Technical Appendix 8.2: Protected Mammals Report

Windburn Wind Farm Extension

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1.0 Introduction

1.1 Background

SLR Consulting Limited (SLR) was commissioned by Windburn Wind Farm Ltd (the Applicant) in March 2023 to undertake protected mammal surveys for the proposed Windburn Wind Farm (the proposed development), centred on OS grid reference NN 87737 02889 (the site), to inform the Environmental Impact Assessment (EIA) for the proposed development.

This report presents the results of the protected mammal surveys carried out during July and August 2023, comprising of the site plus a 50m buffer for terrestrial mammals and a 250m buffer along watercourses for riparian mammal, hereafter the 'Survey Area', as shown in **Figure 8.2.1**.

It should be noted that the site was partially surveyed by SLR in August 2021. Although this data is superseded by the 2023 survey results, the data collected in 2021 has been reviewed and any relevant records included within this report where appropriate.

1.2 Site Description

The site is located in the Ochil Hills approximately 2.9km north of Alva and it is characterised by open habitats such as heathland, bog, and acid grassland, with some woodland within sheltered glens and small plantations. There are several watercourses within the site boundary including the Danny Burn, the River Devon and the Finglen Burn. The Upper and Lower Glendevon reservoirs are present outwith the site boundary to the east.

1.3 Scope of Study

The scope of this study was to carry out a survey for protected mammals within the Survey Area and proposed access route survey area in order to identify presence, potential presence, or likely absence. The following species, considered to be potentially present, following a desk study, were targeted for this survey:

- Water vole *Arvicola amphibius*;
- Otter *Lutra lutra*;
- Red squirrel *Sciurus vulgaris*;
- Badger *Meles meles*;
- Pine marten *Martes martes*; and,
- Other mammals/fauna of interest – only recorded if seen.

The aim of the survey was to provide baseline data to inform the wind farm design process, the development of any habitat restoration and management proposals and the subsequent Environmental Impact Assessment (EIA) Report. The assessment of impacts resulting from the proposed development and the development of mitigation measures, if required, are beyond the scope of this report and will be covered in the EIA Report.

1.4 Survey and Reporting Personnel

The terrestrial mammal surveys were undertaken by Stuart Abernethy (ACCIEM) and Euan Macrae. Stuart holds NatureScot licenses for the disturbance and survey of bats, otter, and great crested newts. The riparian surveys were undertaken by Beth Hanlon, Sophie McPeake and Rachel McLeod. This report has been completed by Cróna McMonagle (ACIEEM) and Sophie McPeake, the review process was undertaken by Associate Ecologist Russell Goodchild and authorised by Principal Ecologist Sara Toule (ACIEEM).

1.5 Relevant Legislation

1.5.1 Otter

Otter is a European Protected Species, of which receives full protection under Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) (the 'Habitats Regulations'). They are also fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). As such, it is an offence to deliberately or recklessly:

- capture, injure or kill an otter;
- harass an otter or group of otters;
- disturb an otter while it is occupying a structure or place used for shelter or protection;
- disturb an otter while it is rearing or otherwise caring for its young;
- obstruct access to a holt or other structure or place otters use for shelter or protection, or otherwise deny the animal use of that place;
- disturb an otter in a manner or in circumstances likely to significantly affect the local distribution or abundance of the species; and
- disturb an otter in a manner or in circumstances likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young.

It is also an offence to:

- damage or destroy a breeding site or resting place of such an animal (whether or not deliberately or recklessly). This applies at all times, whether or not the breeding site or resting place currently being used by an otter; and
- keep, transport, sell or exchange, or offer for sale or exchange any wild otter (or any part or derivative of one) obtained after 10 June 1994.

The otter is also detailed within the Scottish Biodiversity List (SBL)[1], of which is a list of animals, habitats and plants that Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland.

1.5.2 Water Vole

Water vole receives partial protection through its listing on Schedule 5 of The Wildlife and Countryside Act 1981 (as amended). In Scotland, this legal protection is currently restricted only to the water vole places of shelter or protection; it does not extend to the animal itself. It is an offence to intentionally or recklessly:

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

Water vole is listed within the SBL as a species of principle importance for biodiversity conservation in Scotland.

1.5.3 Badger

Both badgers and their setts are protected under the Protection of Badgers Act 1992, as amended by the Wildlife and Natural Environment (Scotland) Act 2011. Under this legislation it is an offence to:

[1] Available online at https://www.nature.scot/doc/scottish-biodiversity-list

- Kill, injure, take, possess or cruelly ill-treat a badger;
- Interfere with a sett by damaging or destroying it;
- Obstruct access to a badger sett;
- Disturb a badger whilst it is occupying a sett; and,
- Allow a dog to enter a sett.

1.5.4 Pine Marten

Pine marten receive full protection under Schedule 5 of The Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally or recklessly:

- Kill, injure or take a pine marten;
- Damage, destroy or obstruct access to any structure or place a pine marten uses for shelter or protection;
- disturb a pine marten when it is occupying a nest or den for shelter or protection (except when this is inside a dwelling house); and
- Possess or control, sell, offer for sale or possess or transport for the purpose of sale any living or dead pine marten or any derivative of such an animal.

The pine marten is also listed within the SBL as a species of principal importance for biodiversity conservation in Scotland.

1.5.5 Red Squirrel

Red squirrels and their dreys receive full protection under Schedules 5 and 6 of the Wildlife and Countryside Act 1981 (as amended). In short, it is an offence to intentionally or recklessly:

- Kill, injure or take a red squirrel;
- Damage, destroy or obstruct access to a drey or any other structure or place which a red squirrel uses for shelter or protection;
- Disturb a red squirrel when it is occupying a structure or place for shelter or protection;
- Possess or control, sell or offer for sale, or possess or transport for the purpose of sale any living or dead red squirrel or any derivative of such an animal; and
- Knowingly causing or permitting any of the above acts to be carried out.

The red squirrel is also listed within the SBL as a species of principal importance for biodiversity conservation in Scotland.

1.5.6 Planning Policy

National Planning Policy

In order to accord with the biodiversity provisions of National Planning Framework 4 (NPF4)[2], development proposals should demonstrate that they contribute to the enhancement of biodiversity. Of particular relevance to this study, Policy 3b states:

Development proposals for national or major development, or for development that requires an Environmental Impact Assessment will only be supported where it can be demonstrated that the

[2] National Planning Framework 4 was adopted by Scottish Ministers on 13 February 2023. Further information is available online at https://www.gov.scot/publications/national-planning-framework-4/documents/

proposal will conserve, restore and enhance biodiversity, including nature networks so they are in a demonstrably better state than without intervention. Proposals within these categories will demonstrate how they have met all of the following criteria:

- *The proposal is based on an understanding of existing characteristics of the site and its local, regional and national ecological context prior to development, including the presence of any irreplaceable habitats;*
- *Wherever feasible, nature-based solutions have been integrated and made best use of;*
- *An assessment of potential negative effects which should be fully mitigated in line with the mitigation hierarchy prior to identifying enhancements;*
- *Significant biodiversity enhancements are provided, in addition to any proposed mitigation. This should include nature networks, linking to and strengthening habitat connectivity within and beyond the development, secured within a reasonable timescale and with reasonable certainty. Management arrangements for their long-term retention and monitoring should be included, wherever appropriate…'*

Wherever possible, opportunities to deliver biodiversity enhancement should therefore be considered and implemented for any new development proposals.

1.5.7 Local Planning Policy

The site is located within two local authority areas; Clackmannanshire, and Perth and Kinross.

