Torfichen Wind Farm

Protected Species Survey Report

Appendix 8.2

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Document Quality Record

Version	Status	Person Responsible	Date
0.1	Draft	E. Stacey	03/08/2023
0.2	Reviewed	N. White / F. Gillies	10/08/2023
0.3	Updated	E. Stacey / N. White	15/08/2023
0.4	Reviewed	K. Hobbs	31/08/2023
1	Internal Approval	K. Hobbs	05/09/2023
2	Updated following Client Review	B. Henry	19/10/2023

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1 INTRODUCTION

MacArthur Green was commissioned by Renewable Energy Systems Ltd. (the Applicant) to carry out protected species surveys at Torfichen Wind Farm (hereafter referred to as the 'Proposed Development').

These surveys primarily focussed on otter (*Lutra lutra*), water vole (*Arvicola amphibius*), badger (*Meles meles*), red squirrel (*Sciurus vulgaris*) and pine marten (*Martes martes*). A Habitat Suitability Index (HSI) assessment was also carried out to determine the suitability of any waterbodies for great crested newt (GCN) (*Triturus cristatus*).

A watching brief was also kept throughout these surveys, and during all ecological surveys at the Proposed Development, and signs recorded for other protected species potentially inhabiting the site and respective survey areas such as adder (*Vipera berus*), common or viviparous lizard (*Zootoca vivipara*), and slow worm (*Anguis fragilis*).

Surveys for bats and fish were carried out and are reported separately in **Appendix 8.3** and **Appendix 8.4**.

These protected species surveys were undertaken to aid and inform the design and ecological assessment for the Proposed Development Environmental Impact Assessment Report (EIA Report).

2 THE SITE AND SURVEY AREA

The Proposed Development is located approximately 4 km south of Gorebridge and 9.5 km south-east of Penicuik, within the northern edge of the Moorfoot Hills in the Midlothian Council (MC) area.

The site is set within a mixed landscape of undulating farmland, fragmented moorland and forestry which is populated sparsely with settlements. The elevation on site varies from 270 m Above Ordnance Datum (AOD) along the northern boundary of the site to 490 m AOD near the summit of Mauldslie Hill to the south. Elevation generally decreases towards the north-west. A number of tributaries to the Black Burn, Latch Burn and Middleton North Burn intersect the site and there is a small area of Ancient Woodland overlapping the northern boundary. The site is primarily agricultural, predominately used for livestock farming.

The 'survey area' in which protected species surveys were undertaken for the Proposed Development exceeds the proposed extent of the site boundary and is shown in **Figure 8.5**; a 500 m buffer around the Proposed Development was subject to HSI assessment for GCN (shown on **Figure 8.5**).

3 LEGAL PROTECTION

Details of the legal protection of the protected species surveyed for are given in **Annex A** of this report.

4 METHODS

4.1 Desk-based Assessment

A desk-based assessment was undertaken to inform the field surveys and assessment with regards the presence of designated sites and species of interest within the site and study area.

This assessment consisted of the consultation of various online resources such as the NBN Atlas[1], NatureScot Sitelink[2] and the Deer Distribution Survey[3]. The desk-based assessment also reviewed the EIA and associated documents for the three turbine Carcant Wind Farm (adjacent to the site boundary).

4.2 Field Surveys

Surveys to record the presence or likely absence of otter, water vole, badger, red squirrel and pine marten have been undertaken, with all habitats suitable for protected species surveyed within the survey area. The respective surveys areas included the site boundary, with waterbodies within a 500 m buffer of the Proposed Development undergoing an HSI assessment for GCN; see **Figure 8.5.**

A watching brief for any protected species signs was also undertaken during other survey visits (e.g., vegetation/other ecology surveys) throughout the year.

The signs found indicate type and intensity of activity and consequently help in the assessment of the importance of a particular area for the protected species. The survey methods used are described below and are in line with NatureScot guidance[4].

4.2.1 Otter

All accessible watercourses within the survey area were surveyed for otter field signs. Otter field signs and survey methods are described in Bang & Dahlstrøm (2001)[5], Sargent & Morris (2003)[6], and Chanin (2003)[7], and include:

- **Holts:** underground features 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. Holts are used by otters to rest up during the day and are the usual location of natal or breeding sites. Otters may use holts permanently or temporarily.

