**Appendix 8.3: Protected Species Survey Report** 



## **Loch Liath Wind Farm Ltd**

# **Loch Liath Wind Farm** EIA

**Appendix 8.3: Protected Species Survey Report** 

Final report

Prepared by LUC April 2023

Bristol Edinburgh Glasgow London Manchester

landuse.co.uk

Land Use Consultants Ltd Registered in England Registered number 2549296 Registered office: 250 Waterloo Road London SE1 8RD

100% recycled paper

Landscape Design Strategic Planning & Assessment Development Planning Urban Design & Masterplanning **Environmental Impact Assessment** Landscape Planning & Assessment Landscape Management Ecology Historic Environment GIS & Visualisation















## Loch Liath Wind Farm Ltd

**Loch Liath Wind Farm EIA** 

**Appendix 8.3: Protected Species Survey Report** 

Project Number 11057

Version	Status	Prepared	Checked	Approved	Date
1.	Final Draft	LUC	LUC	LUC	12.04.2023

Bristol Edinburgh Glasgow London Manchester

landuse.co.uk

Land Use Consultants Ltd Registered in England Registered number 2549296 Registered office: 250 Waterloo Road London SE1 8RD

100% recycled paper

Landscape Design Strategic Planning & Assessment Development Planning Urban Design & Masterplanning **Environmental Impact Assessment** Landscape Planning & Assessment Landscape Management Ecology Historic Environment GIS & Visualisation













## **Appendix 8.3**

## **Protected Species Survey Report**

## Introduction

**1.1** This Appendix details the full methods and results of the protected species surveys undertaken to inform the Ecological Impact Assessment (EcIA) of the proposed Loch Liath Wind Farm (hereafter referred to as the 'Proposed Development'). The EcIA is provided in **Chapter 8: Ecology** of the Environmental Impact Assessment Report (EIA Report).

## **Supporting Documents**

- **1.2** This Appendix supports the EcIA in addition to the following Appendices:
- Appendix 8.1: Desk Study and Legal Context;
- Appendix 8.2: Habitats and Vegetation Survey Report;
- Appendix 8.4: Bat Survey Report; and
- Appendix 8.5: Outline Restoration and Enhancement Plan.
- 1.3 This Appendix is supported by the following figures which can be found the EIA Report:
- Figure 8.1: Ecology Study Area; and
- Figure 8.6a-b: Protected Species Survey Results.

## **Terminology**

- **1.4** The following terminology will be used throughout this Appendix:
- Site
  - All land within the red line boundary (as shown in Figure 8.1).

## Proposed Development

- The physical process involved in the development of the land at Loch Liath Wind Farm including construction and operation
  of an up to 13 turbine wind farm and ancillary infrastructure (described in detail in **Chapter 4: Project Description** of the
  EIA Report).
- Developable Area
  - The area where the turbines are proposed to be sited (including all associated infrastructure).
- Ecology Survey Area (ESA)
  - The area within the red-line boundary in which all ecology surveys were undertaken in 2020 and 2021 in line with good practice guidelines for all ecological features surveyed. For protected species this comprised the location of the turbines plus a buffer up to the red line boundary, as shown in **Figure 8.1**.
- Access Survey Area (ASA)
  - The area within the red line boundary in which ecological survey was undertaken along the Bhlaraidh Wind Farm existing access track. This is defined at its southern end as the junction with the A887 in Glen Moriston, and at its northern end as the location at which the existing track ends and new track is proposed, as shown in Figure 8.1.

## <sup>1</sup> LUC (2020). Loch Liath Wind Farm: EIA Scoping Report.

## Scope

- 1.5 In December 2020 LUC submitted a Scoping Report<sup>1</sup> on behalf of the Loch Liath Wind Farm Ltd ('the Applicant') as a means of agreeing the full scope of surveys with relevant consultees to inform the EclA. In their scoping response, NatureScot agreed with the protected species surveys proposed. No additional comments pertinent to protected species were received.
- **1.6** Surveys for the following species were undertaken:
- Otter:
- Scottish wildcat:
- Badger;
- Red squirrel;
- Pine marten:
- Water vole; and
- Bats.
- 1.7 Bat surveys, including methods, findings, and interpretation of results, are addressed separately in Appendix 8.4.
- 1.8 Reference should be made to Chapter 8: Ornithology for details of ornithological survey and assessment.

## **Methods**

## **Desk Study**

**1.9** A desk study was undertaken to inform the protected species surveys. An account of the methods adopted, and findings, is provided in **Appendix 8.1**, which also sets out the legislative provisions afforded to protected species. As such, the desk study is not discussed further in this Appendix.

## Field Surveys

## Overview

- 1.10 Protected species surveys of the ESA and ASA were largely undertaken in June to August 2020, and April to June 2021, while targeted wildcat surveys were undertaken in February to July 2020 and September to November 2020. Surveys were completed during accepted survey seasons, in appropriate weather conditions, and by experienced field ecologists. The turbine layout at the time of surveys extended up to 26 turbines (the EIA scoping layout). The survey was based on the footprint, oversail and anticipated land take of the 26 turbine layout, which extended over a wider area north and east than the 13 turbine layout of the Proposed Development.
- **1.11** 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 **Annex A** of this Appendix.
- **1.12** 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.

- **1.13** At the time of survey, the access for the Proposed Development had not been confirmed. Survey was therefore undertaken along the Bhlaraidh Wind Farm existing access track (i.e. the ASA). In addition, survey was undertaken along a potential northern access track through Shewglie Wood, and signs noted are presented where relevant to provide a wider context.
- 1.14 Further details relating to specific survey methods are provided below.

## **Baseline Data Collection**

#### Otter

1.15 A survey for otter *Lutra lutra* was undertaken on all watercourses located within the ESA and ASA in accordance with recognised best practice<sup>2</sup>. 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 8.3.1** below.

Table 8.3.1: Watercourse Suitability for Otter

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

- **1.16** Where watercourses were considered suitable to support otter, a detailed survey was undertaken for field signs.
- 1.17 Field signs searched for include:
- Resting sites (as defined in Table 8.3.2);
- Spraint (including age and description: fresh, recent, old);
- Prints, tracks, slides and runs; and
- Feeding remains.

**Table 8.3.2: Otter Resting Site Classifications** 

Restin Site T	_	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.

<sup>&</sup>lt;sup>2</sup> NatureScot (2016). Protected Species Advice for Developers: Otters [Online]. Available at: <a href="https://www.nature.scot/sites/default/files/2018-09/Species%20Planning%20Advice%20-%20otter.pdf">https://www.nature.scot/sites/default/files/2018-09/Species%20Planning%20Advice%20-%20otter.pdf</a>. [Accessed July 2022].

Resting Site Type	Description	
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.	

- **1.18** 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.
- 1.19 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, and
- 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).

## **Scottish Wildcat**

- **1.20** Surveys for Scottish wildcat *Felis silvestris* were undertaken in accordance with best practice<sup>3,4</sup>. The survey area for wildcat differs from the ESA as survey was undertaken over a wider area to reflect the wide-ranging behaviour and low density of this species; full details of the methods and results of the wildcat survey are provided in **Annex B** and a summary is provided below.
- **1.21** Field survey was undertaken in February 2020 by an ecologist experienced in wildcat surveys, and focused on identifying field signs such as potential den sites, scats, scratch marks, prey remains and prints. All field signs identified during the survey were recorded using an iPad running GPS Pro software with the feature of interest target noted and photographed.
- 1.22 Confirming that Scottish wildcat are present from field signs alone is not possible as the signs are indistinguishable to that of feral/domestic cats or hybrids (excluding the use of DNA scat analysis). A programme of camera trapping was therefore undertaken, focusing on key areas of the ESA and its surroundings; the lower lying northern area, including the edge of Shewglie Wood outwith the ESA, was surveyed in March-May 2020, while the southern upland areas were surveyed during May-July 2020.
- 1.23 Camera traps were deployed for a period of six to eight weeks during each of the survey sessions, with six cameras deployed during March-May and five cameras during May-July. Cameras were deployed at a spacing of approximately 1-2 km, with trap placement focusing on locations of high potential while maintaining good overall coverage. At each camera trap station, dead game birds were secured as bait within the field of view of the camera. In addition, a scent lure of valerian root was distributed in front of the camera.
- **1.24** Upon completion of camera trapping, ornithologists identified a single cat print in peat substrate within the central area of the ESA in August 2020. From prints alone it is not possible to confirm whether a cat print belongs to a wildcat, feral or domestic cat.

<sup>&</sup>lt;sup>3</sup> Cresswell, W.J., Birks, J.D.S., Dean, M., Pacheco, M., Trewhella, W.J., Wells, D. and Wray, S. (2012). UK BAP Mammals: Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation. The Mammal Society, Southampton.

<sup>&</sup>lt;sup>4</sup> NatureScot (n.d.). Protected Species Advice for Developers: Wildcat [Online]. Available at <a href="https://www.nature.scot/sites/default/files/2018-09/Species%20Planning%20Advice%20-%20wildcat.pdf">https://www.nature.scot/sites/default/files/2018-09/Species%20Planning%20Advice%20-%20wildcat.pdf</a> [Accessed July 2022].

Appendix 8.3
Protected Species Survey Report
Loch Liath Wind Farm EIA
April 2023

Nonetheless, due to the presence of a print within the Site, an additional period of 'reactive' camera trapping was undertaken. Seven camera traps were deployed during September-November 2020 focussing on the area where the print was identified.

## Badger

- **1.25** A survey for badger *Meles meles* was undertaken in the ESA and ASA in accordance with best practice guidelines<sup>5,6</sup>. Surveys sought to identify suitable habitat for, and direct evidence of, badger. Suitable habitat is considered to be sheltered areas with free-draining soils; normally woodland, scrub or mosaics that incorporate these habitat types. Where suitable habitat was identified, direct evidence was searched for, including:
- Badger setts (as defined in Table 8.3.3);
- Tracks, prints, and paths (including scratched logs and fallen wood);
- Guard hair:
- Latrines and dung pits (categorised as fresh, recent or old);
- Snuffle holes (i.e. surface foraging); and
- Feeding remains.

**Table 8.3.3: Badger Sett Definitions** 

Sett Type	Definition
Main	These usually have a large number of entrances with large spoil heaps. The sett generally looks well used. They may have well used paths to and from the sett and between sett entrances.
Annexe	These usually have a large number of entrances with large spoil heaps. The sett generally looks well used and is connected to the main sett by clear tracks and paths.
Subsidiary	These setts often only have a few entrances and are located at least 50m from a main sett. They are not continuously active and evidence may be limited.
Outlier	These setts may have only one or two entrances with little spoil. Used sporadically, these setts often show little signs of use.

