



Over Hill Wind Farm
Protected Species Survey Report
Technical Appendix 9.2

Prepared by:	Ashleigh Wylie
Authorised by:	Rachael Iveson, Claudia Gebhardt
Date:	27 th March 2017
Tel:	0141 342 5404
Email:	claudia.gebhardt@macarthurgreen.com
Web:	www.macarthurgreen.com
Address:	95 South Woodside Road Glasgow G20 6NT

Document Quality Record.

Version	Status	Person Responsible	Date
1	Draft	Ashleigh Wylie	01/04/2016
2	Reviewed	Rachael Iveson	14/04/2016
3	Updated	Ashleigh Wylie	15/04/2016
4	Internal Approval	Rachael Iveson	19/04/2016
5	Updates following incidental records	Ashleigh Wylie	09/03/2017
6	Internal Approval	Claudia Gebhardt	27/03/2017
7	Final Client Approval		

CONTENTS

Executive Summary	i
1 Introduction	1
2 The Site and Study Area	1
3 Legal Protection	1
4 Methods	1
4.1 Otter	2
4.2 Water Vole	2
4.3 Badger	3
4.4 Red squirrel	3
4.5 Reptiles	4
4.6 Great Crested Newt - Habitat Suitability Index Assessment	4
5 Results	5
6 Discussion	5
6.1 Otter	5
6.2 Water Vole	5
6.3 Badger	6
6.4 Red Squirrel	6
6.5 Reptiles	7
6.6 Great Crested Newt – Habitat Suitability Index Assessment	7
6.7 Other Species	7
7 Conclusions	8
References	9
Annex 1. Legal Protection	10
Annex 2. Survey Results	14
Annex 3. Photographs	16

EXECUTIVE SUMMARY

MacArthur Green was commissioned by Energiekontor to carry out protected species surveys for the proposed Over Hill Wind Farm (referred to as the 'Proposed Development').

These surveys were undertaken to aid and inform the ecological assessment for the Over Hill Wind Farm Environmental Statement.

Surveys were conducted on the 17th and 18th August 2015 by MacArthur Green. The surveys found evidence of otter, squirrel and common lizard to be using the Proposed Development Area. An incidental sighting of a red squirrel was observed to the north-west of the Study Area during a scarce breeding bird survey. Possible snuffle holes were recorded within the Proposed Development Area, however it was not possible to determine whether these were caused by badger or deer. There was no evidence of water vole or any other protected species using the Proposed Development Area.

1 INTRODUCTION

MacArthur Green was commissioned by Energiekontor to carry out protected species surveys at the proposed Over Hill Wind Farm (hereafter referred to as the 'Proposed Development'). The Proposed Development Area is located approximately 7 km to the north-east of Dalmellington, Ayrshire. These surveys focussed on otter (*Lutra lutra*), water vole (*Arvicola amphibius*), badger (*Meles meles*) and red squirrel (*Sciurus vulgaris*). A watching brief was also kept and signs recorded for other protected species potentially inhabiting the Proposed Development Area, i.e. native reptiles the adder (*Vipera berus*), common or viviparous lizard (*Zootoca vivipara*), and slow worm (*Anguis fragilis*). A habitat assessment was conducted for great-crested newts (*Triturus cristatus*).

These protected species surveys were undertaken to aid and inform the ecological assessment for the Over Hill Wind Farm Environmental Statement.

2 THE SITE AND STUDY AREA

The Proposed Development Area is predominantly composed of open moorland habitat, with areas of young coniferous forestry plantation along the east, west and southern sections. It is evident that the open habitat has not been grazed by livestock for a number of years given the height and condition of the vegetation.

There are a number of watercourses present across the Proposed Development Area. Beoch Lane borders the south-eastern Site boundary, flowing in a north-easterly direction. The Gullet Sike, Mitchell's Sike, West Burn, House Burn, and Bullet Burn are all present within the eastern section of the Proposed Development Area, and all flow into the Beoch Lane. The Black Water flows along the north-west Site boundary, and is fed by the Palmsike Burn, Lairhag Burn, Otter Sike, Broadhag Burn and Old March Burn, which are all present within the northern section of the Proposed Development Area.

3 LEGAL PROTECTION

The details of the legal protection of the protected species surveyed for are given in Annex 1.

4 METHODS

Surveys to record the presence or likely absence of otter, water vole, badger and red squirrel specifically were carried out at the Proposed Development Area on the 15th and 16th August 2015 during which all habitats suitable for these species were surveyed within the Site boundary (hereafter referred to as the 'Study Area').