[1] National Biodiversity Network Atlas Scotland. (2023). Available: https://scotland.nbnatlas.org/. Accessed: August 2023.
[2] NatureScot (2023). SiteLink. Available online: https://sitelink.nature.scot/home [Accessed August 2023]
[3] The British Deer Society (2016). Deer Distribution Survey Results. Available online: https://bds.org.uk/science-research/deer-surveys/deer-distribution-survey/ [Accessed August 2023]
[4] NatureScot (2023). Standing Advice for Planning Consultations. Available online: https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/planning-and-development-standing-advice-and-guidance-documents [Accessed August 2023]
5 Bang, P., and Dahlstrøm, P. (2001). Animal Tracks and Signs. Oxford University Press, Oxford.
[6] Sargent, G., and Morris, P. (2003). *How to Find and Identify Mammals*. The Mammal Society, London.
[7] Chanin, P. (2003). *Monitoring the Otter (Lutra lutra)*. Conserving Natura 2000 Rivers Monitoring Series No.10 English Nature, Peterborough.

- **Couches:** 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 have been known to be used as natal and breeding sites. Couches can be very difficult to identify and may consist of 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:** otters have characteristic footprints that can be found in soft ground and muddy areas.
- **Spraints:** otter faeces may be used to mark territories, often on in-stream boulders. They can 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 at high flow conditions when they will travel along bank sides in preference to swimming.
- **Slides and play areas:** slides are typically worn areas on steep slopes where otters slide on their bellies, often found between holts or couches and watercourses. Play areas are used by juvenile otters in play and are often evident by trampled vegetation and the presence of slides. These are often positioned in sheltered areas adjacent to the natal holt.

Any of the above signs (apart from paths) are diagnostic of the presence of otter. However, it is often not possible to identify couches with confidence unless other field signs are also present. Spraints are the most reliably identifiable evidence of the presence of this species.

4.2.2 Water Vole

All watercourses within the survey area were surveyed for water vole field signs following the methodology prescribed in Dean *et al.* (2016)[8]. This involved searching for the following field signs:

- **Faeces:** recognisable by their size, shape, and content. If not too dried-out these are also distinguishable from rat droppings by their smell.
- **Latrines:** faeces, often deposited at discrete locations.
- **Feeding stations:** food items are often brought to feeding stations along pathways and hauled onto platforms. Recognisable as neat piles of chewed vegetation up to 10cm long.
- **Burrows:** appear as a series of holes along the water's edge distinguishable from rat burrows by size and position.
- **Lawns:** may appear as grazed areas around land holes.
- **Nests:** where the water table is high above ground woven nests may be found.

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

- **Footprints:** tracks may occur at the water's edge and lead into bank side vegetation. May be distinguishable from rat footprints by size.
- **Runways in vegetation:** low tunnels pushed through vegetation near the water's edge; these are less obvious than rat runs.

Dean *et al.* (2016)[8] states that water vole droppings are the only field sign that can be used to determine water vole presence reliably on their own. Experience is required to distinguish feeding signs, burrows and footprints of water voles from those of other species. A collection of these field signs found in close proximity can indicate water vole presence.

4.2.3 Badger

Land with the potential to support badger within the survey area was searched for field signs with particular attention given to areas around woodland and areas underlain by mineral soils. Field signs of badger are described in Neal and Cheeseman (1996)[9], Bang and Dahlstrøm (2001)[5], and Scottish Badgers (2018)[10]. Field evidence searched for included:

- **Setts:** single and/or groups of holes (refer to **Table 4-2** for categories).
- **Prints:** badgers have characteristic footprints that can be found in soft ground and muddy areas.
- **Latrines and dung pits:** these are small excavated pits in which droppings are deposited. Latrines are a collection of dung pits used as territorial markers.
- **Hairs:** tufts of hair can often be found on fences, or in the entrances to setts.
- **Feeding signs:** small scrapes, also known as snuffle holes, where badgers have searched for insects and plant tubers. Feeding signs can also include dug up wasp or bee nests and ripped up dung of other species including cattle.
- **Scratching posts:** marks on trees (including fallen trees) where badgers have scratched leaving claw marks or ripped at areas of rotten bark to search for food.
- **Paths:** these are routes that badgers take when moving between setts and foraging areas.

Where setts were recorded their sett entrance classification and sett type were noted, in line with the definitions outlined in Scottish Badgers (2018)[10], which are reproduced below in **Table 4-1** and **Table 4-2** below.

Table 4-1 Sett entrance classifications and associated descriptions[10]

Classification	Description
Well Used	Are clear of debris and vegetation, sides worn smooth but not necessarily excavated recently.
Partially Used	Are not in regular use and have debris e.g. twigs and leaves in the entrance. They could be used after only a minimal amount of clearance.

[9] Neal, E., and Cheeseman, C.L. (1996). Badgers. Poyser Natural History, London.
[10] Scottish Badgers (2018). Surveying for Badgers: Good Practice Guidelines. Version 1.

