G, H and I** within the SAC as described in **Table 3.1**.

3.6 Field signs have been grouped by location, a summary provided in **Table 3.1**, **Figure 6.6** shows these locations.

Table 3.1: Otter Survey Results

Field Sign and Location	Context and Description
Hover	<ul style="list-style-type: none"> ■ Hover on bank of water under old stone wall. Spraints were recorded on rocks, area likely to flood and extends less than 0.5 m. ■ Image 5, Appendix A ■ Hover along water in sheltered area under overhanging bank, with spraint recorded on rocks, likely to flood. ■ Image 7, Appendix A ■ Hover on bank of water under overhanging heather. Spraints were recorded on banking, area likely to flood and extends less than 0.5 m. ■ Image 8, Appendix A
Spraint (Various locations) See Appendix A, Photo 5-7	<ul style="list-style-type: none"> ■ Bogan Grain water course – one spraint on rock ■ Dye Water Site A – four spraint within 100 m at western boundary. ■ Dye Water Site B – six spraint along 200 m stretch of water. ■ Dye Water Site C – three spraint along 300 m stretch of water.

Field Sign and Location	Context and Description
	<ul style="list-style-type: none"> ■ Dye Water Site D – sprainting site with multiple spraints under bracken on flat rock by water. Spraint nearby on rock. ■ Dye Water Site E – spraint sites on rock in water ■ Dye Water Site F – various spraint sites on rocks in water. ■ Dye Water Site G – various spraint sites along water within 100 m. ■ Dye Water Site H – three spraint sites on rocks and under old wall within 200 m. ■ Dye Water Site I – eight spraint along water to east of site. ■ Dye Water Site J – two spraint sites on rock near Byreclough farm buildings. ■ Dye Water Site K – three spraint along water near Byreclough house. ■ Kersons Cleugh watercourse – two spraint by water 200 m apart.

3.7 The Study Area supported relatively limited evidence of otter. Crucially, the only evidence of resting sites was limited to a low status hover feature. This suggests that while the Study Area forms part of an otter population, it is unlikely to form a core territorial area, and therefore is unlikely to be of importance to breeding.

Water Vole

3.8 No signs for water vole were identified during surveys. The Study Area supported few areas of suitable habitat for sheltering and foraging water voles, along tributaries of Dye Water. Small tributaries that connected to Dye Water provided suitable habitat in the form of slow flowing water courses and grassy banks that are suitable for feeding and burrowing sites due to the steep sided banks and lush vegetation⁴. Other water courses within the Study Area lacked overhanging vegetation to provide sheltered commuting and foraging resources and were very shallow with rocky substrates that were unsuitable for sheltering resources (i.e. burrows) for water voles. (See Photos in **Appendix A**)

Other Observations

3.9 There were multiple incidental sightings of other mammals and reptiles across the Study Area during field surveyed:

- 46 mountain hare sightings were recorded predominantly across the Study Area.
- Two stoat sightings were recorded to the south of the Study Area.
- Ten sightings of common lizard were recorded in various locations; and
- Two sightings of adder were identified.

3.10 Further information is provided in **Figure 6.6** and **Appendix A, Photo 4 and 8**.

Discussion

3.11 Otter field signs were recorded on the across the watercourse within the Study Area, in the form of spraints of varying ages. A single temporary resting site and nine sprainting sites were recorded along the Dye Water within the Study Area. This suggests that the Dye Water is being used by otter for foraging and commuting, the east section of the Dye Water within the Study Area is also within the River Tweed SAC. Bogan Grain and Kersons Cleugh water courses also recorded low levels of field evidence of otters, however no resting places were recorded. This suggests that the Dye Water and to a lesser extent the Bogan Grain and Kersons Cleugh are being used on a sporadic basis by otter for foraging and commuting. The lack of sheltering places recorded within the Study Area indicates that although it is being used by otter, it is unlikely that this area is a core part of the breeding territory of the species.

⁴ Strachan, R., Moorhouse, T. and Gelling, M. (2011). Water Vole Conservation Handbook. Third Edition. Wildlife Conservation Research Unit, Oxford.

3.12 Dye Water Bogan Grain and Kersons Cleugh water courses are all tributaries of the River Tweed SAC which is designated for otter. Therefore, it is likely that Otter are travelling upstream from on the River Tweed SAC to forage. A series of precautionary mitigation and enhancement has been recommended to safeguard and improve habitats for otter and the qualifying features of the River Tweed SAC. Details are provided below in **Table 3.2**.

Precautionary Mitigation

3.13 A series of species-specific mitigation measures set out in **Table 3.2**. These measures represent a combination of standard, well-rehearsed techniques and measures specifically designed for the development.

Table 3.2: Protected Species - Precautionary Mitigation and Enhancement

Ecological Feature	Specific Mitigation and Enhancement
Site Wide Mitigation Measures	<ul style="list-style-type: none"> ■ Preparation of Species Protection Plans as appropriate for pre-construction and construction phases, as part of the project's wider CEMP (including appropriate pollution prevention measures). The Species Protection Plans should set out measures to protect all species covered by legislation in the UK. ■ Presence of an Environmental Clerk of Works (ECoW) during all operations to provide ongoing support and monitoring. The ECoW role should be developed in accordance with current good practice guideline.
Site Wide Enhancement	<ul style="list-style-type: none"> ■ Riparian woodland/ shrub habits will be introduced to the river corridors of the Watch Water and Dye Water (and their tributaries) to improve habitat connectivity to the wider landscape. Further details are included within the Outline Restoration and Enhancement Plan for the Site.
Otter	<ul style="list-style-type: none"> ■ Pre-construction surveys, no more than six months prior to felling, to identify changes in baseline. ■ 50 m buffer zone around watercourses to safeguard commuting routes and shelter places of otter. ■ Species licensing route where surveys suggest presence of resting sites. ■ Sensitive timing of works when otters are likely to be most active (i.e. sunrise and sunset). ■ Toolbox talks for all site contractors.
Common lizard and adder	<ul style="list-style-type: none"> ■ Finger-tip vegetation to clear animals from areas of optimal reptile habitat immediately prior to vegetation is to be cleared. ■ Toolbox talks for all site contractors.

Conclusion

3.14 The Study Area supported low levels of field evidence of sheltering and foraging otter and reptiles. Although the Study Area is likely to be part of territories for these species, it is unlikely to form important core territories to support breeding. The Study Area is well connected to similar habitats in the wider landscape. A series of standard mitigation measures have been adopted as part of the Proposed Development to safeguard legal compliance in relation to protected species and to avoid and protect water courses.

Appendix A

Photography

Site Photographs



Image 1: Dye Water



Image 2: Kersons Cleugh



Image 3: Grassland Habitats Suitable for Common Lizard



Image 4: Adder recorded near Dye Water

Photography

Appendix 6.3: Protected Species Report
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Image 5: Otter spraint and hover along Dye Water



Image 6: Otter spraint site under banking



Image 7: Otter spraint on rocks and potential hover location



Image 8: Hover on bank of water under overhanging heather

Photography

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Image 8: Stoat recorded near Wood Cleugh