## **Red Squirrel**

**1.26** A survey for red squirrel *Sciurus vulgaris* was undertaken in accordance with best practice guidelines<sup>7,8</sup> to assess suitability of habitats for the species within the ESA and ASA. Suitable habitat includes cone-bearing coniferous plantation woodland located on free-draining soils, with good connectivity to other woodland habitats. Where suitable red squirrel habitat was recorded, searches for foraged cones, dreys and tracks/prints were undertaken.

## **Pine Marten**

- **1.27** A survey for pine marten *Martes martes* was undertaken on all habitats within the ESA and ASA in accordance with best practice guidelines<sup>3,9</sup>. The survey assessed habitats for their suitability to support the species, while searching for indicative field signs such as feeding remains, scat, footprints, and dens.
- **1.28** The survey was undertaken using a systematic approach, where possible. Suitable habitats were surveyed for evidence of pine marten by walking linear routes. Transects generally followed defined wayleaves, firebreaks and access tracks as these are frequently used by pine marten and therefore where indicative field signs are most commonly found.

#### Water Vole

- **1.29** Surveys for water vole *Arvicola amphibius* were undertaken in the ESA to assess the suitability for all watercourses within the ESA to support populations of water vole in accordance with recognised best practice<sup>10</sup>. Ecologists searched for evidence of suitable habitat for, and direct evidence of, water vole.
- **1.30** 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 8.3.4** below.

Table 8.3.4: Watercourse Suitability for Water Vole

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  Watercourses may also be heavily poached by livestock.

- **1.31** Where watercourses were considered suitable, these were surveyed with the aim of identifying and recording presence of water vole. Field signs searched for included:
- Burrows and tunnel systems;
- Runs, tracks and slides:
- Latrines (with droppings categorised as fresh, recent, or old);
- Feeding stations and remains; and
- Physical sightings.

## **Other Observations**

**1.32** 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.

## **Constraints and Limitations**

**1.33** All ecological surveys represent a snapshot of the faunal and floral assemblages of any given site. While surveys provide an overview of the habitats and species present, they cannot be used to determine long-term trends in species and habitat populations or

<sup>&</sup>lt;sup>5</sup> Scottish Badgers (2018). Surveying for Badgers: Good Practice Guidelines. Version 1.

<sup>&</sup>lt;sup>6</sup> NatureScot (n.d.). Protected Species Advice for Developers: Badger [Online]. Available at <a href="https://www.nature.scot/sites/default/files/2018-09/Species%20Planning%20Advice%20-%20Badger\_0.pdf">https://www.nature.scot/sites/default/files/2018-09/Species%20Planning%20Advice%20-%20Badger\_0.pdf</a> [Accessed July 2022].

<sup>7</sup>Gurnell, J., Lurz, P., McDonald, R. and Pepper, H. (2009). Practical Techniques for Surveying and Monitoring Squirrels. Forestry Commission

<sup>[</sup>Online]. Available at: https://cdn.forestresearch.gov.uk/2009/09/fcpn011.pdf [Accessed July 2022].

<sup>&</sup>lt;sup>8</sup> NatureScot (n.d.). Protected Species Advice for Developers: Red Squirrel [Online]. Available at: <a href="https://www.nature.scot/sites/default/files/2018-09/Species%20Planning%20Advice%20-%20red%20squirrel.pdf">https://www.nature.scot/sites/default/files/2018-09/Species%20Planning%20Advice%20-%20red%20squirrel.pdf</a> [Accessed July 2022].

<sup>&</sup>lt;sup>9</sup> NatureScot (n.d.). Protected Species Advice for Developers: Pine Marten [Online]. Available at: <a href="https://www.nature.scot/sites/default/files/2018-09/Species%20Planning%20Advice%20-%20pine%20marten.pdf">https://www.nature.scot/sites/default/files/2018-09/Species%20Planning%20Advice%20-%20pine%20marten.pdf</a> [Accessed July 2022].

<sup>&</sup>lt;sup>10</sup> Strachan, R., Moorhouse, T. and Gelling, M. (2011). Water Vole Conservation Handbook. Third Edition. Wildlife Conservation Research Unit, Oxford.

Appendix 8.3
Protected Species Survey Report
Loch Liath Wind Farm EIA
April 2023

behaviours. Methods adopted within the ESA at Loch Liath Wind Farm represent current good practice but the data collected cannot be used to confirm the absence of a species from the ESA. Faunal and floral assemblages are dynamic and can change over short periods of time. To that end, the suitability of the ESA to support protected species is considered, in addition to direct searches for evidence.

- 1.34 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.
- **1.35** During the final reactive period of wildcat camera trapping, it was not possible to access the Site to check and rebait the camera traps due to regular stalking activity. However, five of the cameras operated for at least three weeks, with two of them operating for the full period of 70 nights. Therefore, given the lack of evidence of wildcat despite the survey effort, this is not considered to be a significant limitation.

## **Baseline**

## **Desk Study**

- 1.36 Historical records identified the presence of otter and red squirrel within 2km of the Site (see **Appendix 8.1**), although none were from within the Site.
- **1.37** In addition, water vole is known to be present within the area having been previously recorded outwith and to the south of the Site during surveys undertaken for the proposed Bhlaraidh Wind Farm Extension Environmental Statement<sup>11</sup>.
- 1.38 The desk study identified two records of otter within 2km of the Site. One of these was outwith to the north of the Site in Glen Urquhart near the Allt Seanabhaile; this watercourse flows north from the Site into the glen. The second record was from the Allt Saigh outwith to the south-east of the Site; this watercourse is part of a different watershed from the lochans and watercourses within the Site, although as it flows into Loch Ness it is hydrologically connected to the Site. The watercourses within the Site are hydrologically connected to Ness Woods Special Area of Conservation (SAC), which is designated for its otter population (see Appendix 8.1).
- **1.39** The desk study identified 25 records of red squirrel within 2km of the Site, none of which were from within the Site. Records were noted to be present in Glen Moriston and Glen Urquhart, outwith to the north and south respectively.

## **Field Study**

## **Habitats Overview**

## **Ecology Survey Area**

- 1.40 The ESA supports a range of different habitat types, with varying degrees of suitability for protected species.
- **1.41** Most of the ESA was noted to comprise an undulating topography of typical upland habitats. Blanket bog was extensive on level and gently-sloping ground, giving way to wet and dry heath on steeper slopes and rocky knolls. Marshy grassland was recorded throughout, often associated with the edges of waterbodies and watercourses. Peat deposits were widespread, with localised pockets of deep peat scattered throughout.
- **1.42** The ESA supports a complex network of lochs, lochans and flowing watercourses, many of which flow through deeply eroded peat channels. The watercourses vary in width and substrate, while the waterbodies vary from unmapped bog pools up to sizeable named lochs; these features also vary in their suitability to support protected species.
- 1.43 More detailed descriptions of the habitats present within the ESA are provided in Appendix 8.2.

#### **Access Survey Area**

**1.44** At the southern end of the ASA, the existing track passes through the woodland of Glen Moriston, with habitats noted to include extents of broadleaved semi-natural woodland and plantation woodland of varying ages and species composition. These occur in mosaic with acid grassland and marshy grassland habitats, with smaller extents of bracken and heath habitats. This mosaic reflects a range of conditions of soil, hydrology, and woodland management. Where the track leaves the mature woodland, the habitats become open and dominated by marshy grassland and heath. The track reaches an elevation of approximately 500m at the southern extent of Bhlaraidh Wind Farm, and at this northern end of the ASA the habitats are a mosaic dominated by wet heath and modified bog.

## **Habitat Suitability and Evidence**

#### Otte

- **1.45** Surveys identified suitable habitat for otter. Many of the larger watercourses within the ESA offer suitable conditions for commuting and foraging, although shelter was more limited in this exposed upland plateau.
- **1.46** No evidence of otter was recorded during the targeted field surveys. However, an incidental recording of otter was made on a wildcat camera trap deployed within the Site on the Allt Seanabhaile during the reactive trapping period (September-November 2020). This record is outwith and to the north of the ESA, although it provides confirmation that the species utilises the habitats within the wider area and so is also likely to pass through the ESA.
- **1.47** Watercourses such as the Allt Seanabhaile and River Coiltie provide potential commuting roues into the ESA. Both of these watercourses have numerous tributaries in their headwaters. The majority of the lochs and lochans within the ESA are connected to one of these two watercourses. The waterbodies themselves offer foraging and bathing opportunities. An example of one of these upland lochs, the southern Loch nam Meur, is shown in **Image 1, Annex A**.
- **1.48** A number of small streams flow through the ASA. No signs of otter were recorded during the survey, although the watercourses have potential to be used by foraging and commuting otter. Signs of otter were noted outwith the ASA on the River Moriston, comprising three old spraints within 200m of the junction of the existing access track with the A887.

## Wildcat

- 1.49 Full details of the results of the wildcat surveys are provided in Annex B.
- **1.50** The field surveys did not record any evidence of wildcat, although features were identified across the ESA and wider Site that had potential to be used by this species should it be present. This included numerous rocky outcrops and boulder fields that supported crevices and cavities with potential to be used for denning. However, there was no evidence to suggest that any of these habitats were in use by wildcat, and no evidence of wildcat (such as scats or feeding remains) was noted during field surveys.
- **1.51** Habitats were identified that may support prey species; this included watercourses and associated riparian habitats and lochs with marginal vegetation, both of which provide potential habitat for small mammals, such as water vole, and birds, such as upland waders. However, there was no significant presence of rabbit *Oryctolagus cuniculus* identified, which is a key prey species, and no brown hares *Lepus europaeus* were observed during the surveys.
- **1.52** No images of cats were recorded on camera traps deployed during the initial survey period (March-July 2020). A single cat print was subsequently identified during ornithological surveys, near Carn an t-Sluic Dhuibh outwith the ESA to the north-east. From prints alone it is not possible to confirm whether a cat print belongs to a wildcat, feral or domestic cat. However, no recordings of wildcat were made during the subsequent reactive camera trapping period which targeted this area.
- 1.53 The wider Site offers some limited suitability to support wildcat. However, the ESA itself is devoid of any significant woodland, and woodland is relatively limited in the surrounding landscape with the exception of Glen Urquhart and Glen Moriston (including some extents of woodland within the ASA) which are some distance from the ESA to the north and south respectively. As such, the ESA occupies an exposed position on high ground between these glens. Although the wider Site does support numerous rocky outcrops and boulder fields offering denning potential, the majority of these are located in exposed locations with low vegetation and limited connectivity to the mosaic of habitat types favoured by wildcat. Prey resources appear to be limited to small mammals and breeding birds. Based on the results of the surveys, the presence of wildcat within the ESA is assessed as being unlikely.