Classification	Description
Disused	Not in use for some time, are partially blocked and could not be used without considerable effort. Rabbits and foxes may take over part of a sett and keep disused entrances open.
Collapses	Where a tunnel has collapsed.
Air Holes	Where badgers have made a small hole in a tunnel roof from below.

Table 4-2 Categories of sett and associated descriptions[10]

Category	Description
Main	Main setts usually have several holes with large spoil heaps, and the sett generally looks well used. There are obvious paths to and from the sett and between sett entrances. In the British National Badger Survey the average number of holes for a main sett was twelve, although main setts may be much smaller, even a single hole in exceptional circumstances. Although normally the breeding sett and in continuous use, it is possible to find a main sett that has some disused or dormant entrances.
Annexe	These are often close to a main sett, normally less than 150m away, and are connected to the main sett by one or more well-worn paths. Usually there are several holes but the sett may not be in use all the time, even if the main sett is very active. The average number of holes per annexe sett in the British survey was eight.
Subsidiary	These are usually at least 50m from a main sett, and do not have an obvious path connecting with another sett. They are not continuously active. The average number of holes per subsidiary sett in the British survey was four.
Outlier	These often have little spoil outside the holes, have no obvious path connecting them with another sett, and are only used sporadically. When not in use by badgers, they are often taken over by foxes or even rabbits. However, they can still be recognised as badger setts by the shape of the tunnel (not the actual entrance hole), which is at least 25cm in diameter, and rounded or a flattened oval shape (i.e. broader than high). Fox and rabbit tunnels are smaller and often taller than they are broad. The average number of holes per outlying sett in the British survey was two.
Other	In some cases, it can be difficult to assess the status of a sett, and it is open to interpretation. It is therefore recommended that if there is uncertainty as to the type of sett present, setts should be referred to as 'Other'.

4.2.4 Pine Marten

Signs of pine marten were searched for within the survey area following guidance from O'Mahony *et al.* (2006)[11]. Survey methods included:

- **Scats**: searches for pine marten scats were made along linear features such as fence lines, stone walls or forestry tracks/rides. Also searches for scats on prominent features such as tree stumps, dead logs or stones, and around rock piles and dense scrub where the species could establish a den.
- **Dens**: identification of features which could be used as a den. Dens can include the utilisation of upturned trees, tree cavities, rocks or manmade structures such as log piles or large bird boxes.

[11] O'Mahony D., O'Reilly, C. & Turner, P. (2006). National Pine Marten Survey of Ireland 2005. COFORD, Dublin.

4.2.5 Red squirrel

Areas of woodland that have the potential to support red squirrel were surveyed for squirrels, following guidance from Gurnell *et al.*[12]. Survey methods included:

- **Sightings**: visual sightings of red squirrels.
- **Dreys**: dreys are usually built close to the main stem of a tree, over 3 m from ground level and over 50 x 30cm in size.
- **Feeding signs**: predated cone (cone cores) searches in areas of woodland.

4.2.6 Great Crested Newt – Habitat Suitability Index Assessment

Ponds or waterbodies identified from Ordnance Survey (OS) maps within the respective survey area and where access permissions allowed were surveyed and subject to a GCN HSI assessment following standard guidance (Oldham *et al.*, 2000)[13] and taking cognisance of O'Brien *et al.*, (2017)[14] which proposes modifications to the geographical range factor in Scotland.

The HSI allows for an evaluation to be made of the potential for waterbodies to support GCN. It considers the following ten habitat criteria, which influence the likely presence or likely absence of GCN, and scores them according to their suitability:

- geographic location;
- pond size/area[15];
- pond permanence;
- water quality;
- pond shading;
- presence of fish;
- presence of waterfowl;
- presence of other ponds within a 500m radius;
- availability of suitable terrestrial habitat; and
- availability of suitable aquatic vegetation on which newts can lay their eggs.

HSI scores are calculated as the geometric mean of the ten individual habitat suitability scores using the formula HSI = $(SI_1 \times SI_2 \times SI_3 \times SI_4 \times SI_5 \times SI_6 \times SI_7 \times SI_8 \times SI_9 \times SI_{10})^{1/10}$. HSI scores, which range between 0 and 1, can provide an indication of the likelihood of their potential to support GCN. Ponds with high scores are more likely to support GCN than those with low scores. **Table 4-3** details

[12] Gurnell, J., Lurz, P. McDonald, R. & Pepper, H. (2009). Practical Techniques for Surveying and Monitoring Squirrels. Forestry Commission Practice Note.
[13] Oldham, R.S., Keeble, J., Swan. M.J.S. and Jeffcote, M. (2000). *Evaluating the Suitability of Habitat for the Great Crested Newt* (*Triturus cristatus*). Herpetological Journal, Vol. 10 pp.143-155.
[14] O'Brien, D., Hall, J., Miró, A., Wilkinson, J. (2017). Testing the validity of a commonly-used habitat suitability index at the edge of a species' range: great crested newt Triturus cristatus in Scotland. Amphibia-Reptilia 38: 265-273.
[15] Score omitted from calculation if pond over 2,000m² (Oldham *et al.*, 2000).

the HSI score bands that have been developed to provide a rough guide as to likelihood of ponds supporting GCN based on their HSI scores (Oldham *et al.*, 2000)[13].