Local planning policy for Clackmannanshire Council is set out in Clackmannanshire Council Local Development Plan 2015[3]. Policy EA2 addresses habitat networks and biodiversity, stating:

"This policy aims to encourage the protection and enhancement of biodiversity and habitat networks by safeguarding the integrity of features of the landscape which are important because of their linear and continuous structure or function as intermediate sites for the movement of both fauna and flora. All development proposals will be expected to fulfil all of the following criteria:

- *Maximise the potential of their development to contribute positively to biodiversity conservation and enhancement (and seek mitigation for any adverse impacts of development);*
- *Protect and enhance existing habitat networks in or adjacent to the development site;*
- *Mitigate any negative impacts on habitats, species or network connectivity either resulting from the development or as a result of the cumulative effects of developments locally;*
- *Identify opportunities to strengthen the existing habitat network by creating new habitat links. Wherever possible, development proposals should contribute to the objectives of the Clackmannanshire Biodiversity Action Plan; and the ongoing improvement of the Integrated Habitat Network and the Clackmannanshire Green Network, in accordance with the Green Infrastructure SG."*

Policy EA3 addresses council policy in relation to protected species. It reads:

"Where a proposal could have a detrimental impact on any protected species, the applicant will be required to carry out an Ecological Appraisal. Development will only be permitted where the applicant has demonstrated that either:

- *A species licence will not be required for the proposal to be implemented; or*
- *Where a species licence will be required, it is likely to be granted. (with reference to any relevant licensable purpose or licence 'tests')".*

[3] Clackmannanshire Council (2015). *Clackmannanshire Local Development Plan*. [online] Available at: https://www.clacks.gov.uk/document/6862.pdf [Accessed 15 Nov. 2023].

With regard to Perth and Kinross Council, local planning policy is detailed in the Perth and Kinross Local Development Plan 2[4]. Information in relation to protected species is detailed in Policy 41:

"The Council will seek to protect and enhance all wildlife and wildlife habitats, whether formally designated/protected or not, taking into account the ecosystems and natural processes in the area. The Council will apply the principles of the Planning for Nature: Development Management and Wildlife Guide and will take account of the Tayside Local Biodiversity Action Plan (LBAP) and relevant national and European legislation relating to protected species when making decisions about applications for development.

Proposals that have a detrimental impact on the ability to achieve the guidelines and actions identified in these documents will not be supported unless clear evidence can be provided that the ecological impacts can be satisfactorily mitigated.

In particular, developers may be required to:

a) *Ensure a detailed survey is undertaken by a qualified specialist where one or more protected or priority species is known or suspected. In accordance with the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017, development proposals that could have a significant impact on the environment may require an Environmental Impact Assessment;*
b) *Demonstrate all adverse effects on species and habitats have been avoided wherever possible. A Landscape Plan may be required to demonstrate the impact of the development and how good design and site layout can enhance the existing biodiversity;*
c) *Include mitigation measures and implementation strategies where adverse effects are unavoidable;*
d) *Enter into a Planning Obligation or similar to secure the preparation and implementation of a suitable long-term management plan or a site Biodiversity Action Plan, together with long-term monitoring.*

European Protected Species

Planning permission will not be granted for development that would, either individually or cumulatively, be likely to have an adverse effect upon European protected species (listed in Annex IV of the Habitats Directive (Directive 92/43/EEC)) unless the Council as Planning Authority is satisfied that: (a) there is no satisfactory alternative; and (b) the development is required for preserving public health or public safety or for other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment. In no circumstances can a development be approved which would be detrimental to the maintenance of the population of a European protected species at a favourable conservation status in its natural range. Local Development Plan 2: 2019 75 Policy 41: Biodiversity (continued).

Other Protected Species

Planning permission will not be granted for development that would be likely to have an adverse effect on protected species unless it can be justified in accordance with the relevant protected species legislation (Wildlife and Countryside Act 1981 (as amended) and the Protection of Badgers Act (1992))."

[4] Perth and Kinross Council (2019). *Perth and Kinross Local Development Plan 2*. [online] *Perth and Kinross Council*. Available at: https://www.pkc.gov.uk/media/45242/Adopted-Local-Development-Plan-2019/pdf/LDP_2_2019_Adopted_Interactive.pdf?m=637122639435770000 [Accessed 15 Nov. 2023].

2.0 Methodology

2.1 Desk Study

In order to inform field surveys and provide context for assessment, a data request for records relating to protected and notable species within 2km of the site, for all years, was submitted to The Wildlife Information Centre. The data was obtained in April 2023, with details presented in **Annex A**. A very brief summary of the results for protected mammals is provided along with the results of the walkover survey.

2.2 Field Survey

The Survey Area is shown on **Figure 8.2.1** and consists of the site boundary plus a 50m buffer for all species apart from otter. The Survey Area for otter was defined as all accessible watercourses within the Site plus a buffer of 250m.

Survey metadata of detailing the conditions at the time of survey are set out in **Table 2-1**.

Table 2-1: Mammal Survey Metadata

Date	Average Temperature (degrees Celsius)	Average Wind Speed (Beaufort)	Rainfall
23/08/2023	18	1	Heavy showers in morning
24/08/2023	18	4	Occasional showers
25/08/2023	14	1	Occasional showers
16/10/2023	7	3	None
17/10/2023	5	1	None
18/10/2023	13	3	None

2.2.1 Protected and Notable Species

2.2.1.1 Otter

The survey for otter comprised a walkover of all accessible watercourses within the site and 250m of site. The survey was carried out by two suitably qualified ecologists in order to comply with health and safety requirements associated with working in and/or near water. The survey was undertaken across six days – 23-25 August and 16-18 October 2023.

Otter field signs are described in guidance produced by Bang & Dahlstrøm (2001)[5], Sargent & Morris (2003)[6] and Chanin (2003a & b)[7,8], and include:

- Holts – these are underground shelters where otters live. They can be tunnels within bank sides, underneath root plates or boulder piles and even man-made structures such as disused drains. They can also be excavated from pre-existing badger setts, rabbit burrows

[5] Bang, P. & Dahlstrøm, P. (2001). *Animal Tracks and Signs*. Oxford University Press, Oxford.

[6] Sargent, G. & Morris, P. (2003) *How to find & Identify Mammals*. The Mammal Society, London.

[7] Chanin P (2003a) Ecology of the European Otter. Conserving Natura 2000 Rivers, Ecology Series No. 10. English Nature, Peterborough

[8] Chanin P (2003b) Monitoring the Otter Lutra lutra. Conserving Natura 2000 Rivers Monitoring Series No 10. English Nature, Peterborough

and fox *Vulpes vulpes* earths as well as above ground shelters in dense scrubby vegetation. Holts are used by otters to rest during the day and may be used as natal or breeding sites. Otters may use holts permanently or temporarily;

- Couches/hovers – these are above ground resting-up sites. They may be partially sheltered or fully exposed. Couches may be regularly used, especially in reed beds and on in-stream islands. They may be used as natal and breeding sites. Couches can be very difficult to identify and may comprise an area of flattened grass or earth. Where rocks or rock armour are used as couches, these can be almost impossible to identify without observing the otter *in-situ*;
- Prints and tracks – otters have characteristic footprints that can be found in soft ground and muddy areas;
- Spraints – otter faeces are often used to mark territories, usually deposited on in-stream boulders or similarly prominent features such as raised ground close to water, under tree roots, beneath bridges and at crossing points of fences or walls. They can also be present within or outside the entrances of holts and couches. Spraints have a characteristic smell and often contain fish remains;
- Feeding signs – the remains of prey items may be found at preferred feeding stations. Remains of fish, crabs or skinned amphibians can indicate the presence of otter;
- Paths – these are terrestrial routes that otters take when moving between resting-up sites and watercourses, or during high flow conditions when otters travel along bank sides in preference to swimming; and
- Slides and play areas – slides are typically worn areas on steep slopes where otters slide on their bellies; slides are often found between holts/couches and watercourses. Play areas are used by juvenile otters in play and are usually evident as trampled vegetation and the presence of slides. These are often positioned in sheltered areas adjacent to the natal holt.

Any of the above signs are diagnostic evidence of the presence of otter; but it is often not possible to identify couches with confidence unless other field signs are also present. Spraint is the most reliable identifiable evidence of the presence of this species.