A watching brief for any protected species signs was undertaken during other survey visits (e.g. ornithology/vegetation surveys) to the Proposed Development Area throughout the survey period.

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:

4.1 Otter

All accessible watercourses within the Study Area were surveyed for otter field signs. Otter field signs and survey methods are described in Bang & Dahlstrøm (2001), Sargent & Morris (2003) and Chanin (2003), 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;
- **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; and
- **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 Water Vole

All watercourses within the Study Area were surveyed for water vole field signs following the methodology prescribed in Strachan, Moorhouse and Gelling (2011)¹. This involved searching for the following field signs:

¹ As surveys were conducted in 2015 they were undertaken in line with Strachan *et al* (2011) guidance. Updated guidance for water voles (Dean *et al*, 2016) was published after the survey dates.

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

4.3 Badger

Land with the potential to support badger within the Study Area was searched for field signs with particular attention given to areas around woodland and areas underlain by mineral soils as opposed to peat. Field signs of badger are described in Neal and Cheeseman (1996), Bang and Dahlstrøm (2001), and SNH (2001). Field evidence searched for included:

- **Holes:** (i.e. setts, single and/or groups of holes);
- **Prints:** badgers have characteristic footprints that can be found in soft ground and muddy areas;
- **Latrines (and dung pits used as territorial markers):** These are small excavated pits in which droppings are deposited;
- **Hairs:** Tufts of hair can often be found on fences, or in the entrances to setts;
- **Feeding signs (snuffle holes):** Small scrapes where badgers have searched for insects and plant tubers;
- **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; and
- **Paths:** These are routes that badgers take when moving between setts and foraging areas.

4.4 Red squirrel

Areas of woodland that have the potential to support red squirrel were surveyed for squirrels, following guidance from Gurnell *et al.*, (2009). Survey methods included:

- **Red squirrels:** visual sightings of red squirrels;

- **Dreys:** usually built close to the main stem of a tree, over 3 m from ground level and over 50x30 cm in size (Gurnell *et al.*, 2009); and
- **Feeding signs:** predated cone (cone cores) searches in areas of woodland.

4.5 Reptiles

It is not considered necessary to undertake targeted reptile surveys; however, incidental records of reptile sightings, or signs such as shed skins, and features of particular importance (i.e. potential hibernacula) were recorded.

4.6 Great Crested Newt - Habitat Suitability Index Assessment

The water bodies present within the Study Area were assessed for their suitability for supporting great-crested newts (GCN). A Habitat Suitability Index (HSI) assessment following standard guidance (Oldham *et al.*, 2000) was conducted. The HSI allows for an evaluation to be made of the potential for water bodies to support GCN. It takes into account 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;
- Pond permanence;
- Water quality;
- Pond shading;
- Presence of fish;
- Presence of waterfowl;
- Presence of other ponds within a 500 metre 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. 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 4-1 GCN Habitat Suitability Index Scoring details 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).

Table 4-1 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

5 RESULTS

There was evidence of otter, squirrel and reptiles using the Study Area. No protected features for any of these species were recorded during the surveys. Potential badger snuffle holes were recorded, although given both the similarity of this field sign with that of deer and the presence of deer within the Study Area, it is difficult to determine the cause with absolute certainty. No evidence of water vole or any other protected species was found during the surveys.

All results are listed within Annex 2 and Figure 9.5 in Volume 2 of the ES.

The weather conditions were mainly dry during the surveys. Light rain showers started at midday on the second survey day, and got progressively heavier in the afternoon. The weather conditions are not considered to have affected the integrity of the survey as the majority of the watercourses had already been surveyed before the rain started.

6 DISCUSSION

6.1 Otter

Evidence of otter was recorded during the surveys. Spraints were recorded in seven separate locations along the Black Water. No protected features (i.e. holts or couches) were recorded within the Study Area.

The habitats present along the Black Water were considered suitable for supporting foraging otters. There was limited availability of bank side vegetation that would be suitable for sheltering opportunities around the watercourse. The spraints that were recorded ranged in age, with some considered to be fresh and others were older and weathered. It is possible that otters use the Black Water periodically to forage and to commute between other suitable watercourses within the area.

Old March Burn and Beoch Water that run along the eastern boundary also provide suitable foraging and commuting habitat for otter; however, limited bankside shelter opportunities reduce the likelihood of otter using this area for resting up. There are numerous tributaries that drain the Study Area into the watercourses to the east and west which provide varying levels of suitability for foraging and shelter. The steeper bank sides and forestry plantations near these burns may provide sheltering opportunities for otter; however, no holts or couches were recorded during the surveys.