Table 4-3 GCN habitat suitability index scoring

HSI score	Pond suitability
<0.5	Poor
0.5-0.59	Below average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent

4.2.7 Reptiles

Targeted reptile surveys were not undertaken, however, incidental records of reptile sightings, or signs such as shed skins, and features of particular importance (i.e. potential hibernacula) were recorded.

4.2.8 Other Species

A watching brief was maintained for all other protected, notable, and/or invasive species during surveys and presence or field signs recorded as appropriate (e.g. hares (*Lepus* spp.), and American mink (*Neovison vison*)).

4.2.9 Species Scoped Out

Surveys for beaver (*Castor fiber*) and wildcat (*Felis silvestris*) were scoped out of field surveys due to the absence of suitable habitat or the survey area being located outwith the known range or distribution of these species.

5 SURVEY DETAILS & LIMITATIONS/CONSTRAINTS

Surveys for protected species were undertaken between 17 – 20 October 2022 and 14 – 15 November 2022. The weather conditions during surveys were dry with showers over both survey periods, with watercourses at normal levels. Two survey visits were required as a large portion of the site was inaccessible during the October visit as a result of deer farming operations.

The timing of protected species surveys were outwith the ideal window for detection of water vole. However, no particular suitability of habitat for water vole was recorded, with watercourses heavily poached.

The estimates of two factors within the GCN HSI assessment of ponds (levels of shade and macrophyte coverage) are recommended to be undertaken between May and the end of September (Oldham *et al.*, 2000)[13] to allow for an accurate assessment of vegetation cover during the main GCN active period. Although the HSI assessment for the site was undertaken in October 2022, submerged vegetation from the main 2022 flowering season was still apparent. It was also possible to accurately estimate levels of shading due to the pond being located within open grassland with no shade from surrounding trees or buildings.

Due to protected species' mobile natures, it is possible that new features may be created in the period between surveys and the commencement of construction. It is therefore recommended that re-fresh surveys are undertaken in advance of construction activities progressing across the site.

6 RESULTS

6.1 Desk-based Assessment Results

6.1.1 Designated Sites

There are no designated sites within the site boundary. **Table 6-1** below details the designated sites within 5 km of the site with a protected species as a qualifying feature.

Table 6-1 Ecologically designated sites within 5 km of the site

Designated site	Distance from site (km)	Qualifying interests	Last assessed condition & date
River Tweed Special Area of Conservation (SAC)	1.1 km	Atlantic salmon (*Salmo salar*)	Favourable Maintained (5 August 2011)
		Brook lamprey (*Lampetra planeri*)	Favourable Maintained (22 November 2018)
		Otter (*Lutra lutra*)	Favourable Maintained (11 December 2011)
		River lamprey (*Lampetra fluviatilis*)	Favourable Maintained (22 November 2018)
		Sea lamprey (*Petromyzon marinus*)	Unfavourable Declining (22 November 2018)

The River Tweed SAC is separated from the Proposed Development by a ridge of hills (Mauldslie Hill, Torfichen Hill, Broad Law, Wull Muir) and falls within a different catchment, and as such is not considered to be hydrologically connected to the site.

6.1.2 Online Resources/Data Searches

A search of the NBN Atlas Scotland (NBN, 2023)[1] within 5 km of the site returned records for the following protected or notable species (excluding bats, discussed in Appendix A8.3, and plant species, discussed in Technical Appendix A8.1):

- brown hare (*Lepus europaeus*);
- fallow deer (*Dama dama*);
- grey squirrel (*Sciurus carolinensis*);
- mountain hare (*Lepus timidus*);
- otter;
- red deer (*Cervus elaphus*);
- red squirrel;

- roe deer (*Capreolus capreolus*); and
- sika deer (*Cervus nippon*).

Details regarding licences and data providers for the above records are included in **Annex B**.