2.2.1.2 Water Vole

The survey methods used for water vole were based on the standard methodology detailed in the Water Vole Conservation Handbook (Strachan *et al*., 2011)[9] and the Water Vole Mitigation Handbook (Dean *et al*., 2016)[10]. All accessible watercourses within the survey area were searched for signs of water vole activity including:

- Live water vole observations;
- Faeces – these are recognisable by their size, shape and content. When reasonably fresh, water vole faeces are also distinguishable from rat droppings by their smell;
- Latrines – faeces are often deposited at discrete locations known as latrines;
- Feeding stations – food items are often brought along pathways and hauled onto platforms which are used as feeding stations. These are recognisable as neat piles of chewed vegetation up to 10cm long. There can be crossover in size with field vole feeding signs, and

[9] Strachan, R. 2006. Water Vole Conservation Handbook. 2nd Edition.

[10] Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016). The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series). Eds Fiona Matthews and Paul Chanin. The Mammal Society, London.

therefore other signs may be required to provide diagnostic evidence of the presence of water vole;

- Burrows – these appear as a series of holes along the water's edge; they are distinguishable from rat or field vole burrows by their size, position and characteristics;
- Lawns – these may appear as grazed areas around burrows;
- Nests – woven nests may be found above ground in areas where the water table is high;
- Footprints – water vole tracks may occur at the water's edge and lead into bankside vegetation. Clear prints are distinguishable from rat and field vole footprints by their characteristics and size; and
- Runways in vegetation – low tunnels pushed through vegetation near the water's edge may be visible; these are less obvious than rat runs and are only diagnostic of water vole in the presence of other signs.

Any of the above signs (other than feeding stations and runways) can be taken as diagnostic evidence of the presence of water vole.

Current guidance recommends that up to two field survey visits are carried out, but one survey visit may be sufficient in certain circumstances (e.g., where the habitat is of very low suitability for water voles and there is a very low likelihood that water voles are present). In the context of this study, a single survey for water vole was considered sufficient owing to the lack of suitable habitat and lack of signs on site (See Section 3.2).

2.2.1.3 Red Squirrel

All suitable habitat within the survey area was surveyed for squirrel field signs. A broad-scale walkover assessment was undertaken, which involved assessing habitat suitability and recording any signs of squirrel (e.g., feeding signs and dreys), as described in Gurnell *et al.* 2009[11] including:

- Dreys:
- Feeding signs: and
- Sightings.

There is no distinguishable difference between the dreys or feeding signs of a red squirrel and a grey squirrel *S. carolinensis* therefore all dreys and feeding signs are counted as potential red squirrel presence unless accompanied by a live sighting.

2.2.1.4 Badger

The badger survey comprised a walkover of suitable habitat within the survey area during daylight hours to search for, and record, evidence of badger activity. The survey followed guidance published by Neal & Cheeseman (1996)[12], and SNH (2001)[13] and Reynolds and Harris (2005)[14], Field signs pertaining to badger include:

- Setts - these are underground tunnels where badgers live. Setts can have large spoil heaps or discarded bedding material at the entrance. Badgers may use setts permanently or temporarily, which can thus be classed as active or inactive.

[11] Gurnell, J., Lurz, P. & Pepper, H. (2001) Practical Techniques for Surveying and Monitoring Squirrels.

[12] Neal, E. & Cheeseman, C. (1996). *Badgers*. Poyser Natural History, London.

[13] Scottish Natural Heritage (2001). *Scotland's Wildlife: Badgers and Development*. SNH, Battleby.

[14] Reynolds, P. & Harris, M. (2005). Inverness Badger Survey 2003. Scottish Natural Heritage Commissioned Report No. 096

  - *Main setts:* At least five holes, often with large spoil heaps and obvious pathways originating from and between sett entrances. Usually active.
  - *Annexe setts:* Sett with several holes, connected to a main sett by a clear badger path, normally less than 150m from the main sett. Not used all of the time.
  - *Subsidiary setts:* Usually at least 50m from the main sett with no obvious paths connecting to other setts. Used intermittently. *Outlier setts:* One or two holes. No obvious paths connecting to other setts and only used sporadically. Little spoil outside holes. Often used by other mammals.
- Prints - badgers have characteristic footprints that can be found in soft ground and muddy areas;
- Latrines - faeces are often deposited in dung pits at discrete locations. These are known as latrines and are often used as territorial markers;
- Hairs – badgers have characteristic hairs which can often be found in the soil at sett entrances or snagged on fences; and
- Feeding signs (snuffle holes) – scrapes and small holes created in the ground by badgers foraging for earthworms etc.

Any of the above signs can be taken as diagnostic evidence of the presence of badger.

2.2.1.5 Pine Marten

All suitable habitat within the survey was surveyed to determine the presence, or potential presence, of pine marten.

Pine marten field signs are described in Bang and Dahlstrøm (2006)[15] and Balharry *et al.* (1996)[16] and include:

- Scats – These are typically dark in colour and 4-12cm long x 0.8-1.8cm in diameter. They often have a coiled twisted appearance, typical of many mustelid scats. Scats will often contain food remains including fur, feathers, bone, plant content and seeds. Scats vary in size, shape and colour, overlapping in these respects with scats of foxes, polecats, mink and stoat. Marten scats are usually long and cylindrical, often tapering at one end and sometimes coiled into a 'U' or 'S' shape. Scats may be 5-14mm in diameter and up to 120mm long. Where scat identification is in doubt, DNA analysis may be used to confirm pine marten.
- Footprints – Five-toed but slightly cat-like forefoot imprints measure approximately 40 x 45mm for females and 55 x 65mm for males; fur on the underside of feet in winter may blur prints and make them look larger, especially in soft snow. Indistinct trails of bounding martens (stride length 60-100cm) may resemble those of hares, with prints in groups of two or three where one or both hind feet have registered over prints of forefeet; and
- Den sites – Dens are usually not distinctive unless revealed by visible concentration of scats. Elevated den sites are preferred to keep martens safe from predators and provide insulation and shelter from the elements, and so hollow trees, owl boxes and the roofs of dwelling houses are often used, as well as purpose-built pine marten den boxes. Where such elevated dens are absent, they may den on the ground in rabbit burrows, rocky outcrops or under tree root plates.

[15] P., Bang & R. Dahlstrom (2006) Animal Tracks and Signs. Oxford University Press.

[16] Balharry, E.A., McGowan, G.M., Kruuk, H., Halliwel, E., 1996. Distribution of Pine Martens in Scotland as Determined by Field Survey and Questionnaire. SNH Survey and Monitoring Report No. 48. Scottish Natural Heritage, Edinburgh, UK.

Any of the above signs are diagnostic evidence of the presence of pine marten. However, it is often not possible to identify den sites with confidence unless other field signs are also present. Scats are the most reliable identifiable evidence of the presence of this species.

Other Protected and/ or Notable Species

Incidental sightings of other protected and/ or notable species, such as amphibians and reptiles, were also recorded during the survey.

2.3 Limitations

Heavy rain showers occurred during on the morning of the first survey. This is not thought to be a significant limitation as surveys on that day were focused on terrestrial mammal species, and not on riparian species. Therefore, there is less chance of signs being washed away.

A section of Carim Burn in the north of the site was partially inaccessible due to deer fencing. Accessible tributaries of the same watercourse were deemed unlikely to be suitable for otter or water vole therefore the impact of limited access to this particular watercourse is thought to be minimal.

At several points across the site, for some small sections of watercourse access was limited by vegetation e.g. rush, which prevented surveyors from having a clear view of small sections of some watercourses, or due to unsafe terrain e.g. steep sided gorges or waterfalls. However, the impact of this is not significant given that the majority of the Survey Area was accessible and could be clearly viewed.

It should be noted that ecological study provides only a ‘snapshot’ of the conditions prevailing at the time of survey. Lack of evidence of any species does not necessarily preclude them from being present on site at a later date.