6.2 Water Vole

No field signs or protected features of water vole were recorded within the Study Area.

The nature of the habitats present along the Black Water, Beoch Lane, House Burn and West Burn are suitable for supporting water vole. The grass and rush bankside vegetation and soft, peaty banks could provide foraging and burrowing opportunities. It is possible that the water flow within the Black Water is too high and the water quality within the House Burn too poor, making it less likely that water vole would utilise these watercourses. Despite the suitability of the habitats to support the species, no evidence of water vole was recorded during the surveys.

No evidence of American mink (*Neovison vison*) (a predator of water vole) was recorded within the Study Area during the surveys.

Water voles are included in the Ayrshire Biodiversity Action Plan under a Species Action Plan and their presence has been noted to the north-east of New Cumnock and south and east of Girvan (South Ayrshire Council, 2008). No records of water vole presence were included within the area in the National Water Vole Database and Mapping Project report (McGuire *et al*, 2014). Although information on water vole distribution is limited, records of their presence have been recorded within other reports, such as environmental statements (South Ayrshire Council, 2008) and surveys are ongoing in establishing their distribution across the region. Given that the habitats present within the Study Area show variable suitability for supporting water vole, it is possible that those which are deemed suitable could support the species.

6.3 Badger

Snuffle hole type scrapings were recorded in two locations within the Study Area. Due to the nature of these field signs, it was not possible to be certain that they were caused by badger. It is possible that they could have been formed by deer scraping the vegetation, and as roe deer were observed within the Study Area, this cannot be ruled out.

Badgers are known to be in the wider area and the habitats present within the Study Area have the potential to support foraging and commuting badger. The majority of the habitat in the Study Area consists of wet, peaty habitats which are sub-optimal for sett building; however, there is an extensive amount of commercial coniferous forestry plantation present across the Study Area which provides good connectivity for any badgers commuting within and between the Study Area and its surroundings.

6.4 Red Squirrel

Evidence of squirrel was recorded within the Study Area during the surveys. Stripped cones were recorded under a tree in the corner of a ride, close to the West Burn. It is not possible to determine species of squirrel, red or grey, from this field sign alone.

An incidental sighting of a red squirrel was recorded during a scarce breeding bird survey in July 2015. The sighting was recorded to the north-west of the Study Area, outwith the Site boundary.

The Study Area is located to the north of the Carsphairn woodland which was identified by Poulson *et al*. (2005) as a red squirrel priority woodland within the Strathclyde region of Scotland. In the study, the Carsphairn woodland was noted as having conifers present that were of cone bearing age, making it suitable to support foraging squirrels, and that the red squirrel populations were also

considered to be stable (Poulsom *et al.*, 2005). Given the known presence of red squirrel within the area, and the incidental record to the north-west of the Proposed Development Area, it is likely that the stripped cones recorded within the Study Area were from red squirrels. However, the woodland also borders the areas that have been highlighted as a priority for grey squirrel control (SNH, 2010), meaning that there is a possibility that some grey squirrels could be present within the wider woodland area.

6.5 Reptiles

A common lizard was observed along a forestry ride within the eastern section of the Study Area, close to the Upper Beoch Farm. An incidental record of a common lizard was also recorded during the phase 2 peat survey undertaken in March 2017.

No specific features with the suitability to act as potential hibernacula were recorded within the Study Area during the surveys.

6.6 Great Crested Newt – Habitat Suitability Index Assessment

HSI assessments were undertaken on three ponds present within the Study Area. The full results of the HSI assessment are provided within Annex 2. The Study Area sits within geographic 'Zone B', as outlined within Oldham *et al.* (2000), which categorises the general location as 'marginal'.

All of the three ponds showed 'poor' suitability for GCN (pond 1 HSI: 0.41; pond 2 HSI: 0.33; pond 3 HSI: 0.42). The water quality from the ponds was considered to be moderate or poor, and the terrestrial habitat around the ponds considered to be moderate, although there was a lack of suitable hibernacula features. No evidence of fish or wildfowl was seen at pond 1 or 3. Given the location and HSI results, it is unlikely that GCN are present in the Study Area.

6.7 Other Species

There were numerous scats and prints of red fox (*Vulpes vulpes*) recorded across the Study Area. Roe deer (*Capreolus capreolus*) are also utilising the Study Area, with several sightings recorded.