Results of the Deer Distribution Survey (British Deer Society, 2016)[3] suggest that the following deer species are likely to be present or have previously been recorded in the wider area of the site:

- fallow deer (recorded in 2007 and/or 2011, reconfirmed in 2016);
- red deer (confirmed only in 2016);
- roe deer (recorded in 2007 and/or 2011, reconfirmed in 2016); and
- sika deer (recorded in 2007 and/or 2011, unconfirmed in 2016).

6.1.3 Carcant Wind Farm Application Information

The ecology chapter for the operational Carcant Wind Farm EIA Report, to the south of the site, noted signs suggesting presence of otter, water vole and badger. Scat potentially attributable to pine marten and feeding signs potentially from red squirrel were also noted (Energiekontor, 2019)[16].

6.2 Field Survey Results

The survey results are summarised in **Table 6-2** below, with full detailed results provided within **Annex B**, selected photographs are presented in **Annex C**. Survey results are displayed on **Figure 8.5**.

Table 6-2 Protected species survey results summary

Species	Survey Results Summary	General Habitat Suitability
Otter	One otter spraint was recorded on the western edge of the Site, next to a lochan linked to the Gladstone Reservoir. No protected features were recorded.	Burns within the site are generally open and offer little opportunity for shelter or resting, although they may offer some potential for foraging or commuting. At many points, the burns are heavily poached by livestock.
Water vole	No signs indicative of water vole presence was recorded.	Burns within the site are heavily poached.
Badger	Seven badger setts and numerous associated field signs were recorded within the site. Full details are contained within **Confidential ANNEX E**.	The central portion of the site is open moorland which has limited suitability for badger, with waterlogged, peaty soils. Areas of mineral soil around the periphery of the Site, and stands of conifer plantation, provide areas of more suitable habitat for sett building and foraging.
Pine marten	No signs indicative of pine marten presence was recorded.	Much of the site is open ground, without the more extensive areas of woodland favoured by pine marten. Some small blocks of conifer plantation are present within the site which may provide some limited suitable habitat.

[16] Energiekontor (2019). Wull Muir Wind Farm. Volume 1. Main Text. Chapter 9, Ecology.

Species	Survey Results Summary	General Habitat Suitability
Red squirrel	Potential red squirrel feeding signs were recorded within Allanshaw Wood, a block of woodland near Sowburnrig and at the edge of woodland near Whitelaw Cleugh Burn. No red squirrels were sighted and as such it cannot be ruled out that feeding signs are from the invasive grey squirrel species.	There are numerous isolated blocks of conifer plantation and some small areas of mixed woodland scattered across the site which may offer suitability for red squirrel feeding and drey building.
GCN	One waterbody was recorded within 500 m of the Proposed Development. No signs of GCN were recorded.	The waterbody scored as 'Poor' in the HSI assessment; full HSI results are provided in **Annex D.**
Reptiles	A common lizard sighting was recorded in the west of the site within rushy ground near Black Burn.	Much of the site is open ground with upland vegetation, providing suitable foraging habitat for reptiles. Two features with potential for use as hibernacula were recorded: a drystone dyke and a pile of stones.
Other Species	Brown hare sightings were recorded at three locations, two in the east of the site and one in the west.	n/a
General	A disused mammal hole of a size with potential for badger was recorded. No diagnostic field signs attributable to any protected species were recorded. Rabbit warrens were numerous across the site. Whilst some holes within the warrens were potentially of a size that could be used by a protected species, no diagnostic field signs were noted.	n/a

ANNEX A. LEGAL PROTECTION

A full list of protected species and the associated legislation can be found on the NatureScot website[17]. The following provides a summary of legal protection; the actual legislation should be consulted for the definitive list of offences.

Bats, Otter and Great Crested Newt (GCN)

Bats, **otter** and **GCN** receive protection in Scotland under the Conservation (Natural Habitats, &c.) Regulations (1994) (as amended) (the "Habitats Regulations"), being classified as European protected species of animals[18].

For European protected species, NatureScot guidance[19] sets out that it is an offence to deliberately or recklessly:

- capture, injure or kill an animal;
- harass an animal or group of animals;
- disturb an animal while it is occupying a structure or place used for shelter or protection;
- disturb an animal while it is rearing or otherwise caring for its young;
- obstruct access to a breeding site or resting place, or otherwise deny an animal use of a breeding site or resting place;
- disturb an animal in a manner or in circumstances likely to significantly affect the local distribution or abundance of the species;
- disturb an animal in a manner or in circumstances likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young;
- disturb an animal while it is migrating or hibernating;
- take or destroy an animal's eggs; or
- damage or destroy a breeding site or resting place of such an animal (these sites and places are protected even when the animal is not present)[20].

Regulation 44(2)(e) of the Habitats Regulations allows a licence to be granted for activities ordinarily prohibited, where that purpose is:

> "Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment."