Whilst it is considered unlikely that any significant evidence of protected or otherwise notable mammal species has been overlooked, due to the nature of the subjects of ecological surveys it is feasible that species that use the site may not have been recorded by virtue of their seasonality, cryptic behaviour, habit or random chance.

The above limitations discussed are not seen to have caused a significant impact and the results of this report are considered to be an accurate reflection of the site at the time of survey.

3.0 Results

Details of survey results are displayed in **Figure 8.2.2** and all target notes are detailed in **Annex 2**.

3.1 Otter

The presence of otter within the wider area was confirmed during the desk study data search.

There are several watercourses on site which consist of a mix of small burns as well as larger watercourses such as the River Devon and the Danny Burn. These watercourses provide potential commuting corridors for otter through the site, as well as providing a potential foraging resource for this species. The reservoirs to the east of the site would also provide good quality foraging habitat for otters.

Generally, the watercourses in the lower parts of the site are more suitable for a greater range of otter activities as they are wider with more rocky features and variation in bank height. This would provide otter not only with greater foraging opportunities but also areas to rest up in. The watercourses in the higher parts of the site are narrow, with low banks and less variation in vegetation cover which limits sheltering opportunities. Though the higher watercourses provide a commuting route to the boggy and marshy areas of site, within which otter may forage for amphibians.

Two otter spraints were recorded during the field survey (Target Note (TN) 8 and 9). Both were located to the north of the site, one on the Danny Burn, and the other on a small tributary of the Danny Burn. The spraints were recorded within 500m of each other.

3.2 Water vole

No records of water vole were returned in the desk study. The larger watercourses within the Survey Area are relatively fast flowing which would limit opportunities for water voles. Within the higher parts of the Survey Area there are small, slow-flowing burns partially underground and close to bog habitat which could provide good water vole habitat. However, the upland habitats within the site are heavily grazed throughout, reducing the foraging opportunity available to water voles. The site lacks areas of tall vegetation which would provide shelter for water voles and help protect them from predators like foxes, which are known to be present on site. Therefore, it can be concluded that much of the habitats on site present limited suitability for water vole. No signs of water voles were recorded during the survey.

3.3 Red Squirrel

The desk study identified three records of red squirrel within 2km of the site, indicating that they are present within the local area. The majority of the Survey Area contains no suitable habitat for red squirrel with little tree cover present. The most suitable areas of habitat are present close to the access road with small pockets of conifer plantation (TN 1, 2, 3, and 6). These plantations consist of Scots pine *Pinus sylvestris* and Sitka spruce *Picea sitchensis* which would provide shelter and foraging opportunities for red squirrels. However, these plantations are small in size and fragmented with poor habitat connectivity for red squirrels to safely move between them. No dreys or confirmed red squirrel feeding signs were recorded during the survey. However, a small area of nibbled penny buns *Boletus edulis* (TN 2*)* were recorded within one of the plantations. These are a favoured food by red squirrel, among other animals.

3.4 Badger

No records of badger were returned during the desk study data search. Upland habitats are not generally favoured by badgers, due to a lack of shelter and wet ground conditions which are ill suited to sett building. It is unlikely that badgers would regularly use the majority of the site. However, more suitable habitat was noted within the vicinity of the access route with small plantation pockets and

grassland providing areas of forage and shelter. No evidence of badger was recorded during the surveys, though potential areas of suitable habitat were (TN 1, 5, 6, &7).

3.5 Pine marten

No records of pine marten were returned during the desk study data search. Habitat for pine marten within the Survey Area is sub-optimal. The lack of woodland cover restricts shelter available to pine marten for both commuting and den building purposes. Pine marten will make use of open habitat such as heathland and grassland for foraging but are more likely to use these open habitats if they are located adjacent to areas of woodland. Given the low levels of woodland within the Survey Area it is unlikely that the site is frequently used by pine marten, but they may opportunistically forage within the area. No crags or suitable rocks for denning were identified and no signs of pine marten were noted during the survey.

3.6 Other Species

Evidence of rabbit *Oryctolagus cuniculus* was noted within the plantation pockets along the access road (TN 4 & 5). Roe deer *Caprelous capreolus*, fox *Vulpes vulpes* and field vole *Microtus agrestis* were recorded within the Site. A stoat *Mustela erminea* was also sighted during ornithological surveys near the top of Blairdenon Hill.

Common lizard *Zootoca vivipara* was also recorded incidentally within the during ornithological surveys of the Site within the turbine area.

4.0 Summary and Conclusions

The site contains limited suitable habitat for protected mammal species with only otter being confirmed as active on site. No places of shelter were identified during the surveys.

The importance of the site for protected mammals will be assessed within the EIA Report which will set out mitigation measures and best practice guidelines in relation to protected mammal species.

FIGURES

284000 286000 288000 290000 292000

708000 706000 704000 702000

LEGEND

- Application Boundary
- Application Boundary 50 m Buffer
- Watercourse
- Watercourse 50 m Buffer

N

0 1 2 Kilometres

WINDBURN WIND FARM LTD

SLR

WINDBURN WIND FARM

PROTECTED SPECIES REPORT

SURVEY AREA

FIGURE 8.2.1

Scale 1:35,000 @ A3

Date APRIL 2025

12959.00001.0236.0 Survey Areas

284000 286000 288000 290000 292000

708000 706000 704000 702000

TN1 TN2 TN3 TN4 TN5 TN6 TN7 TN8 TN9

Boreland Blackford Netherton Longfauld Butterdyke Topfauld Factory Distillery Drumhead Drumfad Castle (remns of) West Mains Glen Ho Bardrill Braes of Ogilvie Drumcairn Tarneybackle Blueton Williamfield Burnside Knowehead Banheath St Mungo's Fm Whaick East Biggs Wester Biggs (ruin) Kinpauch Hill 426 Glen of Kinpauch Wether Hill 503 Craigentaggert 493 Hill Tambeth Danny Burn Berry Hill Glen Bee Upper Glendevon Reservoir Lower Glendevon Reservoir Core Hill 542 Sheddens Little Corum Sauchanwood Hill 541 Glen Groathill Greenhill Burn Burnfoot Hill Backhills Broth Burn Bald Hill 500 Middle Hill Gradwell Burn Grodwell Hill 553 Skythorn Hill Cairnmorris Hill Maddy Moss Andrew Gannel Hill 669 Ben Cleuch 721 Ben Buck 679 Ben Ever 622 Craighorn Glenach Burn Ella Glen Burn Mickle Corum 594 Glentye Hill 481 Black Hill 355 Harperstone Head-dykes Side (ruin) Millstone Burn Ashentrool 417 Loss Hill Park Cott Glentye Cott Cauldhame Glen Tye Big Hunt Hill Old Wharry Burn Blairdenon Hill 631 613 Stones 1715 314 264 255 249 Langbank

N

LEGEND

- Application Boundary
- Application Boundary 50 m Buffer
- Target Note
- Watercourse
- Watercourse 50 m Buffer

0 1 2 Kilometres

WINDBURN WIND FARM LTD

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WINDBURN WIND FARM

PROTECTED SPECIES REPORT

SURVEY RESULTS

FIGURE 8.2.2

Scale 1:35,000 @ A3

Date APRIL 2025

12959.00001.0237.0 Survey Results

ANNEX A: DESK STUDY REPORT

Annex A: Ecological Desk Study

Windburn Wind Farm

Windburn Wind Farm Limited

Wind 2 Office,
2 Walker Street,
Edinburgh
EH3 7LA

Prepared by:

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The Tun, 4 Jackson's Entry, Edinburgh, EH8 8PJ

SLR Project No.: 428.V12959.00001

2 June 2025

Revision: 01

Table of Contents

Tables in Text

Appendices

1.0 Introduction

SLR Consulting Limited (SLR) was commissioned by Windburn Wind Farm Ltd (the applicant) in March 2023 to undertake protected mammal surveys for the proposed Windburn Wind Farm (the proposed development), centred on OS grid reference NN 87737 02889 (the site), to inform the Environmental Impact Assessment (EIA) for the proposed development. This desk study was completed in April 2023 and the results have been used to inform plans for the proposed development and the associated Environmental Impact Assessment (EIA) Report.