<sup>&</sup>lt;sup>11</sup> SSE Generation Limited (2018) Bhlaraidh Wind Farm Extension Environmental Statement, Volume 2: Main Report, Chapter 5: Ecology,

Appendix 8.3
Protected Species Survey Report
Loch Liath Wind Farm EIA
April 2023

#### Badger

- **1.54** No field signs of badger were recorded during the targeted field surveys. However, a sighting of a badger was made by a surveyor near Loch na Ruighe Duibhe in the centre of the ESA. Details of the sighting are provided in **Table 8.3.5** and **Figure 8.6a-b**.
- **1.55** In addition, there were six incidental recordings of badger from two wildcat camera traps deployed outwith the ESA to the north during the first trapping period (March-May 2020). Both of these cameras were beyond the northern boundary of the ESA on the edge of Shewglie Wood (see **Annex B** for details).
- 1.56 Habitats within the ESA were generally unsuitable to support badger as the ESA is dominated by exposed moorland in which trees are absent. The habitats are open and exposed, and the ground is frequently wet, supporting bog, wet heath and marshy grassland. While these habitats provide some limited foraging potential, for example nests of ground-nesting birds, they do not offer suitable sett-building habitat. Drier heathland habitats on well-drained, rocky slopes may provide some limited potential, for example in cavities within rocky outcrops. However, the ESA is at some distance from more suitable habitat, such as woodland and relatively more lowland agricultural habitats found along the valleys of the River Enrick to the north and River Moriston to the south.
- **1.57** Habitats within the ESA were considered to be of negligible suitability to support badger. Suitable badger habitat (such as improved grassland, arable fields and deciduous woodland) is absent from the ESA. Whilst there is some limited foraging potential on the moorland, it is at significant distance from the extents of more suitable habitat and so it is not likely to be regularly used.
- 1.58 The northern portion of the ASA comprises open-range habitats ranging from drier grassland and heath towards the south, to extents of wet heath and bog at its northern extent. Similar to the ESA, these habitats offer negligible suitability for badger. At lower elevations in the south of the ASA in Glen Moriston, habitats have greater suitability for badger as there is a mosaic of open grassland and heathland habitats, with extents of woodland of varying ages and species composition. However, no signs of badger were recorded within the ASA.

Table 8.3.5: Badger Evidence Recorded within the ESA

Badger Evidence ID	Evidence	National Grid Reference (NGR)	Location	Details
1	Sighting	NH 38473 24106	Near Loch na Ruighe Duibhe	Sighting of a badger running along watercourse towards lochan.

## Red Squirrel

- 1.59 No evidence of red squirrel was recorded in the ESA during targeted field surveys.
- **1.60** Habitats within the ESA had no suitability to support red squirrel due to a lack of woodland cover as exposed moorland habitats dominate.
- **1.61** Foraging signs of red squirrel, in the form of chewed cones, were noted by surveyors during surveys in April and June 2021 in Shewglie Wood outwith the ESA to the north, but due to a lack of trees the ESA itself does not provide the conditions required by red squirrel and the species is assessed to not be present within the ESA.
- 1.62 Woodland habitats are present along the Bhlaraidh Wind Farm existing access track, although these are restricted to the south of the ASA in Glen Moriston. In addition, many areas have been felled in recent years, some of which have been replanted. These woodland habitats therefore comprise a range of types and ages, including plantation woodland of both coniferous and mixed species, with smaller extents of semi-natural broadleaved woodland dominated by mature silver birch *Betula pendula*. Open grassland and heathland habitats are also present. No signs of red squirrel were noted in the ASA during the survey, although desk study records indicate that this species is present within Glen Moriston. Mature woodland habitats recorded in the ASA are considered to provide some suitability, although more recently planted woodland is not yet of sufficient age to be used by red squirrel.

#### **Pine Marten**

- 1.63 No evidence of pine marten was recorded in the ESA during the targeted field surveys. However, there were two incidental recordings of pine marten within the Site from wildcat camera traps deployed outwith the ESA during the reactive trapping period (September-November 2020; see **Annex B** for camera trap locations and results). One of these was deployed near the Allt Seanabhaile north of the ESA, while the second was further east towards Carn an t-Sluic Dhuibhe.
- 1.64 In addition, a further six incidental recordings were made on wildcat camera traps deployed outwith the ESA. Five recordings were made on camera traps on the edge of Shewglie Wood to the north of the ESA (during the first trapping period, March-May 2020). A single recording was made on a camera trap deployed to the south-east of the ESA near the Allt Loch an t-Sionnaich watercourse (during the second trapping period, May-July 2020); this watercourse flows down into Creag-nan-Eun Forest that lines the western side of Loch Ness.
- **1.65** Habitats within the ESA are considered to provide some suitability to support pine marten, and pine marten has been confirmed to be present in the wider Site through incidental recordings on camera traps. The habitats within the ESA are likely to provide some foraging resources, for example nests of ground-nesting birds and small mammals, and there may be cavities offering shelter within rocky outcrops (although no potential denning locations were specifically noted). The ESA is unlikely to provide all of the resource requirements; however, this species can have a very large home range (up to 32 km² for males in upland plantations¹²) and more optimal habitats are present outwith the ESA to the north and south in the form of areas of coniferous plantation forestry¹³.
- 1.66 Habitats within the ASA offer suitability for pine marten, particularly at lower elevations in Glen Moriston where there is a mosaic of habitat types, including woodland of a range of types, ages and species composition, as well as more open grassland and heathland habitats. Towards the northern end of the ASA, the habitats become increasingly dominated by wet heath and bog habitats, similar to those found in the ESA; while these habitats have relatively lower suitability for pine marten compared to the mosaic of habitats in the southern extent of the ASA, this species is known to be present in the wider area and is expected to make use of the open-range habitats.

## Water Vole

- **1.67** The ESA has optimal habitat for water vole, with many of the watercourses within the ESA providing suitable opportunities for shelter and foraging, as well as peaty substrate suitable for burrow excavation. Details of water vole evidence and potential are provided in **Table 8.3.6** and **Figure 8.6a-b**.
- **1.68** Areas of particularly favourable habitat were recorded along tributaries of the River Coiltie in the east of the ESA, on watercourses flowing into and out of the northern Loch nam Meur, and on watercourses flowing north and east into Loch na Ruighe Dhuibhe. Many of these watercourses were tunnelled within the peat beneath the surface vegetation. Where there was surface water, the watercourses were often characterised by extents of slow-moving clean water, with areas of deeper water (pools). Macrophytes were limited within the watercourses, but the adjacent vegetation often comprised rushes (for example soft rush *Juncus effusus*), sedges *Carex* spp. and/or purple moor grass *Molinia caerulea*, thereby providing a plentiful food resource. Peaty banks offer suitable substrate for burrow excavation, and the tussocky bank habitats provide potential nesting habitat and concealment from predators.
- **1.69** Water vole presence was recorded throughout the ESA. The most commonly recorded sign was burrows of a sufficient size to indicate the likely presence of this species. Confirmatory evidence was recorded at many (but not all) locations in the form of feeding remains and latrines. There were several locations at which good potential habitat was recorded and burrows noted, that lacked this confirmatory evidence of recent activity. This is likely to be due to the dynamics of upland water vole populations, which often exist as a metapopulation<sup>14</sup>, such that stochastic (chance) events result in colonies being abandoned (for example due to the flashy nature of upland watercourses following a period of heavy rainfall) and subsequently recolonised.
- **1.70** Where watercourses were tunnelled underneath the peat, this made searching for burrows and signs particularly challenging. In addition, although attempts were made to avoid surveying after heavy rainfall, such events in the uplands can very quickly wash away confirmatory field signs. It was not possible to fully characterise the status of all watercourses with regards to water vole, and in any case colonies can quickly become active or inactive due to metapopulation dynamics of local extinctions and local colonisations<sup>14</sup>.

<sup>&</sup>lt;sup>12</sup> Balharry, D. (1993) Factors Affecting the Distribution and Population Density of Pine Martens (Martes martes) in Scotland. PhD Dissertation. University of Aberdeen. Cited in: Birks, J. D. S. (2002) The Pine Marten. London: The Mammal Society.

<sup>&</sup>lt;sup>13</sup> The Mammal Society (2022). Species – Pine Marten [Online]. Available at: <a href="https://www.mammal.org.uk/species-hub/full-species-hub/discover-mammals/species-pine-marten/">https://www.mammal.org.uk/species-hub/full-species-hub/discover-mammals/species-pine-marten/</a> [Accessed June 2022].

<sup>&</sup>lt;sup>14</sup> Capreolus Wildlife Consultancy (2005). *The ecology and conservation of water voles in upland habitats*. Scottish Natural Heritage Commissioned Report No. 099 (ROAME No. F99AC320).

**1.71** Watercourses within the ASA were not considered to have potential for water vole, being generally fast-flowing and lacking suitable adjacent habitat. No signs of this species were recorded in the ASA.

Table 8.3.6: Water Vole Evidence Recorded within the ESA

Water Vole Evidence ID	Evidence	National Grid Reference (NGR)	Location	Details
1	Burrows, latrines, feeding signs	Approx. NH 39938 24327	On a tributary of the River Coiltie, near Carn an Tuairner.	Over 30 holes of varying sizes. Droppings noted. Also feeding signs in the form of 45° cuts to vegetation. No surface water at the location.
2	Burrows	Approx. NH 38682 25295	On a tributary of the Allt Seanabhaile, on outflow from Loch a' Mhuilinn.	Several holes of correct size for water vole noted, but no confirmatory signs noted. Area lacks the favoured rush vegetation.
3	Burrows	Approx. NH 37881 25389	Small watercourse flowing into Loch a' Mhuilinn from the north.	Approximately 20 holes, but look disused. Area fairly dry. No confirmatory evidence.  Image 2, Annex A
4	Burrows	Approx. NH 38744 25843	Area of marshy grassland near tributary of the Allt Seanabhaile.	Several burrows noted. Water table just underneath ground surface. No confirmatory signs.
5	Burrows	Approx. NH 39481 25404	Watercourse flowing northeast from northern Loch nam Meur.	Several holes present in area of marshy grassland along watercourse. Further burrows downstream to the north in mosaic of marshy grassland and wet heath.
6	Potential, burrows	Approx. NH 39531 25171	On small watercourse leading into the northern Loch nam Meur from the east.	High potential in a low-lying area of wet heath and marshy grassland. Water flows just underneath the ground surface. Four burrows noted. No confirmatory evidence.
7	Burrows, latrines, runs	Approx. NH 38100 22741	On lochans and tributary leading in to Loch na Ruighe Duibhe from the south.	Over ten burrows noted on small lochan, with old droppings and clear runs between burrows. Further burrows and old droppings noted downstream.
				Image 3, Annex A
8	Burrows, latrines	Approx. NH 37528 23366	Area of pools and channels in blanket bog south-west of Loch na Ruighe Duibhe.	Over ten burrows and recent droppings in area of thick grass around small pools.
9	Burrow, latrines, runs	Approx. NH 39728 23467	Watercourse flowing east from southern Loch nam Meur to Loch Aslaich.	Numerous holes observed along bank of small watercourse, with recent droppings and runs evident between holes.
10	Burrows, latrines	Approx. NH 38145 25963	Western tributary of the Allt Seanabhaile .	Burrows on small watercourse, water largely flowing beneath the ground. Fresh droppings noted further downstream in an area of marshy grassland
11	Burrows	Approx. NH 39080 24093	Below western flank of Carn an Tuairneir.	Numerous burrows in low-lying area of bog. No confirmatory evidence. Signs of wash-out as a result of recent heavy rain.
12	Burrows, latrines	Approx. NH 37535 24221	Watercourse flowing east, to the north of Carn na Ruighe Duibhe	Numerous burrows observed on watercourse that channels underground in several locations. Limited numbers of droppings noted.