The Study Area was also found to support amphibian species, with common frog (*Rana temporaria*) and common toad (*Bufo bufo*) recorded within the area.

A European eel (*Anguilla anguilla*) was observed within the Black Water.

Several dragonfly and damselfly species were recorded using the Study Area, including the common hawker (*Aeshna juncea*), black darter (*Sympetrum danae*) and the common blue damselfly (*Enallagma cyathigenum*). An emperor moth (*Saturnia pavonia*) caterpillar was also observed.

Incidental records of a number of bird species were recorded, including: meadow pipit (*Anthus pratensis*); mistle thrush (*Turdus viscivorus*); carrion crow (*Corvus corone*); raven (*Corvus corax*); buzzard (*Buteo buteo*); woodpigeon (*Columba palumbus*); song thrush (*Turdus philomelos*); chaffinch (*Fringilla coelebs*); goldfinch (*Carduelis carduelis*); pied wagtail (*Motacilla alba*); magpie (*Pica pica*); lesser redpoll (*Carduelis cabaret*); crossbill (*Loxia curvirostra*); and linnet (*Carduelis cannabina*).

7 CONCLUSIONS

Evidence of otter, squirrel and common lizard was recorded during the surveys. No protected features for these species were recorded.

Potential badger snuffle holes were recorded during the survey, although it was not possible to determine species with absolute certainty due to the similarity of this field sign with that of deer. The habitats present within the Study Area showed suitability for supporting commuting and foraging badgers.

The presence of spraints confirmed that otter use the watercourses within the Study Area. No holts or couches were recorded; however, there is suitable habitat around the burns and coniferous plantation within the Study Area.

It is likely that squirrels are present within the forestry in the Study Area. Red squirrels are known to be present within the area, and an incidental sighting was recorded during a bird survey in July 2015. It is also possible that grey squirrels are present within the wider area.

The habitats present within the Study Area showed suitability to support water vole, although no evidence of their presence was found.

Two sightings of common lizards were recorded within the Study Area on two separate occasions, meaning that reptiles are utilising the habitats present.

It is considered unlikely that GCN will be in the Study Area.

REFERENCES

- Bang, P., and Dahlstrøm, P. (2001). *Animal Tracks and Signs*. Oxford University Press, Oxford.
- Chanin, P. (2003). *Monitoring the Otter (Lutra lutra)*. Conserving Natura 2000 Rivers Monitoring Series No.10 English Nature, Peterborough.
- Croose, E., Birks, J.D.S. & Schofield, H.W. (2013). *Expansion zone survey of pine marten (Martes martes) distribution in Scotland*. Scottish Natural Heritage Commissioned Report No. 520.
- 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.
- Gurnell, J., Lurz, P. McDonald, R. & Pepper, H. (2009). *Practical Techniques for Surveying and Monitoring Squirrels*. Forestry Commission Practice Note, October 2009.
- Kitchener, A. (1995). *The Wildcat*. The Mammal Society, London.
- McGuire, C., Whitfield, D., Perkins, H., and Owen, H. (2014). National Water Vole Database and Mapping Project – Guide to the Use of Project Outputs to End of 2012.
- Neal, E., and Cheeseman, C.L. (1996). *Badgers*. Poyser Natural History, London.
- 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.
- Poulsom, L., Griffiths, M., Broome, A., and Mayle, B. (2005). *Identification of priority woodlands for red squirrel conservation in North and Central Scotland: a preliminary analysis*. Scottish Natural Heritage Commissioned Report No. 089 (ROAME No. F02AC334).
- Sargent, G., and Morris, P. (2003). *How to Find and Identify Mammals*. The Mammal Society, London.
- SNH. (2001). Scotland's Wildlife: Badgers and Development. SNH, Battleby, Perthshire.
- SNH. (2010). Protecting Scotland's red squirrels – The Consultation Response. Scottish Natural Heritage, Edinburgh.
- South Ayrshire Council. (2008). Ayrshire Biodiversity Action Plan – The Conservation and Enhancement of Ayrshire's Biodiversity 2007-2010. South Ayrshire Council, Ayr.
- Strachan, R., Moorhouse, T. and Gelling, M. (2011). *The Water Vole Conservation Handbook*. Third Edition, Wildlife Conservation Research Unit, Department of Zoology, University of Oxford.

Annex 1. Legal Protection

Otters receive protection under the Conservation Regulations (1994) (as amended) only².

Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)

Under Regulation 39 (1) it is an offence to:

- (a) deliberately or recklessly to capture, injure or kill a wild animal of a European protected species;
- (b) deliberately or recklessly:
 - (i) to harass a wild animal or group of wild animals of a European protected species;
 - (ii) to disturb such an animal while it is occupying a structure or place which it uses for shelter or protection;
 - (iii) to disturb such an animal while it is rearing or otherwise caring for its young;
 - (iv) to obstruct access to a breeding site or resting place of such an animal, or otherwise to deny the animal use of the breeding site or resting place;
 - (v) to disturb such an animal in a manner that is, or in circumstances which are, likely to significantly affect the local distribution or abundance of the species to which it belongs; or
 - (vi) to disturb such an animal in a manner that is, or in circumstances which are, likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young;
- (c) deliberately or recklessly to take or destroy the eggs of such an animal; or
- (d) to damage or destroy a breeding site or resting place of such an animal.

Regulation 44 (2e) allows a licence to be granted for the activities noted in Regulation 39 such that:

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.

Otter is also listed on Appendix I of CITES, Appendix II of the Bern Convention and Annexes II and IV of the Habitats Directive (1994). It is also listed as globally threatened on the IUCN/WCMC Red Data List.

² The Conservation Amendment (Scotland) Regulations (2007) removed EPS from Schedule 5 and 8 of the Wildlife and Countryside Act 1981.

Water vole is not protected by Section 9, subsection 1 of the Wildlife and Countryside Act but is covered by Section 9, subsection 4 and Section 10³.

Wildlife and Countryside Act (1981)
Nature Conservation (Scotland) Act 2004

Under Section 9, Subsection 4, Paragraphs (a) and (b)⁴, 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 uses for shelter or protection.
- Intentionally or recklessly disturb any such animal while it is occupying a structure or place which it uses for that purpose.

Under Section 10, Subsection 3, Paragraph (c)⁴, any person shall not be guilty of an offence by reason of:

- Any act made unlawful by that section if he shows:
 - (a) That each of the conditions specified in subsection (3A) was satisfied in relation to the carrying out of the unlawful act; or
 - (b) 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.
- Section 3A states those conditions referred to in Subsection 3c 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.

³ as amended by the Nature Conservation (Scotland) Act 2004

Badgers are protected under the Protection of Badgers Act 1992 (as amended by the Nature Conservation (Scotland) Act 2004 (as amended)).

The following applies under this legislation:

Part 1.–

- (1) 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.
- (2) If, in any proceedings for an offence under subsection (1) above consisting of attempting to kill, injure or take a badger, there is evidence from which it could reasonably be concluded that at the material time the accused was attempting to kill, injure or take a badger, he shall be presumed to have been attempting to kill, injure or take a badger unless the contrary is shown.
- (3) A person is guilty of an offence if, except as permitted by or under this Act, he has in his possession or under his control any dead badger or any part of, or anything derived from, a dead badger.

Part 3. –

- (1) A person is guilty of an offence if, except as permitted by or under this Act, he interferes with a badger sett by doing any of the following things–
 - (a) damaging a badger sett or any part of it;
 - (b) destroying a badger sett;
 - (c) obstructing access to, or any entrance of, a badger sett;
 - (d) causing a dog to enter a badger sett; or
 - (e) disturbing a badger when it is occupying a badger sett,
 - (f) intending to do any of those things or being reckless as to whether his actions would have any of those consequences.
- (2) A person is guilty of an offence if, except as permitted by or under this Act, he knowingly causes or permits to be done an act which is made unlawful by subsection (1) above.

Note: A badger sett is defined in law as any structure or place which displays signs of current use by a badger.

Red squirrels are protected by the following legislation:

Wildlife and Countryside Act (1981)

Nature Conservation (Scotland) Act 2004

Under Section 9, Subsection 1, it is an offence to:

Intentionally or recklessly:

- Kill, injure or take any wild animal listed on Schedule 5;
- Damages or destroys or obstructs access to, any structure or place that any animal listed on Schedule 5 uses for shelter or protection;
- Disturbs any such animal while it is occupying a structure or place which is used for that purpose
- 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.

Freshwater pearl mussels are listed on Annexes II and V of the Habitats Directive and is fully protected under the Wildlife and Countryside Act 1981 (as amended). It is also listed as endangered on the IUCN/WCMC Red Data List.