1.1 Site Description

The site is located in the Ochil Hills approximately 2.9km north of Alva and it is characterised by open habitats such as heathland, bog, and acid grassland, with some woodland within sheltered glens and small plantations. There are several watercourses within the site boundary including the Danny Burn, the River Devon and the Finglen Burn. The Upper and Lower Glendevon reservoirs are present outwith the site boundary to the east.

1.2 Desk Study Scope

This desk study is designed to give an overview of relevant existing ecological data, including data for protected and notable species and designated sites nearby. The desk study summarises data from a range of sources (see Section 3.0). The scope of this report is limited to ecology and therefore excludes information on sites designated for other interests such as geology.

2.0 Methods

Desk study data were acquired for protected and notable species from the following sources:

- The Wildlife Information Centre (TWIC) was commissioned in June 2021 to provide data relating to records of protected and notable species within the site and a 10km of it for all bat species, and a 2km radius for all other protected/notable species (limited to records within the last 15 years);
- NBN Atlas: Information relating to records of protected and notable species within the site and a 2km (limited to data licenced for commercial use);
- NatureScot's Carbon and Peatland 2016 Map (SNH, 2016) was reviewed, which gives a value to indicate the likely presence of carbon rich soils, deep peat and priority peatland habitat for the site, at a coarse scale across Scotland; and
- Ancient Woodland Inventory Scotland (NatureScot, 2000): A search was made for woodlands listed on the Ancient Woodland Inventory within a 2km radius of site.

A search of the Clackmannanshire Council, and Perth and Kinross Council online planning portals for relevant ecological reports submitted for other nearby developments within 10km of the site was made, and where relevant information could be obtained, these reports were reviewed for relevant ecological information:

- Wind Prospect (2011) Burnfoot Hill Wind Farm Extension (Burnfoot North)- Environmental Statement;
- Green Cat Renewables (2015) Strathallan Wind Farm – Environmental Statement;
- Wind Prospect (2017a) Burnfoot East Wind Farm – Environmental Statement; and
- Wind Prospect (2017b) Rhodders Wind Farm – Environmental Statement.

2.1 Nomenclature

For ease of understanding for most readers only common (English) names for species are used within the main body of the report (unless a species has no common name). Scientific (Latin) names are provided on first mention within the main body of the report.

2.2 Limitations

TWIC provides data for the south-east part of central Scotland. The northern limit of the area they provide data for runs along the Clackmannanshire border to the north of the site[1]. There is not Local Biological Records Centre for the area 2km to 10km north of the site. We consider that the data available from TWIC, NBN and ecological reports for nearby wind farms provide an adequate overview of the species present in the wider area.

Further, absence of a species from the data gathered does not preclude it from being present on site. Field surveys will seek to determine presence and/or absence of species on site.

The limitations detailed above are not thought that have had a significant impact on the results so the desk study, as where possible limitations were suitably mitigated.

3.0 Results

The information below summarises the data returned as a result of the searches detailed in Section 2.

3.1.1 Statutory Designated Sites

There are no statutory designated sites within the application boundary. There are 19 statutory sites designated for terrestrial (non-avian) features within 10km of the site. Sites designated for their geological value/features have been excluded. These are detailed in **Table 3-1** below and shown on EIA Report **Figure 8.1**.

Table 3-1 Statutory Designated Sites within 10km

Site Name	Designation	Distance from site boundary (km) and direction	Reasons for Designation (terrestrial ecology)
Shelforkie Moss	SAC	1.6 north	Active raised bog; degraded raised bog.
Carsebreck and Rhynd Lochs	SSSI	0.9 north	Hydromorphological mire range; raised bog.
Quoigs Meadow	SSSI	2.1 west	Spring fen.
Craig Leith and Myreton Hill	SSSI	2.1 west	Upland habitat assemblage; upland mixed ash woodland; sticky catchfly *Lychnis Viscaria;* Northern brown Argus *Aricia artaxerxes.*
Bog Wood and Meadow	SSSI	3.3 north east	Lowland grassland fen meadow and woodland scrub.
Gleneagles Mire	SSSI	3.5 north	Wetlands: basin fen.

[2] https://www.alerc.org.uk/lerc-finder.html

Dollar Glen	SSSI	3.6 east	Beetle *Stenus glacialis;* subalpine calcareous grassland; subalpine flushes.
Gartmorn Dam	SSSI	6.6 south east	Freshwater habitat – eutrophic loch; open water transition fen.
	LNR		
Kippenrait Glen	SAC	7.0 south west	Mixed woodland on base-rich soils associated with rocky slopes.
	SSSI		Beetle assemblage, cranefly *Lipsothrix ecucullata;* upland mixed ash woodland.
Kincardine Castle Wood	SSSI	6.9 north east	Lowland mixed broadleaved woodland.
Firth of Forth	SSSI	6.8 south	Beetle assemblage; lowland neutral grassland; maritime cliff; mudflats; northern brown argus *Aricia artaxerxes;* Saline lagoon; saltmarsh; sand dunes; transition grassland; vascular plant assemblage.
Abbey Craig	SSSI	6.9 south west	Upland mixed ash woodland; beetle assemblage.
River Teith	SAC	8.4 south west	River lamprey *Lampetra fluviatilis*, brook lamprey *Lampetra planeri*, sea lamprey *Petromyzon marinus* and Atlantic salmon *Salmo salar*.
Linn Mill	SSSI	7.8 south east	Upland mixed ash woodland.
Damhead Wood	SSSI	7.6 south east	Wet woodland.
Wester Moss	SSSI	9.3 south west	Raised bog.
Back Burn Wood and Meadows	SSSI	9.6 east	Upland mixed ash woodland and lowland acid grassland.
Devon Gorge	SSSI	9.7 east	Upland mixed ash woodland.

3.1.2 Non-statutory Designated Sites

There is one non-statutory designated site, and three candidate non-statutory designated sites within 2km of the site boundary. Two of these sites, Alva Moss and Upper Glendevon Reservoir, sit either wholly or partially within the site boundary (see **Table 3-2** and EIA Report **Figure 8.2**).

Table 3-2: Non-Statutory Designated Sites within 2km of the Site

Site Name	Designation	Distance from site boundary (km)	Site Conditions
Alva Moss	LNCS (candidate)	Within boundary	Class 1 peatland. Blanket *sphagnum* bog, mire and acid grasslands with nationally and locally scarce plants such as cloudberry *Rubus chamaemorus* and mossy saxifrage *Saxifraga hypnoides*. Ancient woodland also covers the majority of the site.
Upper Glendevon Reservoir	LNCS	Within boundary	Reservoir with bogs, Scots pine *Pinus sylvestris*.

Site Name	Designation	Distance from site boundary (km)	Site Conditions
Old Wharry Burn	LNCS (candidate)	1.8	Notable species present include: Heather *Calluna vulgaris*, Harebell *Campanula rotundifolia*, Grass-of Parnassus *Parnassia palustris*, Mossy Saxifrage *Saxifraga hypnoides*, Small Heath *Coenonympha pamphilus*, as well as numerous bird species.
Black Hill	LNCS (candidate)	1.9	Wooded summit in the western Ochill Hills.

3.2 Protected and Notable Species

Full details of species records returned can be found in Annex 01 and are summarised below.