## **Incidental Sightings**

- **1.72** Scats consistent with those of fox *Vulpes vulpes* were noted within the ESA, and a fox was recorded on a camera trap on the edge of Shewglie Wood, outwith the ESA to the north.
- **1.73** A weasel *Mustela nivalis* was recorded on a camera trap outwith the ESA but on the eastern Site boundary, on a tributary of the River Coiltie during the reactive trapping period (at approximately NH 40433 24649).
- **1.74** No amphibian or reptile species were recorded within the ESA during the field surveys, although the habitats are expected to support common species such as common toad *Bufo bufo*, common frog *Rana temporaria* and common lizard *Zootoca vivipara*, and may support adder *Vipera berus*.
- **1.75** Red deer *Cervus elaphus* were seen within the ESA, including on camera traps, and numerous signs of this species were observed throughout the ESA during the field surveys.
- **1.76** Feral pigs are reported to be present in Glen Moriston, and a recording was made of an individual animal on a camera trap deployed outwith the ESA near Carn na Caorach to the south-east.

## **Discussion and Conclusion**

- 1.77 The ESA provides sheltering habitat and extensive habitat for water vole, with some suitability for commuting and foraging otter.
- **1.78** No otter signs were recorded in the ESA, although a programme of camera trapping (targeted at wildcat) did confirm the presence of this species within the wider Site. No spraints or resting sites were recorded, which suggests that the lochans and watercourses are used at-most on a sporadic basis by foraging and commuting otter. As such, the ESA likely forms a peripheral part of a larger territory, the core of which is either further north (in Glen Urguhart) or west (associated with Loch Ness).
- **1.79** Active water vole colonies were recorded in various locations within the ESA including: on a tributary of the River Coiltie; near Loch na Ruighe Duibhe; on a watercourse flowing towards Loch Aslaich; and on a tributary of the Allt Seanabhaile. Burrows and old droppings were noted in several other locations. This confirms that water vole are using areas of suitable habitat within the ESA, as the vegetation present along the banks provides opportunities for foraging, concealment and protection.
- **1.80** It is likely that patches are being colonised and abandoned according to local factors. Water voles in the uplands exist as metapopulations<sup>14</sup>, and while territories are generally maintained, the structure and location of burrows within those territories are dynamic. There is potential for the resident water vole population to expand and colonise other parts of the ESA, dependent on factors such as breeding success, weather events, and the availability of foraging and burrow resources.
- 1.81 Both pine marten and badger have been confirmed to be present in the wider Site and are likely to exploit habitats within the ESA periodically. However, pine marten relies on a wide range of mature woodland habitats throughout the year (e.g. for foraging and breeding) which are not found within the ESA. In addition, the ESA offers limited sett-building habitat for badger. The population densities of both species are therefore likely to be low within the ESA as the exposed habitats of the higher ground do not offer optimal habitat for either species. Pine marten may occasionally utilise the more open habitats of the higher ground and may utilise rocky cavities scattered throughout the undulating landscape, but there is a mosaic of more suitable habitat in the lower glens to the north, east and south. Similarly, badger may pass occasionally through the open habitats of the ESA but the core of their territory would be expected to be in the higher quality habitats of the lower glens.

## **Annex A: Images**



Annex B: Wildcat Survey Report (Nevis Environmental (2021) Loch Liath Wind Farm, Wildcat Camera Trapping Report)

Appendix 8.3
Protected Species Survey Report
Loch Liath Wind Farm EIA
April 2023

# LOCH LIATH WIND FARM

# WILDCAT CAMERA TRAPPING REPORT

## STATKRAFT UK LTD





## **Nevis Environmental Ltd**

Beauly House Dochfour Business Centre Dochgarroch Inverness IV4 7HT T: +44 (0) 1463 830231

www.nevisenvironmental.com

LOCH LIATH WIND FARM ENVR1141
Wildcat Camera Trapping FEBRUARY 2021

Doc Name	Rev	Details	Author	Checked	Approved
ENVr1141	Α	Initial Issue for comments	J. Bunyan	R.Goddard	A. Blackshaw
	В	Revision for Reactive Trapping		R.Goddard	A. Blackshaw
	С	Final after client comments		R.Goddard	A. Blackshaw
	D	Final after client comments		R.Goddard	A. Blackshaw

Page i

## Confidentiality

This document contains proprietary and confidential information, which is provided on a commercial in confidence basis. It may not be reproduced or provided in any manner to any third party without the consent of Nevis Environmental.

## © Copyright Nevis Environmental

This work and the information contained in it are the copyright of Nevis Environmental. No part of this document may be reprinted or reproduced without the consent of Nevis Environmental.

## **Addressee**

The contents of this report are for the exclusive use of the Client. If other parties choose to rely on the contents of this report they do so at their own risk.

## Disclaimer

Associate - Ecology

Nevis Environmental has performed the consultancy services as described in this report in accordance with a standard of best practice available within the industry. Nevis Environmental do not make any representations or warranty, expressed or otherwise as to the accuracy or completeness of the source data used in this report, and nothing contained herein is, or shall be relied upon, as a promise or representation, whether as to the past or the future in respect of that source data.

This document has been prepared by J. Bunyan
J. Bunyan Ecologist
This report has been checked by
Rebecca Goddard General Manager
This report has been reviewed by
Alistair Blackshaw, BSc. (Hons) MCIEEM

LOCH LIATH WIND FARM ENVR1141
Wildcat Camera Trapping FEBRUARY 2021

## **Contents**

E	ecutive	Summary				
1	Intro	duction				
	1.1	Introduction				
	1.2	Site Location				
	1.3	Development Proposals				
	1.4	Purpose of the Report				
2	Metl	nods				
	2.1	Desk Study				
	2.2	Consultations				
	2.3	Field Survey				
	2.4	Camera Trapping				
	2.5	Limitations				
3	Resu	lts				
	3.1	Desktop Study				
	3.2	Field Sign Surveys				
	3.3	Camera Trap Results				
4	Discu	ussion	. 1			
5	Refe	rences	. 1			
Fi						
	pendix 1 – Overview of Relevant Planning Policy and Legislation					
	ppendix 2 – Target Notes					
	ppendix 3 – Photographs					

Page iii

## **Executive Summary**

Contents	Summary			
Site Location	Nevis Environmental Ltd was commissioned by Statkraft UK ltd to undertake an ecological survey focusing on Scottish wildcat across an area extending to 3,784 ha located on the proposed Loch Liath Windfarm, Balmacaan Estate, north of Loch Ness, Highlands.			
Survey Scope	The survey consisted of desk top studies, field sign surveys and camera trapping.			
Results	Overall the Site was assessed as being suboptimal for Scottish wildcat and very few records for the species within the local environs exist.  V Field sign surveys did not identify any evidence of Scottish wildcat being present			
	within the Site.			
	The Site did support suitable features for denning in the form of boulder scree and craggy outcrops with cavities beneath and between rocks. No signs of these areas being used by Scottish wildcat or any other carnivore was identified.			
	A single animal burrow most consistent with badger was identified within the central area of the Site.			
	▼ The results of the camera trapping confirmed the field sign survey results with no Scottish wildcat being captured. Camera traps located on the periphery of the Site identified the presence of badger, pine marten and wild boar.  The identification of a single cat print by ornithologists on Site after the trapping  The identification of a single cat print by ornithologists on Site after the trapping  The identification of a single cat print by ornithologists on Site after the trapping  The identification of a single cat print by ornithologists on Site after the trapping  The identification of a single cat print by ornithologists on Site after the trapping  The identification of a single cat print by ornithologists on Site after the trapping  The identification of a single cat print by ornithologists on Site after the trapping  The identification of a single cat print by ornithologists on Site after the trapping  The identification of a single cat print by ornithologists on Site after the trapping  The identification of a single cat print by ornithologists on Site after the trapping  The identification of a single cat print by ornithologists on Site after the trapping  The identification of a single cat print by ornithologists on Site after the trapping  The identification of the identification			
	had been completed resulted in a period of reactive camera trapping focussing on the area of the Site around the print. The reactive camera trapping period identified otter (along Allt Seanabhaile) and pine marten within the Site.			
	At present, it is very unlikely that Scottish wildcat are denning within the Site and the species is assessed as being largely absent from the Site. However, due to the highly seasonal habitat use by the species and the presence of a single cat print, the potential for Scottish wildcat to be present in the future, especially during the bird breeding season, cannot be ruled out and a series of recommendations are made.			
Recommendations	Focal preconstruction surveys should be undertaken through field sign surveys and targeted camera trapping at key locations, including watercourses and areas suitable for potential denning.			
	Toolbox talks outlining the ecology and protection of the Scottish wildcat should be provided to construction site operatives.			
	The appointed ECoW should include ongoing watching brief in relation to Scottish wildcat, especially if working within 250m of suitable denning habitats.			
	▼ Disturbance within areas of suitable denning habitat (boulder scree, craggy areas etc.) should be minimised with such features retained as far as practicable.			

**ENVR1141** 

FEBRUARY 2021

## 1 Introduction

**LOCH LIATH WIND FARM** 

**Wildcat Camera Trapping** 

## 1.1 Introduction

Nevis Environmental Ltd was commissioned by Statkraft UK ltd in December 2019 to undertake an ecological survey focusing on Scottish wildcat *Felis silvestris* across an area extending to 3,784ha located north of Loch Ness, Highlands.