[17] NatureScot (2022). Table of all of Scotland's Protected Species. Online: https://www.nature.scot/doc/table-all-scotlands-protected-species [Accessed September 2023].
[18] Schedule 2.
[19] NatureScot. (2023). European protected species. Online: https://www.nature.scot/professional-advice/protected-areas-and-species/protected-species/legal-framework/habitats-directive-and-habitats-regulations/european-protected [Accessed September 2023].
[20] Note that this is a summary of offences. Refer to Regulations 39 and 40 of the Habitats Regulations for legislative context.

Otter is also listed on Appendix I of the Convention of International Trade in Endangered Species (CITES), Appendix II of the Bern Convention, and Annexes II and IV of the Habitats Directive.[21] It is also listed as globally threatened on the IUCN/WCMC Red Data List.

[21] European Union Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.

Water Vole

Water vole is protected in Scotland under Sections 9(4) and 10 of the Wildlife and Countryside Act 1981[22].

Under Section 9(4)(a) and (b) of the Wildlife and Countryside Act 1981, it is an offence to intentionally or recklessly:

- damage or destroy, or obstruct access to, any structure or place which any wild animal included in Schedule 5[23] uses for shelter or protection; or
- disturb any such animal while it is occupying a structure or place which it uses for that purpose.

Section 10(3)(c) provides for exceptions under Section 9, such that a person shall not be guilty of an offence where that person shows:

- that each of the conditions specified in subsection (3A) was satisfied in relation to the carrying out of the unlawful act; or
- that the unlawful act was carried out in relation to an animal bred and, at the time the act was carried out, lawfully held in captivity.

Subsection (3A) states those conditions referred to in Section 10(3)(c) are:

a) That the unlawful act was the incidental result of a lawful operation or other activity;

b) That the person who carried out the lawful operation or other activity:

   i. took reasonable precautions for the purpose of avoiding carrying out the unlawful act; or

   ii. did not foresee, and could not reasonably have foreseen, that the unlawful act would be an incidental result of the carrying out of the lawful operation or other activity; and

c) That the person who carried out the unlawful act took, immediately upon the consequence of that act becoming apparent to the person, such steps as were reasonably practicable in the circumstances to minimise the damage or disturbance to the wild animal, or the damage or obstruction to the structure or place, in relation to which the unlawful act was carried out.

[22] as amended by the Nature Conservation (Scotland) Act 2004.
[23] Animals which are protected under Section 9 of the Wildlife and Countryside Act 1981.

Badger

Badger are protected in Scotland under the Protection of Badgers Act 1992 (the "Badgers Act")[24].

Under Section 1(1) of the Badgers Act, "a person is guilty of an offence if, except as permitted by or under this Act, he wilfully kills, injures or takes, or attempts to kill, injure or take, a badger."

Where it can reasonably be concluded that a person had been attempting to kill, injure or take a badger, then it will be presumed that that person had been attempting to do so, unless it can be proven otherwise[25].

Under Section 1(3), unless authorised under the Badgers Act, a person is guilty of an offence where "he has in his possession or under his control any dead badger or any part of, or anything derived from, a dead badger."

Under Section 3(1), unless authorised under the Badgers Act, it is an offence to interfere with a badger set*. The following actions are described as interference:

- damaging a badger sett or any part of it;
- destroying a badger sett;
- obstructing access to, or any entrance of, a badger sett;
- causing a dog to enter a badger sett; or
- disturbing a badger when it is occupying a badger sett,

intending to do any of those things or being reckless as to whether his actions would have any of those consequences.

It is also an offence if a person knowingly causes or permits any of the above actions to be carried out[26].

*Note: A badger sett is defined under the Badgers Act as any structure or place which displays signs of current use by a badger.[27]

[24] as amended by the Nature Conservation (Scotland) Act 2004 (as amended).
[25] Section 1(2) of the Badgers Act.
[26] Section 3(2).
[27] Section 14.

Mountain Hare, Pine Marten and Red Squirrel

Mountain hare, pine marten and **red squirrel** and are protected in Scotland under the Wildlife and Countryside Act 1981[28].

Under Sections 9(1) and 9(2) of the 1981 Act, it is an offence to intentionally or recklessly kill, injure or take such an animal, or be in possession or control of such an animal (whether live or dead).[29]

Under Section 9(4)(a) and (b), it is an offence to intentionally of recklessly:

- damage or destroy, or obstruct access to, any structure or place which any wild animal included in Schedule 5[30] uses for shelter or protection; or
- disturb any such animal while it is occupying a structure or place which it uses for that purpose.