The desk study data search results included records for the following protected or notable species within 2km (10km for bats) of the site:

- Two species of invertebrates (neither of which are within the site boundary);
- No species of reptiles and amphibians;
- Records of Atlantic salmon, brown trout, sea trout, European eel and lamprey species within 2km of the site;
- Five species of terrestrial mammal – mountain hare *Lepus timidus*, beaver *Castor fiber*, red squirrel *Sciurus vulgaris*, hedgehog *Erinaceus europaeus* and otter *Lutra lutra*; and
- At least three species of bat (within 10km of the site), including common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus*, both of which are considered high risk of collision with wind turbines under current guidelines.

A summary of protected species recorded at nearby wind farm sites is provided below:

- Burnfoot East Wind Farm (Wind Prospect, 2017): Evidence of otter (spraint) was recorded along the Broich Burn. Evidence of squirrel (feeding signs) was recorded in coniferous forestry close to the Upper Glendevon reservoir, species of squirrel unknown; two passes of a single bat species (*Pipistrellus* species) recorded during single dusk survey undertaken. Fish were observed in Grodwell Burn, however fish surveys were not undertaken. No evidence of water vole (*Arvicola amphibius*), badger (*Meles meles*), reptiles, amphibians or other protected species were recorded.
- Burnfoot Hill North Wind Farm (Wind Prospect, 2011): No evidence of badger, otter, water vole, bats, reptiles or other protected species was recorded; and
- Rhodders Wind Farm (Wind Prospect, 2011): No evidence of the presence of badger, otter, water vole, bats or other protected species was recorded during the surveys.

3.3 Invasive/Non-native Species

The desk study data search did not yield any records of invasive species within 10km of the site.

3.4 Ancient Woodlands

A search of the ancient woodland Inventory found that here are eight parcels of ancient woodland (long-established of plantation origin) within 2km of the site. The nearest of which is located approximately 0.7km west of the access track.

3.5 Peatland and Carbon Map

Review of the NatureScot (formerly SNH) Carbon and Peatland 2016 map found the presence of Class 1 and Class 2 peatland habitat within the site. Class 1 peatland is defined as Nationally important carbon rich soils, deep peat and priority peatland habitat – areas likely to be of high conservation value. Class 2 peatland is defined as Nationally important carbon rich soils, deep peat and priority peatland habitat – areas of potentially high conservation value and restoration potential.

4.0 Conclusions

Desk study data indicates that the closest statutory designated site is Carsebrek and Rhynd Lochs (0.9km north), and that protected species such as bats and otters are present within the wider area. Additionally, two candidate non-statutory designated sites overlap either wholly or partially (Upper Glendevon Reservoir and Alva Moss) and are hydrologically connected to the site through groundwater and tributaries within the site.

Annex 01: Summary of Protected/Notable Species Records

Annex A: Ecological Desk Study

Windburn Wind Farm

Windburn Wind Farm Limited

SLR Project No.: 428.V12959.00001

2 June 2025

A.1 Summary of Protected/Notable Species Records

Table 4-1: Summary of Protected/Notable Species Records

Species	Nearest Location to site Boundary	Data Source	Last Record	Protection/Conservation Status (see Annex 02 for Definitions)
Flora				
Beech Fern *Phegopteris connectilis*	Within boundary	TWIC	2015	ST, Borders L Lothian VL
Brown bent *Agrostis vinealis*	0.5km	TWIC	2019	Lothian L
Chickweed-wintergreen *Trientalis europaea*	0.5km	TWIC	2019	SB, Borders and Lothian VL
Cloudberry *Rubus chamaemorus*	Within boundary	TWIC	2019	CL ST Lothian L
Common cow wheat *Melampyrum pratense*	1.1km	TWIC	2019	Lothian L
Cowberry *Vaccinium vitis-idaea*	Within boundary	TWIC	2019	Lothian L
Crowberry *Empetrum nigrum subsp. Nigrum*	Within boundary	TWIC Rhodders Wind Farm Environmental Statement	2011	Lothian L
Downy birch *Betula pubescens*	Within boundary	TWIC	2021	W (I)
Hairy stonecrop *Sedum villosum*	Within boundary	TWIC Rhodders Wind Farm Environmental Statement	2020	E SB ST W(K) Lothian L NS-excludes, RLGB.Lr(NT)
Heather *Calluna vulgaris*	Within boundary	TWIC	2019	ST
Mossy saxifrage *Saxifraga hypnoides*	Within boundary	TWIC	2020	CL SB ST Lothian VL RLGB.VU, ScotBL
Starry saxifrage *Saxifraga stellaris*	Within boundary	TWIC	2020	CL Lothian VL
Fauna				

Species	Nearest Location to site Boundary	Data Source	Last Record	Protection/Conservation Status (see Annex 02 for Definitions)
Invertebrates				
Northern brown argus *Aricia artaxerxes*	0.6km	TWIC	2021	Lothian Rarity, LBAP, SBL
Orange tip *Anthocharis cardamines*		TWIC	2021	LBAP WI
Small heath *Coenonympha pamphilus*	0.3km	TWIC	2021	PS(RO), RLGB.Lr(NT), ScotBL
Small pearl bordered fritillary *Boloria selene*		TWIC	2021	LBAP, Lothian rarity, borders rarity
Green hairstreak *Callophrys rubi*		TWIC	2021	LBAP, Lothian rarity, borders rarity
Small Heath *Coenonympha pamphilus*		TWIC	2021	
Large Heath *Coenonympha tullia*				
Purple Hairstreak *Favonius quercus*				
Speckled wood *Pararge aegeria*				
Common Blue *Polyommatus icarus*				
Common Blue Damselfly				
Fish				
Mammals				
Eurasian red squirrel *Sciurus vulgaris*	0.1km	TWIC	2013	Bern3, RLGB.EN, ScotBL, UKBAP, WCA5/9.1k/l, WCA5/9.1t, WCA5/9.4.a, WCA5/9.4b, WCA5/9.4c, CL E SB ST W(K), Lothian Rarity
Bats				

Species	Nearest Location to site Boundary	Data Source	Last Record	Protection/Conservation Status (see Annex 02 for Definitions)
Common pipistrelle *Pipistrellus pipistrellus*	3.8km	TWIC	2008	CE CL E SB W(K) CMS_A2, CMS_EUROBATS-A1, HabRegs2, HSD4, WCA5/9.4b, WCA5/9.4c
Daubenton's *Myotis daubentonii*	7.5km	TWIC	2016	CE CL Bern2, CMS_A2, CMS_EUROBATS-A1, HabRegs2, HSD4, ScotBL, WCA5/9.4b, WCA5/9.4c
Pipistrelle (unspecified) *Pipistrellus*	3.1km Burnfoot East Wind Farm land	TWIC Burnfoot East Wind Farm Environmental Statement	2017	Bern2, Bern3, CMS_A2, CMS_EUROBATS-A1, HabRegs2, HSD4, RLGB.Lr(NT), ScotBL, UKBAP, WCA5/9.4b, WCA5/9.4c CE
Soprano pipistrelle *Pipistrellus pygmaeus*	3.4km	TWIC	2008	CE CL E F SB W(K) Bern2, CMS_A2, CMS_EUROBATS-A1, HabRegs2, HSD4, ScotBL, UKBAP, WCA5/9.4b, WCA5/9.4c