Figure 2 of this report should be treated as **strictly confidential** as it contains reference to the nesting locations of bird species listed on Schedule 1 of the Wildlife and Countryside Act (1981).

## 1.2 Site Location

The Site boundary is detailed on Figure 1 and has a site centre of NH 405 243.

The Site consists of predominantly upland habitats, located between the Great Glen and Loch Ness to the south and the Rover Enrick to the north. The area is typified by undulating rocky topography with wet heath habitats dominating. Where ground is flatter in valleys and small plateaus the habitat supports blanket bog. The habitats show signs of extensive deer grazing and swards are generally short.

The altitude across the Site varies from 300 m to 617 m above sea level and many rocky outcrops are present, some with loose boulders and scree. A large number of small lochs are present across the Site with a network of small natural drainage channels. Watercourses drain the area across three catchments with the Allt Seanabhaile forming an upland river draining the northern section of the Site flowing to the north, a number of streams forming the River Coiltie draining the central areas and flowing east, and a number of small streams in the south, flowing south eventually forming the Allt Saigh, which flows into Loch Ness.

Very little woodland cover is present within the Site although an area in the north supports sparse natural regeneration, dominated by birch. Outwith the Site boundary to the north, the habitats are dominated by commercial plantation woodland with areas of former plantation which are subject to some natural regeneration. Outwith the Site, to the south, areas of natural regeneration are also present with commercial woodland located on the lower slopes adjacent to Loch Ness.

Access to the Site is by forestry and estate tracks from the north and also from the south.

## **1.3** Development Proposals

It is understood that a wind energy project is proposed, which although yet to be confirmed, is likely to comprise of up to 26 turbines, located on the western side of the area, which hereafter is referred to as the 'Site' and is detailed on Figure 1.

## 1.4 Purpose of the Report

The objectives of the report are as follows:

- ▼ To document the likely absence from, or presence and distribution within, the site of Scottish wildcat, with the key aim of identifying locations of potential den sites.
- ▼ Furthermore, this report aims to outline potential constraints to the proposed development and likely impacts to the focal species should the works proceed.

LOCH LIATH WIND FARM ENVR1141
Wildcat Camera Trapping FEBRUARY 2021

## 2 Methods

## 2.1 Desk Study

To provide additional contextual information, a number of information sources were used to obtain ecological background information for the survey area. Information on statutory sites was obtained from the website of the statutory agency NatureScot via the "Site Link Portal" (<a href="https://www.nature.scot/information-hub/snhi-data-services">https://www.nature.scot/information-hub/snhi-data-services</a>).

A review of information held on the National Biodiversity Network (NBN) Gateway website (https://data.nbn.org.uk/) was also undertaken to provide contextual background information for the location. In addition, direct communications were undertaken with Wildcat Action and local wildcat experts. Wildcat Action is the official wildcat conservation project delivering the Action Plan involving numerous stakeholders including SNH, Forestry Commission Scotland, Wildlife Conservation Research Unit (Oxford University) and Royal Zoological Society of Scotland.

A review of commercially available (25 cm resolution) aerial imagery was undertaken, to assess any key areas of the site that may support denning or good foraging habitat features such as areas of scree, watercourses, ruined buildings etc. The results of this process was used to aid the design of both field sign surveys and camera trap surveys. Key habitats were identified which included woodland of all types and density, scrub, surface water (lochs and watercourses, buildings and areas of scree/ craggy outcrops.

Furthermore, a review of large scale local developments was undertaken to identify if Scottish wildcat surveys had been completed and the results were reviewed.

## 2.2 Consultations

Consultations were undertaken with NatureScot with respect to the proposed survey methodology prior to commencement of the surveys. NatureScot confirmed (6<sup>th</sup> February 2020) that there are two historical records of Scottish wildcat within the area and detailed that the proposed methodology of habitat assessments, field sign surveys and targeted camera trapping following published methodology (https://www.nature.scot/guidance-wildcat-survey-methods) should be undertaken. NatureScot confirmed via email (6<sup>th</sup> February 2020) that the proposed survey approach was satisfactory and also that use of bait and scent lures was recommended. In addition, it was recommended that camera trap stations should be located within suitable habitat with deployment periods (including movement of cameras) should consist of 60 days.

In addition, an informal consultation with Scottish Wildcat Action was undertaken to ascertain if any new records which may not be publically available yet had been obtained.

## 2.3 Field Survey

The field sign surveys were undertaken by a suitably qualified and experienced ecologist across a number of days and under varying weather conditions in order to capture as much information as possible. The survey details are

outlined in Table 1. Due to the proximity of good quality habitat along the northern boundary of the Site the survey area was extended to include a buffer of 200 m along the northern edge (Figure 1).

The Scottish wildcat survey was undertaken in accordance with the 'General Survey' approach detailed by Cresswell *et al.* (2012) and that detailed by SNH. The survey was undertaken by an ecologist experienced in wildcat surveys and focused on identifying field signs such as potential den sites, scats, scratch marks, prey remains and prints. Confirming that Scottish wildcat are present from field signs alone is not possible as the signs are indistinguishable to that of feral/domestic cats or wildcat x domestic hybrids (excluding the use of DNA scat analysis). As a result, camera trapping is key to any Scottish wildcat survey (see Section 2.3).

It is worth noting that knowledge of the Scottish wildcat remains limited with very few confirmed den sites identified and described. Taking into account the legal protection and threatened nature of the species it is likely that any works which have the potential to impact upon individuals will require robust baseline information and strict mitigation measures.

All field signs identified during the survey were recorded using an iPad running GPS Pro software with the feature of interest target noted and photographed. This data was subsequently managed and presented using QGIS 3.14.15-Pi software.

## 2.4 Camera Trapping

As detailed, to provide robust data for the species camera trapping is a key component to surveys. In the central Highlands, wildcats are thought to be present predominantly in the upland margins for the majority of the year, although recent research suggests that individuals may extend their range up on to more upland habitats during spring, probably to take advantage of prey items associated with the nesting bird season. The site was therefore split into two areas (Figure 2 [confidential]) to focus on the key areas of the site at the most relevant time of year. The slightly lower lying northern area including the woodland edge buffer of 200m was surveyed in February-March 2020 (Session 1), while the southern more upland areas were surveyed during May-July 2020 (Session 2). During the two camera trapping sessions six (Session 1) and five (Session 2) camera traps respectively were deployed across the survey area at a spacing of approximately 1-2 km with trap placement focusing on locations of high potential while maintaining good overall coverage. At each camera trap station, a single camera was erected on an existing feature (tree, fence post etc.) or, where no features are present, on a short timber post. Bait, in the form of dead game birds, was secured to a different existing feature or a second post within the field of view of each camera. In addition to meat bait, a scent lure of valerian root was distributed in front of the camera. Cameras were deployed for a period of six to eight weeks. Approximately midway through this period the cameras were checked, data downloaded, batteries replaced, and the station re-baited.

Exact camera trap locations were chosen based on maximising the likelihood of capturing Scottish wildcat while obtaining a good coverage across suitable habitat.

Two types of camera trap were utilised, Little Acorn 5610 Wide Angle and Browning Dark Ops HD Pro. All cameras were set to capture multiple images and (where possible) capture short video clips after completion of still image capture. The delay between triggers was set to 1 min for all cameras.

LOCH LIATH WIND FARM ENVR1141
Wildcat Camera Trapping FEBRUARY 2021

Camera trap locations are detailed on Figure 2 [confidential]. A capture event was identified as the image capture of an individual (in the case of Scottish wildcat) or species (all other species) within a 10 minute period. Where there was no period of time between images greater than 10 minutes, but individual animals were present for a period greater than 10 minutes with multiple captures, this was still identified as a single capture event.

Upon completion of camera trapping, ornithologists identified a single cat print in peat substrate within the central area of the Site. From prints alone it is not possible to confirm whether a cat print belongs to a wildcat, feral or domestic cat. Nonetheless, due to the presence of a print within the Site an additional period of 'reactive' camera trapping was undertaken, focussing on the area of the Site where the print was identified. The location of the identified print and the locations of the seven deployed reactive camera traps are also detailed on Figure 2 [confidential]. It is worth noting that cameras were deployed for a period of 70 nights although due to the regular use of the Site for stalking, no access to check and rebait cameras was permitted.

**Table 1 Summary of survey periods** 

Dates	Survey Phase
07-10th February 2020	Field Sign Survey
11th March 2020	Deploy Session 1 camera traps, northern area and additional field sign surveys.
30th April 2020	Service Session 1 camera traps, northern area and additional field sign surveys.
15th May 2020	Collect Session 1 camera traps, northern area and additional field sign surveys.
26th May 2020	Deploy Session 2 camera traps, southern area and additional field sign surveys.
24th June 2020	Service Session 2 camera traps, southern area and additional field sign surveys.
16th July 2020	Collect Session 2 camera traps, southern area and additional field sign surveys.
8th September 2020	Reactive Camera Trap Session, focus on central area around location of cat print.
20th November 2020	Collection of Reactive Camera Traps

## 2.5 Limitations

Snow cover prevented access to the site in late February 2020, resulting in the first period of camera trapping being undertaken slightly later than planned. Further delays were experienced in relation to the second deployment of camera traps due to the COVID-19 pandemic. These adjustments to timing are not considered to be significant limitations. Camera trapping for wildcat can be undertaken at any time of year and delays were not significant, with the northern area broadly undertaken during winter weather and the southern area undertaken during spring/summer.

Due to the identification of Annex 1 bird species nesting on Site, an exclusion area extending to a 1 km buffer from the identified nest site was established (see blue circle on Figure 2 [confidential]). No surveys were undertaken within this area at the request of the client, following advice from the site ornithologist, in order to avoid disturbance to the nest site.

As detailed within Section 2.4 cameras deployed during the Reactive Camera Trap Session could not be checked and rebaited as was undertaken within previous camera trap sessions due to the regular use of the Site for stalking. As a result a number of these cameras depleted batteries during the trapping session. In all but one case (due to a visit by otter) stations retained the bait although the condition of the bait deteriorated significantly during this period. Although this approach is likely to reduce the effectiveness of the camera trapping process, it would be expected that if cats were present during this process they would have visited at least one of the camera trap stations. The restriction on checking and rebaiting the cameras is therefore not considered to be a significant limitation to the reactive trapping session.

Taking these factors into account it is assessed that the survey was not subject to any significant limitations although the exclusion area resulted in some landscape features being inaccessible for assessment.