Adder, slow worm and viviparous lizard are protected by the following legislation:

These three species of reptile are noted within Schedule 5 of the Wildlife and Countryside Act (1981). However, Schedule 5 of the 1981 act notes that these species are protected 'in respect of section 9(5) only'.

Section 9(5) states:

(5) Subject to the provisions of this part, if any person-

(a) Sells, offers or exposes for sale, or has in his possession or transports 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

(b) Publishes or causes 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.

he shall be guilty of an offence

An amendment was made to Schedule 5 on 18 March 1988 relating to slow worm and viviparous lizard to give them protection under Section 9(1). A further amendment was made to Schedule 5 on 27 March 1991 relating to adders which afford them protection under Section 9(1).

Section 9(1) (as amended by the Nature Conservation (Scotland) Act 2004) states:

'Subject to the provisions of this Part, if any person intentionally or recklessly kills, injures or takes any wild animal included in schedule 5, he shall be guilty of an offence.'

Annex 2. Survey Results

Species	Sign	Grid reference	Notes	Photo
Otter	Spraint	NS 51671 13125	Spraints. 1-2 days old. Some older. On boulder mid-stream in the Black Water.	1
Otter	Spraint	NS 51275 12818	Old spraint on rock, instream. Contains fish remains.	
Otter	Spraint	NS 51111 12787	Spraint on rock on side of stream.	
Otter	Spraint	NS 51638 13095	Spraint on rock in the Black Water. Contains fish bones.	
Otter	Spraint	NS 51175 12825	Spraint on rock within the Black Water.	
Otter	Spraint	NS 51146 12827	Spraint on the edge of bank on boulder within the Black Water.	2
Otter	Spraint	NS 50874 12354	Spraint on rock in Black Water. Area surrounded by works on Southwest Scotland overhead line on-going.	
Squirrel	Stripped cones	NS 52146 11512	Stripped cones under tree in corner of ride – large piles. No observations of red or grey squirrels during survey. Potential for crossbill, however difficult to tell – quite messy, tearing of base of seed.	3
Red squirrel	Sighting	NS 50349 12903	Incidental sighting of a red squirrel recorded during a scarce breeding bird survey in July 2015.	
Common lizard	Sighting	NS 51915 10200	Sighting of common lizard on ride.	
Common lizard	Sighting	NS 51320 12180	Incidental sighting recorded during a phase 2 peat survey in March 2017.	
Eel	Sighting	NS 51206 12855	Eel observed instream of the Black Water, moved rapidly upstream to deep water.	
Possible Badger	Excavated earth	NS 52436 10751	Areas of snuffle holes, most likely caused by deer (roe deer on Study Area). Along banks of Beoch Lane (burn).	4
Possible Badger	Excavated earth	NS 52393 11781	Snuffle hole type scrapings. Similar to the others seen but deeper. Marks ~5-10cm deep, one hole ~30cm deep, 10x15cm wide. Evidence of deer and fox in the area.	

HSI ASSESSMENT RESULTS TABLE

Pond Number	1	2	3
Grid Reference	NS 51389 10567	NS 51245 09121	NS 51300 09839
Location (Zone)	B	B	B
SI ₁	0.50	0.50	0.50
Pond Shape	Circle	Circle	Ellipse
Long Axis Diameter	7	3	12
Short Axis Diameter	6	2	6
Irregular Pond Area			
SI ₂	0.05	0.05	0.11
Pond drying	More than 3 years in 10	Dries annually	More than 3 years in 10
SI ₃	0.50	0.10	0.50
Water quality	Moderate	Poor	Moderate
SI ₄	0.67	0.33	0.67
Shade (%)	10	10	10
SI ₅	1.00	1.00	1.00
Fowl	Minor	Absent	Minor
SI ₆	0.67	1.00	0.67
Fish	Absent	Absent	Absent
SI ₇	1.00	1.00	1.00
No. ponds in 500m	0	0	0
SI ₈	0.1	0.1	0.1
Terrestrial habitat	Moderate	Moderate	Poor
Barriers	None	None	None
SI ₉	0.67	0.67	0.33
Macrophytes (%)	10	95	10
SI ₁₀	0.40	1.00	0.40
HSI	0.41 - Poor	0.33 - Poor	0.42 - Poor

Annex 3. Photographs

Photo 1 Location of an otter spraint recorded along the Black Water



Photo 2 Location of an otter spraint recorded along the Black Water



Photo 3 Stripped cones recorded under a tree, close to the West Burn



Photo 4 Snuffle holes recorded along the banks of Beoch Lane