Annex 02: Glossary of Codes for Species Protection/Conservation Status

Annex A: Ecological Desk Study

Windburn Wind Farm

Windburn Wind Farm Limited

SLR Project No.: 428.V12959.00001

2 June 2025

A.2 Glossary of Codes for Species Protection/Conservation Status

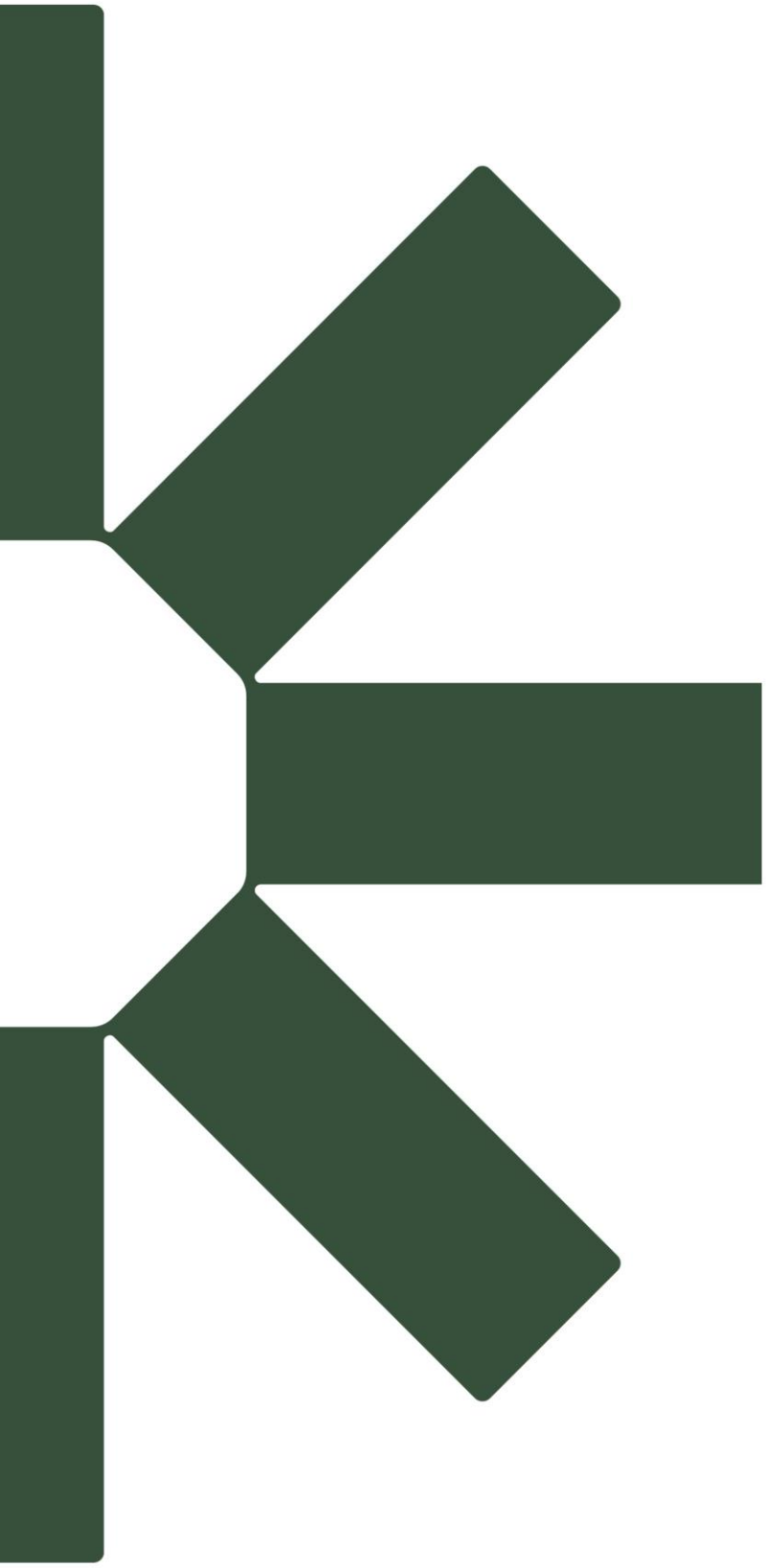
Table 4-2: Glossary of Codes for Species Protection/Conservation Status

Abbreviation	Full Designation	Type	Description
CL	Clackmannanshire	Scotland	Local Biodiversity Action Plan (LBAP)
F	Falkirk	Scotland	Local Biodiversity Action Plan (LBAP)
F (I)	Falkirk Indicatator Species	Scotland	Local Biodiversity Action Plan (LBAP)
ST	Stirling	Scotland	Local Biodiversity Action Plan (LBAP)
W (I)	West Lothian Indicator Species	Scotland	Local Biodiversity Action Plan (LBAP)
SB	Scottish Borders	Scotland	Local Biodiversity Action Plan (LBAP)
VL	Local rarity; Very local	Scotland	Local Biodiversity Action Plan (LBAP)
L	Local rarity; Local	Scotland	Local Biodiversity Action Plan (LBAP)
W (K)	West Lothian Key Species	Scotland	Local Biodiversity Action Plan (LBAP)
Bern1	Bern Convention Appendix 1	International	
Bern 2	Bern Convention Appendix 2	International	
Bern3	Bern Convention Appendix 3	International	Special protection through ‘appropriate and necessary legislative and administrative measures’, of the listed wild fauna species.
FFFCE	The Freshwater Fish Conservation (Prohibition on Fishing for Eels) (Scotland) Regulations 2008	Scotland	
HabRegs2	The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended in Scotland) (Schedule 2)	National Legislation	Schedule 2- European protected species of animals.

Abbreviation	Full Designation	Type	Description
HabRegs4	The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended in Scotland) (Schedule 4)	Legislation	Schedule 4- Animals which may not be taken or killed in certain ways.
HabRegs5	The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended in Scotland) (Schedule 5)	National Legislation	Schedule 5- European protected species of plants.
HSD2np	Habitats Directive Annex 2 (non-priority species)	European	
HSD2p	Habitats Directive Annex 2 (priority species)	European	
HSD4	Habitats Directive Annex 4	European	
HSD5	Habitats Directive Annex 5	European	
Protection of Badgers Act (1992)	Protection of Badgers Act (1992)	National Legislation	The Protection of Badgers Act 1992 protects badgers from taking, injuring, killing, cruel treatment, selling, possessing, marking and having their setts interfered with, subject to exceptions.
RLGB.CR	IUCN	National	GB Red list: Critically endangered
RLGB.DD	IUCN	National	GB Red list: Data deficient
RLGB.EN	IUCN	National	GB Red list: Endangered
RLGB.EW	IUCN	National	GB Red list: Extinct in the wild
RLGB.Lr(NT)	IUCN	National	GB Red list: Lower risk (near threatened)
RLGB.VU	IUCN	National	GB Red List: Vulnerable
RLGB.	IUCN	National	GB Red List: Extinct
RLGLB.CR	IUCN	International	Global Red list: Critically endangered
RLGLB.DD	IUCN	International	Global Red list: Data deficient
RLGLB.EN	IUCN	International	Global Red list: Endangered
RLGLB.EW	IUCN	International	Global Red list: Extinct in the wild
RLGLB.Lr(NT)	IUCN	International	Global Red list: Lower risk (near threatened)
RLGLB.VU	IUCN	International	Global Red List: Vulnerable
RLGLB.EX	IUCN	International	Global Red List: Extinct

Abbreviation	Full Designation	Type	Description
ScotBL	Scottish Biodiversity List of species of principal importance for biodiversity conservation	National	The Scottish Biodiversity List is a list of flora, fauna and habitats considered by the Scottish Ministers to be of principal importance for biodiversity conservation. The development of the list has been a collaborative effort involving a great many stakeholders.
SFFA	Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003	Scotland	Protection for salmonid and other freshwater fish in Scotland.
PS (RO)	Protected Species (Research Only)		
UKPS	UK Priority Habitats and Priority Species	UKPS	The UK List of Priority Species and Habitats contains 1150 species and 65 habitats that have been listed as priorities for conservation action. The UKPS is no longer extant but many of the priority habitats and species remain conservation priorities.
VC75RPR	Ayrshire Rare Plant Register	Local	Species listed in the VC rare plant register.
WCA5/9.1k/l	Wildlife and Countryside Act 1981 (as amended in Scotland)(Schedule 5 Section 9.1 (killing/injuring))	National Legislation	Section 9.1. Animals which are protected from intentional killing or injuring.
WCA5/9.1t	Wildlife and Countryside Act 1981 (as amended in Scotland) (Schedule 5 Section 9.1 (taking))	National Legislation	Section 9.1 Animals which are protected from taking.
WCA5/9.2	Wildlife and Countryside Act 1981 (as amended in Scotland) (Schedule 5 Section 9.2)	National Legislation	Section 9.2 Animals which are protected from being possessed or controlled (live or dead).
WCA5/9.4a	Wildlife and Countryside Act 1981 (as amended in Scotland) (Schedule 5 Section 9.4, subdivision a)	National Legislation	Section 9.4 subdivision a - Animals which are protected from intentional damage or destruction to any structure or place used for shelter or protection.
WCA5/9.4b	Wildlife and Countryside Act 1981 (as amended in Scotland) (Schedule 5 Section 9.4b)	National Legislation	Section 9.4 Animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection.