LOCH LIATH WIND FARM ENVR1141
Wildcat Camera Trapping FEBRUARY 2021

## 3 Results

## 3.1 Desktop Study

Scottish Wildcat Survey 2006 - 2008 (Davis & Gray, 2010) details no probable records from the area and the report suggests that records for this section of the Great Glen are unlikely. The resolution of available data through the NBN Atlas is low and as such records cannot be assigned to specific locations but only a single relevant record for Scottish wildcat is present which is identified as a probable sighting from within 10 km of Site in 2011. Consultations with Scottish Wildcat Action revealed that a further record for Scottish wildcat (but currently unverified) is known from 2019 located approximately 3.5 km north west of the Site.

Environmental Impact Assessments detailing ecological surveys were available for five wind farm applications within 15 km of the Site (excluding distal side of Loch Ness). All of these included Scottish wildcat surveys as part of the baseline ecological surveys, although the methodology and effort varied with only a single survey including camera trapping methodology focussed on wildcats. No presence of Scottish wildcat was detected during the surveys. The wind farms include (EIA submission date):

- Cnoc an Eas (2015)
- ▼ Druim Ba (2015)
- Beinn Mhor Wind Farm (2014)
- Bhlaraidh Wind Farm (2012)
- V Corrimony (2010)

A review of the SNHi Site Link Portal confirmed that there are no statutory designated sites within the Site or immediately adjacent to the Site. Within 5 km of the Site boundary three designated sites are present (Table 3). However, these are not designated for Scottish wildcat although the associated habitats of Levishie Woods SSSI and River Moriston SAC are likely to support suitable habitat for the species.

Table 2 Designated sites within 5km of the Site (excluding distal side of Loch Ness).

Site	Distance from Site	Feature of interest
Levishie Wood SSSI	2km South	Upland Birch Woodland
River Moriston SAC	3km South	Atlantic salmon <i>Salmo salar</i> and freshwater pearl mussel <i>Margaritifera margaritifera</i>
North Inverness Lochs – Dubh Lochs SPA	3.5km East	Breeding Slavonian grebe Podiceps auritus
Dubh Lochs SSSI	3.5km East	Breeding Slavonian grebe Podiceps auritus

It is worth noting that the nearest Wildcat Priority Area (WPA) is located 20 km to the north around Strathpeffer.

A number of woodland areas adjacent to the northern boundary of the Site are identified within the Ancient Woodland Inventory.

The review of aerial imagery highlighted that the Site supports an overwhelming coverage of open upland habitats dominated by wet heath, sections of bog with dry heath present on drier sections. Along the northern edge of the Site a mix of semi-natural woodland, coniferous woodland and planted/natural regeneration woodland is present with some areas extending up the Allt Seanabhailie burn. Woodland cover within the Site is limited to very small patches of sparse semi-natural woodland along the more inaccessible river valleys. Along the southern boundary small patches of scattered broadleaved trees from natural regeneration and patches of sparse coniferous woodland are present but these are very limited in density and coverage. Outwith the Site to the south significant areas of coniferous woodland and regenerating semi-natural broadleaved woodland is present.

The Site supports numerous watercourses ranging from very small peatland drains to more significant rocky rivers.

As detailed in the Section 1.2 a large number of lochs are present across the Site with a network of small natural drainage channels along with larger rocky watercourses which drain the area across three main catchments. The vast majority of the watercourses do not support any significant riparian vegetation with the riparian zone dominated by the wet heath, bog and rocky outcrops that typify the landscape along with sections of marshy grassland dominated by rushes in some areas. The more significant rivers were identified as offering some suitability for foraging and possible movement corridors for wildcat if present.

Areas of scree and exposed boulders are scattered at varying densities across the Site. Some of these offer extensive features between boulders and within scree that are suitable for supporting places of shelter (dens).

## 3.2 Field Sign Surveys

Field sign surveys were undertaken across the entire Site with an emphasis on more suitable habitats identified within the Desktop Study. In addition to identifying signs of Scottish wildcat an assessment of habitats to support important prey items such as rabbits and small mammals, including water vole, was also undertaken.

Across the Site a number of features were identified that may be of relevance to the use of the Site by Scottish wildcat should they be present. These included numerous areas of rocky outcrops or boulder scree that supported crevices and cavities. These features were scattered across the entire Site and varied from single boulders with gaps beneath to large rock crags with significant options for animals to use the cavities between and under the rock for denning. Wherever these features were identified, searches for signs of use in the form of tracks, scat and prey remains were undertaken. No evidence to suggest any of these areas were in use by Scottish wildcat or other carnivores were identified.

Additional features of importance were areas offering potential prey sources. These were generally limited to the watercourses and associated riparian habitats and the lochs and marginal vegetation. Numerous locations supported extensive active colonies of water vole *Arvicola amphibius* as well as smaller vole species. Many of the lochs supported water fowl but generally in low numbers. Although not a focus of the survey extensive population of game birds or upland waders were not encountered during the surveys, suggesting that the potential prey base during the spring and summer months is likely to be limited to some degree.

Page 9

LOCH LIATH WIND FARM ENVR1141
Wildcat Camera Trapping FEBRUARY 2021

No signs indicative of the presence of Scottish wildcat was identified throughout the Site during the field sign survey. All target notes are presented in Appendix 2.

A single animal burrow was located approximately 350 m south of the bothy and was consistent with that of badger (TN39). However the use of the feature by other species such as smaller mustelids, fox *Vulpes vulpes* and wildcat could not be ruled out. During the first camera trap session a camera (Camera 1.1) was placed in close proximity to this location to identify if the feature was likely to be in use.

A very limited number of carnivore scats were identified and these were generally identified as being that of fox.

## 3.3 Camera Trap Results

As detailed in Section 2.3 two camera trapping sessions were undertaken. In total 11 camera traps were deployed during the initial survey work with a total of 615 trap nights. In total only two carnivore species were captured, badger *Meles meles* and pine marten *Martes martes*. Pine marten were present at camera trap stations 1.3, 1.4, 1.6 and 2.1 with badger present at 1.3 and 1.4. Additional noteworthy species captured included black grouse *Lyrurus tetrix* at station 1.5 and wild boar *Sus scrofa* at station 2.3. No images of cats were obtained during the main camera trap sessions. Table 2 provides more details on the camera trap deployments.

**Table 3 Camera Trap Deployment Details** 

Deployment Period	Camera ID	Deployment Date	Date of last operation	Trap Nights	Notes
Session 1a	1.1	11 <sup>th</sup> March 2020	9 <sup>th</sup> May 2020	58	Based on last photo, not functioning on collection.
Session 1a	1.2	11 <sup>th</sup> March 2020	15 <sup>th</sup> May 2020	64	Operational throughout deployment
Session 1a	1.3	11 <sup>th</sup> March 2020	15 <sup>th</sup> May 2020	64	Operational throughout deployment
Session 1a	1.4	11 <sup>th</sup> March 2020	15 <sup>th</sup> May 2020	64	Operational throughout deployment
Session 1a	1.5	11 <sup>th</sup> March 2020	15 <sup>th</sup> May 2020	64	Operational throughout deployment
Session 1a	1.6	11 <sup>th</sup> March 2020	15 <sup>th</sup> May 2020	64	Operational throughout deployment
Session 1 Subtotal			•	378	
Session 2a	2.1	26 <sup>th</sup> May 2020	3 <sup>rd</sup> July 2020	37	Based on last photo, not functioning on collection.
Session 2a	2.2	26 <sup>th</sup> May 2020	16 <sup>th</sup> July 2020	50	Operational throughout deployment
Session 2a	2.3	26 <sup>th</sup> May 2020	16 <sup>th</sup> July 2020	50	Operational throughout deployment
Session 2a	2.4	26 <sup>th</sup> May 2020	16 <sup>th</sup> July 2020	50	Operational throughout deployment
Session 2a	2.5	26 <sup>th</sup> May 2020	16 <sup>th</sup> July 2020	50	Operational throughout deployment
Session 2 Subtotal			237		
Reactive	R1	8 <sup>th</sup> September 2020	20 <sup>th</sup> September 2020	11	Based on last photo, but likely to have been operating longer. Not functioning on collection.

Deployment Period	Camera ID	Deployment Date	Date of last operation	Trap Nights	Notes
Reactive	R2	8 <sup>th</sup> September 2020	11 <sup>th</sup> September 2020	2	Based on last photo, but likely to have been operating longer. Not functioning on collection.
Reactive	R3	8 <sup>th</sup> September 2020	er 6 <sup>th</sup> November 72 2020		Operational throughout deployment
Reactive	R4	8 <sup>th</sup> September 2020	28 <sup>th</sup> September 2020	19	Based on last image taken as not functioning on collection
Reactive	R5	8 <sup>th</sup> September 2020	20 <sup>th</sup> November 2020	72	Operational throughout deployment
Reactive	R6	8 <sup>th</sup> September 2020	20 <sup>th</sup> October 2020	41	Operational throughout deployment
Reactive	R7	8 <sup>th</sup> September 2020	28 <sup>th</sup> September 2020	19	Knocked over by deer on 28 <sup>th</sup> September 2020
Reactive Session Subtotal			236		
TOTAL TRAP NIGHTS			851		

During the period of reactive camera trapping a minimum of 236 trap nights were achieved based upon last confirmed date of camera functioning. A number of the camera traps did not continue to function throughout the entire period due to battery failure or being knocked over by deer. However, with the exception of camera trap station R2 all cameras functioned for at least three weeks. During this period no captures of cats were obtained. Camera trap stations R1, R2, R5 and R7 captured no carnivore images with images of only deer and rodents. Camera trap station R3 recorded a single capture event of pine marten. Camera trap station R4 recorded a single capture of otter *Lutra lutra* and also a single capture of pine marten. Weasel *Mustela nivalis* was captured at camera trap station R6 on a single occasion. It is worth noting that camera trap Station R7, located at the single animal burrow identified no use of the feature but was knocked over by deer after 20 days. Table 4 provides a summary of species identified at camera trap locations.

Table 4 Capture details of notable species at camera traps.