Further, Section 9(5) sets out that it is an offence to:

- sell, offer or expose for sale, or possess or transport for the purpose of sale, any live or dead wild animal included in Schedule 5, or any part of, or anything derived from, such an animal; or
- publish or cause to be published any advertisement likely to be understood as conveying that he buys or sells, or intends to buy or sell, any of those things.

[28] Schedule 5.
[29] See exceptions under Section 9(3).
[30] Animals which are protected under Section 9 of the Wildlife and Countryside Act 1981.

Reptiles

The three native species of **reptile** to Scotland, **adder**, **slow worm** and **viviparous lizard**, are protected under Section 9(1) (insofar as the action relates to killing or injuring the animal), and Section 9(5) of the Wildlife and Countryside Act 1981.

Under Section 9(5), it is an offence to:

- sell, offer or expose for sale, or possess or transport for the purpose of sale, any live or dead wild animal included in Schedule 5, or any part of, or anything derived from, such an animal.
- publish or cause to be published any advertisement likely to be understood as conveying that he buys or sells, or intends to buy or sell, any of those things.

Section 10(3)(c) provides for exceptions under Section 9, such that a person shall not be guilty of an offence where that person shows:

- that each of the conditions specified in subsection (3A) was satisfied in relation to the carrying out of the unlawful act; or
- that the unlawful act was carried out in relation to an animal bred and, at the time the act was carried out, lawfully held in captivity.

Subsection (3A) states those conditions referred to in Section 10(3)(c) are:

a) That the unlawful act was the incidental result of a lawful operation or other activity;

b) That the person who carried out the lawful operation or other activity:

   i. took reasonable precautions for the purpose of avoiding carrying out the unlawful act; or;

   ii. did not foresee, and could not reasonably have foreseen, that the unlawful act would be an incidental result of the carrying out of the lawful operation or other activity; and

c) That the person who carried out the unlawful act took, immediately upon the consequence of that act becoming apparent to the person, such steps as were reasonably practicable in the circumstances to minimise the damage or disturbance to the wild animal, or the damage or obstruction to the structure or place, in relation to which the unlawful act was carried out.

Other Protected Species

Freshwater pearl mussel is listed on Annexes II and V of the Habitats Directive and are fully protected under Section 9 of the Wildlife and Countryside Act 1981. They are also listed as endangered on the IUCN/WCMC Red Data List.

ANNEX B. NBN ATLAS SCOTLAND DATA PROVIDERS AND LICENCES

Table B-1 Data Providers and Licence Details for NBN Atlas Scotland Records Used

Species	Reason for Inclusion	Data Provider (Recorder)	Licence
Brown hare	Protected species (Wildlife and Countryside Act 1981)	BTO (Withheld)	OGL[31]
Fallow deer	Welfare and impacts of deer on habitats and on neighbouring land and interests (inc. public roads)	BTO (Withheld)	OGL[31]
Grey squirrel	Invasive species	Scottish Wildlife Trust (S., T. Galbraith, T. Vanhala, withheld by TWIC) BTO (Withheld)	CC-BY[32] OGL[31]
Mountain hare	Protected species (Wildlife and Countryside Act 1981)	The Mammal Society, and Biological Records Centre (N. Hesford) BTO (Withheld)	CC-BY[32] OGL[31]
Otter	Protected species (Conservation (Natural Habitats, &c.) Regulations 1994 (as amended))	Withheld (Withheld)	OGL[31]
Red deer	Welfare and impacts of deer on habitats and on neighbouring land and interests (inc. public roads)	Withheld (Withheld)	OGL[31]
Red squirrel	Protected species (Wildlife and Countryside Act 1981, Nature Conservation (Scotland) Act 2004)	Scottish Wildlife Trust (Withheld by TWIC)	CC-BY[32]
Roe deer	Welfare and impacts of deer on habitats and on neighbouring land and interests (inc. public roads)	BTO (Withheld)	OGL[31]
Sika deer	Welfare and impacts of deer on habitats and on neighbouring land and interests (inc. public roads)	BTO (Withheld)	OGL[31]

[31] Open Government Licence (OGL) https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/ [Accessed August 2023].

[32] Creative Commons with Attribution 4.0 (CC-BY) https://creativecommons.org/licenses/by/4.0/ [Accessed August 2023].

ANNEX C. FIELD SURVEY RESULTS

Table B-1 below details the relevant data collected for protected species during surveys for the Proposed Development, sorted by species, then survey date (see also **Figure 8.5**). Confidential information relating to badger setts is contained within **Confidential Annex E** and shown on **Figure 8.5C**.