Abbreviation	Full Designation	Type	Description
WCA5/9.4c	Wildlife and Countryside Act 1981 (as amended in Scotland) (Schedule 5 Section 9.4c)	National Legislation	Animals which are protected from their access to any structure or place which they use for shelter or protection being obstructed.
WCA5/9.5a	Wildlife and Countryside Act 1981 (as amended in Scotland) (Schedule 5 Section 9.5a)	National Legislation	Section 9.5 Animals which are protected from being sold, offered for sale or being held or transported for sale either live or dead, whole or part.
WCA5/9.5b	Wildlife and Countryside Act 1981 (as amended in Scotland) (Schedule 5 Section 9.5b)	National Legislation	Section 9.5 Animals which are protected from being published or advertised as being for sale.
WCA8	Wildlife and Countryside Act 1981 (as amended in Scotland) (Schedule 8)	National Legislation	Plants which are protected from intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for sale.
WCA9/INV	Wildlife and Countryside Act 1981 (as amended in Scotland) (Schedule 9)	National Legislation	Includes all non-native species listed in Schedule 9 (parts 1 and 2) covering animals and plants which may not be released or allowed to escape into the wild plus additional invasive non-native species.



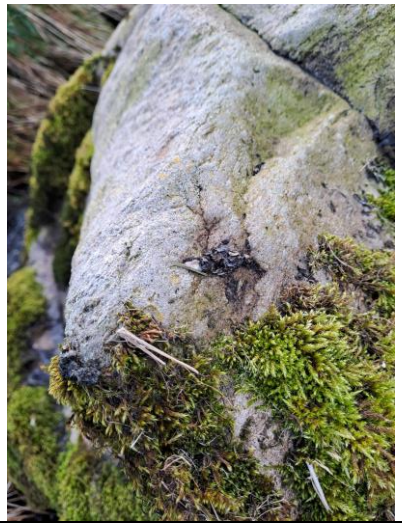
Making Sustainability Happen

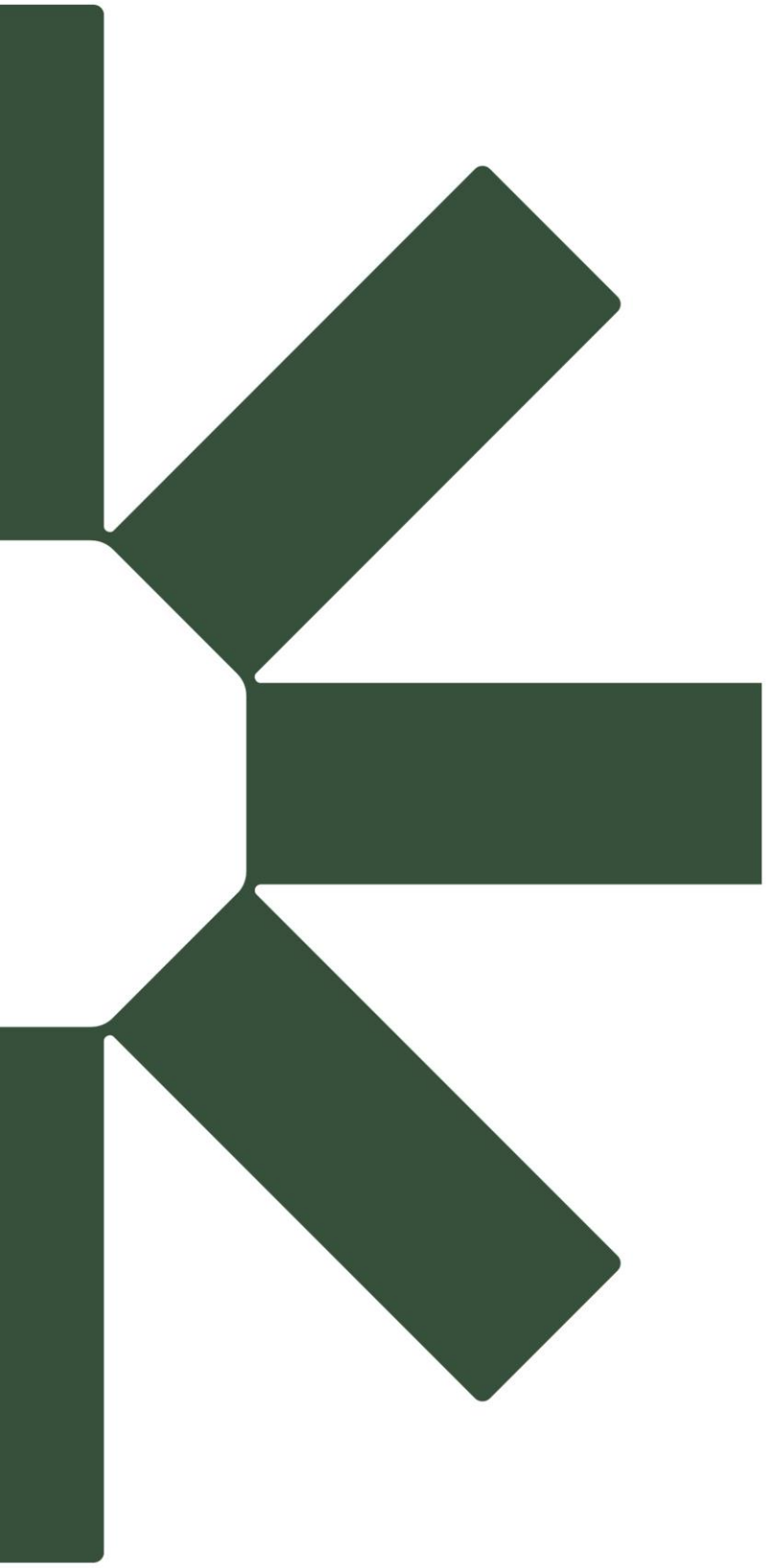
ANNEX B: FIELD SURVEY TARGET NOTES

Table 4-1: Survey Target Notes (TNs)

TN	Location (x,y)	Species	Description	Photo
1	286449, 706202	-	Conifer plantation - immature <20 years. No evidence of use by protected mammals, though potential habitat for badger and red squirrel.	
2	286513, 706288	Red squirrel	Recently eaten penny buns (*Boletus edulis*).	
3	287297, 707212	-	Conifer plantation - immature <20 years, includes Sitka spruce and Scots pine providing suitable habitat for red squirrel. No evidence of use by protected mammals.	

TN	Location (x,y)	Species	Description	Photo
4	288012, 708025	Rabbit	Rabbit warren at side of road.	
5	288035, 708028	Rabbit	Rabbit warren.	
6	286336, 706001	-	Conifer plantation north, consisting of Sitka spruce with potential habitat for red squirrel and badger. No evidence of use by protected mammals.	
7	287085, 707285	-	Plantation of conifer woodland - juvenile trees less than 10 years old with potential habitat for badger. No evidence of use by protected mammals	

TN	Location (x,y)	Species	Description	Photo
8	287205, 704036	Otter	Otter spraint, very old. Located on the Danny Burn.	
9	287618, 704177	Otter	Otter spraint on rock, appears old.	



Making Sustainability Happen