Species	Camera ID	Date
Badger	1.3	18/03/2020
Fox	1.3	18/03/2020
Pine marten	1.3	20/03/2020
Pine marten	1.3	02/05/2020
Badger	1.3	04/05/2020
Pine marten	1.3	05/05/2020
Badger	1.3	07/05/2020

LOCH LIATH WIND FARM ENVR1141
Wildcat Camera Trapping FEBRUARY 2021

Species	Camera ID	Date
Badger	1.4	21/03/2020
Badger	1.4	17/03/2020
Badger	1.4	04/05/2020
Pine marten	1.4	20/03/2020
Black grouse	1.5	03/05/2020
Pine marten	1.6	05/05/2020
Pine marten	2.1	28/05/2020
Wild boar	2.3	26/05/2020

Page 11 Page 12

## 4 Discussion

Based on the desktop study and field sign survey the Site offers some limited suitability to support Scottish wildcat. The landscape is generally devoid of any significant woodland except at the northern and southern edges and as a result is open and exposed with little cover. Although the landscape does support numerous locations where rocky outcrops and boulder scree are present offering potential den sites, the majority of these are located in exposed locations with low vegetation and limited connectivity. Prey resources appear to be limited to low densities of small mammals and pockets of water vole activity with the addition of low to moderate numbers of breeding birds. No significant presence of their key prey species, the rabbit *Oryctolagus cuniculus* was identified and no hares *Lepus europaeus* were observed during the surveys.

Based on the results of the surveys, the presence of Scottish wildcat within the Site is assessed as being unlikely.

The identification of a cat print within the Site resulting in a subsequent reactive period of camera trapping suggests that cats are using the Site on an infrequent basis. From the print it is not known whether or not the cat was a 'wildcat', feral or even domestic cat. The reactive camera trapping resulted in low capture rates of carnivores and did not identify the presence of any cats.

Based on these results the presence of den sites of wildcat within the Site are thought to be very unlikely, although it should be recognised that the species can have significant seasonal variation in its behaviour and the presence of a wildcat passing through the Site on an irregular basis, especially during the nesting bird season, cannot be fully ruled out. Figure 3 details areas that support landscapes or features that are likely to offer some degree of suitability for denning. Although the full details of the development proposals are unknown at present it is recommended that the following precautions are undertaken:

- Focal pre-construction surveys should be undertaken through field sign surveys and targeted camera trapping at key locations, including watercourses and areas suitable for potential denning. All relevant areas within a minimum of 250m of proposed areas of disturbance (all permanent and temporary infrastructure or other areas of increased disturbance).
- ▼ Toolbox talks outlining the ecology and protection of the Scottish wildcat should be provided to construction site operatives.
- ▼ The appointed ECoW should include ongoing watching brief in relation to Scottish wildcat, especially if working within 250 m of suitable denning habitats.
- Disturbance within areas of suitable denning habitat (boulder scree, craggy areas etc.) should be minimised with such features retained as far as practicable.
- Generic precautions should also be undertaken, including:
  - All excavations should have escape ramps fitted at no greater angle than 45° with any smaller open areas capped to prevent animals entering;
  - Site speed limits should be reduced as far as practicable to limit the potential for road traffic accidents with any mammals;

Page 13

Page 14

# LOCH LIATH WIND FARM ENVR1141 Wildcat Camera Trapping FEBRUARY 2021

• If at any point wildcats are observed to be using a place of shelter, works within 200m of the location should cease immediately and a suitably qualified ecologist contacted; and

• Any open pipes, whether installed or being stored, should be closed to prevent any animals entering and potentially being disturbed or becoming trapped.

No details on access routes to the Site were provided and no assessment of potential access routes was undertaken within this survey. If upgrading of existing tracks or construction of new tracks are proposed outwith the Site then it is likely that these areas should also be subject to surveys focussing on Scottish wildcat.

## **5** References

Cresswell, W., Birks, J., Dean, M.D., Pacheco, M., Trewhella, W., Wells, D. & Wray, S. (eds). (2012) *UK BAP Mammals; Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation*. The Mammal Society, Southampton.

Davis, A. R., & Gray, D. (2010). *The distribution of Scottish wildcats (Felis silvestris) in Scotland (2006-2008)*. Scottish Natural Heritage Commissioned Report No. 360. Scottish Natural Heritage.

Joint Nature Conservation Committee. (2007) Second Report by the United Kingdom under Article 17 on the Implementation of the Directive from January 2001 to December 2006. Conservation Status Assessment for Species: S1363 – Felis Silvestris – Wildcat. Peterborough.

Scottish Natural Heritage. (2013) Scottish Wildcat Conservation Action Plan.

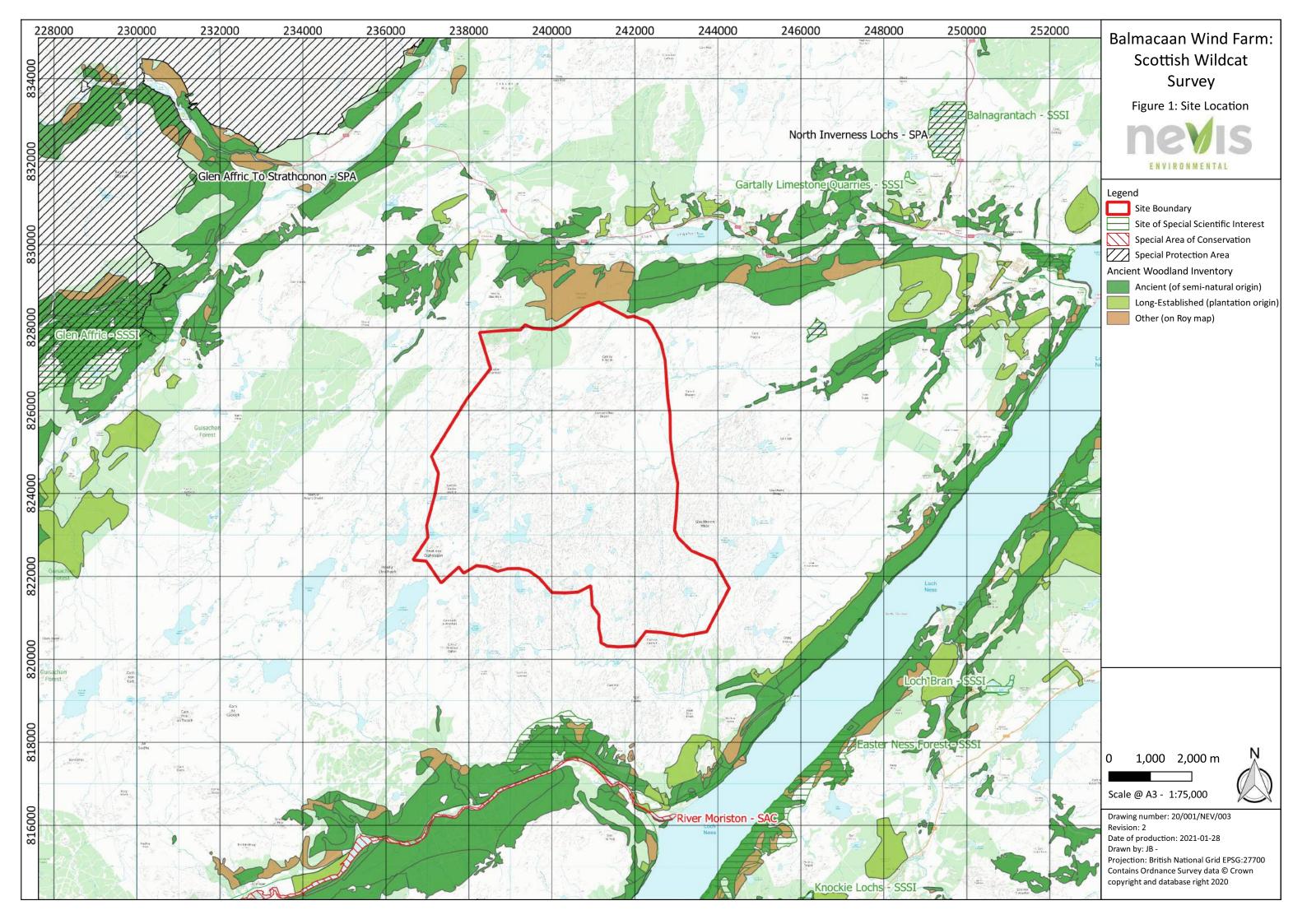
Yamaguchi, N., Kitchener, A., Driscoll, C. & Nussberger, B. (2015) Felis silvestris. The IUCN Red List of Threatened Species 2015: e.T60354712A50652361.

Page 15

# LOCH LIATH WIND FARM ENVR1141 Wildcat Camera Trapping FEBRUARY 2021

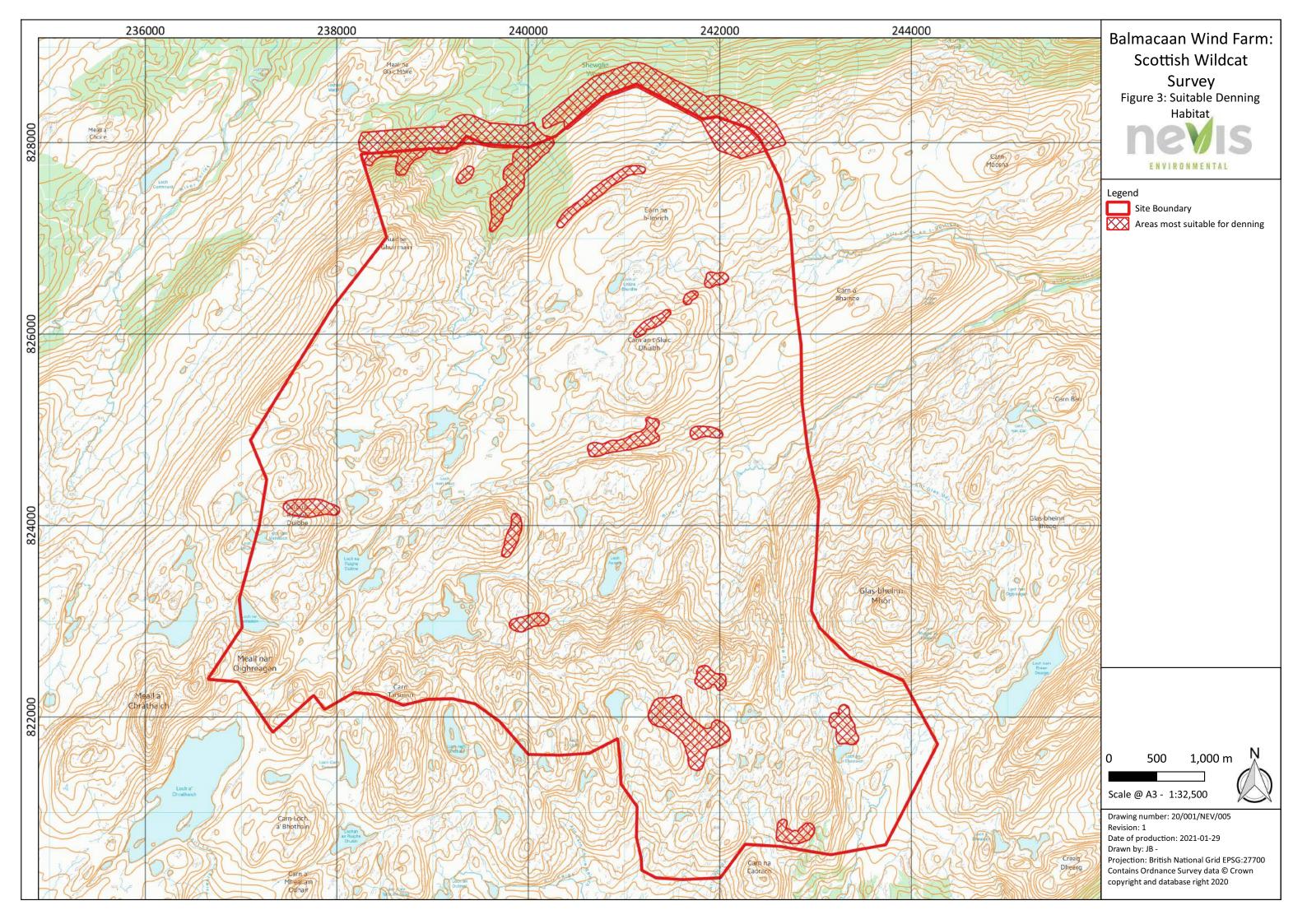
## **Figures**

- ▼ Figure 1 Site Location
- Figure 2 [confidential] Survey Results
- ▼ Figure 3 Suitable Denning Habitat



## Figure 2

Figure 2 is confidential.