Table C-1 Protected species survey results

Species	Sign	PS ID	Easting	Northing	Survey date	Notes
General	Mammal Hole	PS006	335203	656285	17/10/2022	Potential disused mammal hole. Of size suitable for badger but likely too small. Entrance backfilled with soil and debris.
General	Mammal Hole	PS047	333815	655422	17/10/2022	Three disused entrances. Rabbit droppings found in front of all entrances and numerous small mammal burrows evident in area.
General	Mammal Hole	PS048	334563	654265	17/10/2022	Four small mammal holes, rabbit droppings nearby.
General	Mammal Hole	PS012	333460	655883	18/10/2022	Large rabbit warren, although around nine holes seem large enough and are D-shaped that indicate holes were likely originally badger. Lots of rabbit droppings around every entrance and rabbit sighted darting into one hole.
General	Mammal Hole	PS021	332302	655635	19/10/2022	One disused entrance, of a size suitable for badger, along mammal pathway, with vegetation over entrance.
General	Mammal Hole	PS061	330977	652967	20/10/2022	Multiple small burrows with likely rabbit droppings outside.
General	Mammal Hole	PS064	331192	653175	14/11/2022	Numerous holes in steep bank of mineral soil. Rabbit droppings noted.
General	Mammal Hole	PS065	331556	653158	14/11/2022	Rabbit warren in mineral soil bank next to track. Rabbit seen.
General	Mammal Hole	PS070	331520	654048	14/11/2022	D-shaped hole on steep bank above watercourse. Entrance clear and tunnel worn smooth. Part-used. Of a size and shape suitable for badger.
General	Mammal Hole	PS060	331177	652662	15/11/2022	Numerous rabbit burrows in steep sloping sides of valley. Rabbit droppings noted. Some holes D-shaped, but these narrowed after the entrance. Multiple mammal paths in area but no protected species-specific signs. Dead hare (possible fox kill) stashed in base of tree.
Hare	Brown Hare Sighting	PS002	335846	656046	17/10/2022	Sighted at edge of plantation.
Hare	Brown Hare Sighting	PS008	335138	655593	17/10/2022	Sighted in area of rough grazing.

Species	Sign	PS ID	Easting	Northing	Survey date	Notes
Hare	Brown Hare Sighting	PS067	331342	653972	14/11/2022	Hare flushed from grass.
Otter	Spraint	PS039	330921	654237	20/10/2022	Probable old otter spraint on rock at edge of small lochan near reservoir.
Reptile	Potential Hibernaculum	PS003	335558	656602	17/10/2022	Ruined drystone dyke, now partly overgrown. Could offer potential hibernacula opportunities.
Reptile	Potential Hibernaculum	PS014	332858	655558	18/10/2022	Collapsed, slightly overgrown drystone dyke potentially offering hibernacula opportunities.
Reptile	Common Lizard Sighting	PS043	331570	654085	20/10/2022	Sighted darting into rushes near watercourse.
Reptile	Potential Hibernaculum	PS066	330952	653921	14/11/2022	Pile of stones in field.
Squirrel spp.	Feeding Signs	PS001	335861	656019	17/10/2022	Patch of around eight stripped cones in plantation. Potential squirrel feeding remains, although could be from other rodents.
Squirrel spp.	Feeding Signs	PS004	335224	656126	17/10/2022	Patch of around 10 stripped cones in plantation. Probable squirrel feeding remains, although could be from other rodents.
Squirrel spp.	Feeding Signs	PS019	333210	656369	19/10/2022	Large patch of stripped cones within an old ride in an area of clearfell.

ANNEX D. GCN HSI ASSESSMENT RESULTS

The results of the GCN HSI surveys are presented below, ponds/waterbody locations can be cross-referenced to **Figure 8.5**.

Pond/waterbody ref. no. 1 NGR: NT 34120 53301		
HSI factor	**Comment**	**Score**
1. Geographic Location	Zone C – unsuitable.	0.01
2. Surface Area (m^2)	>2000 m^2.	0.8
3. Pond Drying/ Permanence	Never Dries.	0.9
4. Water Quality	Moderate.	0.67
5. Shade (%)	0 – 60%.	1.00
6. Waterfowl	Minor. Rail or coot briefly sighted.	0.67
7. Fish	None recorded but small rowing boat on bank indicative that pond may be fished.	0.67
8. Pond Count	No other ponds within 1 km.	0.1
9. Terrestrial Habitat	Good terrestrial habitat within 250 m of shore. Presence of rough grassland, moorland and trees, with many rodent and rabbit holes.	1.00
10. Macrophyte Cover (%)	1 – 5%.	0.35
HSI Score	0.3872	
HSI Result	Poor	

Photo 1 Pond Number 1