## **Appendix 1 – Overview of Relevant Planning Policy and Legislation**

This section provides an overview of the framework of legislation relating to Scottish Wildcat.

## **Scottish Wildcat**

The Scottish wildcat is also a European Protected Species (EPS) and is protected by the Conservation (Natural Habitats &c.) Regulations 1994 as amended in Scotland which transpose into Scottish law the European Community's Habitats Directive (92/43/EEC). Under this legislation, it's an offence to:

- vapture, kill, disturb or injure Scottish wildcats (on purpose or by not taking enough care);
- damage or destroy a breeding or resting place (deliberately or by not taking enough care);
- obstruct access to their resting or sheltering places (deliberately or by not taking enough care); or
- yossess, sell, control or transport live or dead Scottish wildcats, or parts of Scottish wildcats.

In addition Scottish wildcat is listed in the Scottish Biodiversity List and the UK Biodiversity Action Plan (BAP).

It is worth noting that the Scottish Wildcat, an isolated population of the European wildcat, although protected under the same legislation as otter, are under significant threat at present. The future prospects for the Scottish wildcat were considered bad and deteriorating by Joint Nature Conservation Committee (JNCC) (2007), and the species is recognised as being at threat of extinction in the biogeographical region. In the IUCN Red List of Threatened Species assessment of *Felis silvestris* for Europe, the isolated Scottish population is listed as Critically Endangered (Yamaguchi *et al.* 2015). Also in the Scottish Wildcat Conservation Action Plan it is assessed as declining (Scottish Natural Heritage 2013). This, in combination with the elusive nature of the species, difficulties with differentiating between feral and domestic cats and wildcat x domestic cat hybrids within the field and the cryptic nature (often leaving few field signs with den sites difficult to identify), results in a degree of caution being required. As a result the precautionary principle is often required to ensure that no inadvertent impacts on the species occur from land management activities and development.

In recent years Wildcat Priority Areas (WPAs) have been identified within the Scottish Wildcat Conservation Action Plan (Scottish Natural Heritage 2013) based upon research undertaken using multiple streams of evidence to identify the areas that are likely to be the most suitable for defending and aiding the recovery of existing Scottish wildcat populations (Littlewood et al. 2014).

Page 17

# LOCH LIATH WIND FARM ENVR1141 Wildcat Camera Trapping FEBRUARY 2021

## **Appendix 2 – Target Notes**

## APPENDIX 2 – TARGET NOTES

Name	Description	Χ	Υ
1	Western edge of the Site supports high exposed ground with exposed rock present although few rocky outcrops with cavities. In general location is very exposed, isolated and offers little suitability for the presence of wildcat.	237538	823809
2	Very limited rocky outcrops offering suboptimal features for denning. Location is very exposed and isolated.	237553	824191
3	Small burns feeding lochs have potential support small mammal populations within marshy grassland habitats.	237947	824986
4	Significant expanses of waterlogged boggy ground offers very limited suitability for wildcat.	238323	825126
5	Dry heath dominated slopes to the north of the site supports regenerating coniferous woodland with pockets of birch regeneration. Dense and tall heather over often rocky substrates may support some suitability for den sites, but no signs identified.	238594	828071
6	Small burns within northern banks offer good features for hunting and movement corridors, but no signs of use identified.	238596	828044
7	Northern boundary fence formed by deer fence with regeneration of birch woodland continuing within the Site boundary.	238670	827896
8	Small valleys within areas of regenerating semi-natural birch woodland. Dense vegetation, often over rocky ground offers some suitability for supporting dens but no specific locations identified and no signs of cats identified.	238679	828446
9	Just south of Site boundary a good quality wooded rocky outcrop supporting numerous good cavities. No signs of use.	238719	827966
10	Upper reaches of Allt Seanabhailie offer suitable habitat for water vole and other small mammals as well as waders during the breeding season all potentially providing some prey species.	238736	825286
11	Numerous small lochs on the western side of the Site offer very limited suitable habitat either for denning or hunting.	239466	823494
12	Lower reaches of the Allt Seanabhailie are likely to represent a barrier to movement for the majority of the year.	239556	825810
13	Area of regenerating coniferous woodland with dry and wet heath. Occasional boulders and dense vegetation has some limited potential to support dens but no signs of use.	239611	828701
14	Bog dominated riparian zones supporting small mammals	239633	826150
15	Fast flowing watercourse likely to represent a barrier to movement during majority of year.	239656	827060
16	Lower stretches of the Allt Seanabhaile burn with good quality mixed woodland along banks offers some potential for den sites in rocky areas and is likely to support small mammals and bird prey species. No signs of use by cats.	239785	827335
17	Area of large boulders and craggy outcrops on southern slopes of western peak. Areas offer suitable denning habitat but are extremely isolated and exposed. No signs of use were identified.	239834	823887
18	Area of marshy grassland likely to support small mammals and possibly water vole.	239854	827152

19	Top of small valley (TN21) which may act as a sheltered movement corridor between the open western areas and the central lower areas. Location of camera trap.	239890	822976
20	Area of mixed woodland with some mature broadleaved trees with large root balls and tree holes. Some limited potential to support dens but no specific locations or signs identified.	240019	827850
21	Raised small valley with periodic flow of water supports good craggy areas with suitable cavities within rocks but no signs of use by wildcat or other carnivores.	240051	823005
22	Fenced area of natural broadleaved woodland regeneration to south west.	240400	828159
23	Extensive water vole colony, potential prey base.	240418	826037
24	Open thinned plantation woodland with numerous sections of brash offering some limited potential for supporting dens. No signs of use identified.	240591	828404
25	Small areas where boulders support cavities, no signs of use.	240728	824766
26	Summits of central peaks are very exposed and although some areas support craggy rocky outcrops with some potential for denning, the areas are very exposed with no significant cover.	240747	822665
27	Small meandering watercourses across the Site often supported water vole colonies which may act as an important prey source for any wildcats if present.	240867	821742
28	Small areas where boulders support cavities, no signs of use.	240958	824849
29	Limited vegetated rocky outcrops offering very limited suitability for use as den. No signs of use.	241024	827697
30	The central area of the Site supports landscape features that may act as movement corridors. No signs of use by cats.	241288	825088
31	Areas of vegetated boulder scree may support suitable cavities. No signs of use.	241293	825094
32	Craggy area with suitable potential den features but no signs of use.	241644	821870
33	Suitable cavities within vegetated rocky outcrop, but no signs of use.	241665	826375
34	Extensive water vole colony, potential prey base.	241765	821476
35	Area used for deer feeding and salt lick	241835	827871
36	Craggy area with potential den features visible from a distance (outwith the exclusion area).	241836	822456
37	Small burn with marshy grassland banks potentially suitable for supporting water vole and other prey items.	241889	827906
38	Track from the north servicing the bothy did not support any evidence of use by wildcat.	241893	826099
39	Burrow located in top of bank to river in open location. Opening is large and most consistent with badger although the tunnel does narrow slightly past the entrance area. No definitive signs of use by any species.	241907	824991
40	Bothy with no signs of wildcat presence	241974	825335
41	Suitable cavities within vegetated rocks, but no signs of use.	242000	826583
42	Numerous lochs are present across the Site. Some of these support extensive emergent vegetation in the form of sedges which may support increased waterfowl numbers and provide some potential prey at margins.	242283	821738
43	Water vole colony, potential prey base.	242523	820713

44	Southern boundary deer fence may act as movement corridor and was selected for camera trap location.	242714	820772
45	Typical habitats for the majority of the area included large areas of wet heath over rocky ground with bog habitats present on deeper soils with impeded drainage.	242834	821999
46	Two scats consistent with that of fox. One of the scats consisted of digested bone indicative of not being from cat.	243182	821773
47	Good area of rocky outcrop with numerous gaps and cavities around the vegetated rocks. Assessed as good potential den site, although no definitive signs. Location of camera trap in proximity of feature to assess likely presence of wildcat.	243191	821957
48	The margins of Loch an t-Slonmnaich may offer some suitability for supporting prey items such as small mammals and nesting birds.	243278	821733
49	Small hydro intake on burn from Loch an t-Slonmnaich, with access track from south. No scats located along access track or manmade features.	243408	821351

## Appendix 3 – Photographs

## APPENDIX 3 – PHOTOGRAPHS



Plate 1: View of thinned woodland on northern slopes outwith Site (TN24).



17

Plate 2: Access track within south of Site (TN49).



Plate 3: Typical feature that offers suitability for use as a den but shows no sign of use.



Plate 4: Further typical feature within boulder scree offering potential for use as a den.

18



Plate 5: One of the many locations supporting active water vole colonies that may be a prey source.

19



Plate 6: Single animal burrow consistent with badger (TN39).



Plate 7: Narrow valley with suitable features for denning and could serve as a sheltered movement corridor (TN 21).



Plate 8: Deer fence along southern boundary.

20



Plate 9: Vegetated valley sides with small cavities, suitable for use as a den. No signs of use identified (TN41).



Plate 10: Typical view of central area showing landscape features that may act as movement corridors (TN30).



Plate 11: Typical view of western section of Site supporting open moorland with lochs.



Plate 12: View along track in from north to bothy.

21 22