

TA6.2 Protected Species Survey Report



MacArthur Green

Glenshero Wind Farm
Protected Species Survey Report
Technical Appendix 6.2

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EXECUTIVE SUMMARY

MacArthur Green was commissioned by RES Ltd on behalf of Simec Wind One Ltd to carry out protected species surveys for the proposed Glenshero Wind Farm (referred to as the 'proposed development').

These surveys were undertaken to collate potential constraints information which was used to aid and inform the layout of the proposed development reported in the Glenshero Wind Farm Environmental Impact Assessment Report (EIAR).

Surveys were conducted between 14th and 16th June 2017 by MacArthur Green. A second visit undertaken for water vole was conducted between the 9th and 11th August 2017. A third visit was undertaken between 2nd and 3rd July 2018. The surveys found evidence of otter and water vole using the site. There was no evidence of badger, pine marten, red squirrel or wildcat using the site.

Surveys for bats (see EIAR Volume 4: Technical Appendix 6.3) and fish (see EIAR Volume 4: Technical Appendix 6.4) were conducted and are reported on separately.

1 INTRODUCTION

MacArthur Green was commissioned by RES Ltd on behalf of Simec Wind One Ltd to carry out Protected Species Surveys (PSS) at the Glenshero Wind Farm (hereafter referred to as the 'the proposed development'), which is located 5 km north of the A86 and approximately 8 km west of the village of Laggan, and which includes the southern area of Stronelairg Wind Farm and an area around the gatehouse, located at the start of the Stronelairg Wind Farm access track, off the B862, approximately 2.3km east of Fort Augustus (EIAR Volume: 3 Figure 6.6). These surveys focussed on otter (*Lutra lutra*), water vole (*Arvicola amphibius*), badger (*Meles meles*), red squirrel (*Sciurus vulgaris*), pine marten (*Martes martes*) and wildcat (*Felis silvestris grampia*). A watching brief was also kept and signs recorded for other protected species potentially inhabiting the site, i.e. native reptiles: the adder (*Vipera berus*), common or viviparous lizard (*Zootoca vivipara*), and slow worm (*Anguis fragilis*).

This report has been produced by MacArthur Green and in accordance with Scottish Natural Heritage (SNH) guidelines. All staff contributing to this technical appendix have undergraduate and/or postgraduate degrees in relevant subjects, have deep professional ecological impact assessment and ecology survey experience, and hold professional membership of the Chartered Institute of Ecology and Environmental Management (CIEEM). The report has been reviewed and approved by David MacArthur of MacArthur Green and a copy of his CV is included in EIAR Volume 4: Technical Appendix 1.2.

Surveys for bats (EIAR Volume 4: Technical Appendix 6.3: Bat Survey Report) and fish (EIAR Volume 4: Technical Appendix 6.4: Electrofishing & Habitat Survey Report) were carried out and are reported separately.

These protected species surveys were undertaken to aid and inform the ecological assessment for the Glenshero Wind Farm EIAR.

2 THE SITE

The majority of the site comprises open moorland habitat. The turbines are proposed for the northern part of the site, on the northern slopes of Carn Dearg (736 m) and the western and eastern slopes of Meall na h-Aisre (862 m) (EIAR Volume 3: Figure 2.1).

The two main watercourses on site are the Allt Coire Iain Oig and the Allt Gilbe which are fed by a number of smaller watercourses such as the Blackcorrie Burn. The watercourses within the site drain into the River Spey which flows to the south of the site boundary.

The Beaulay-Denny 400 kV overhead line intersects the site to the south.

3 LEGAL PROTECTION

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

4 METHODS

Surveys to record the presence or likely absence of otter, water vole, badger, red squirrel, pine marten and wildcat specifically were carried out at the site between 14th and 16th June 2017. A second visit for water vole was conducted between the 9th and 11th August 2017 and a third visit for all species

was carried out between 2nd and 3rd July 2018. During the surveys, all habitats suitable for these species were surveyed within a 450 m buffer of the Option A: Draft Scoping Layout (EIAR Volume 3: Figure 3.3), clipped to the site boundary as access was restricted to the site. The area within which the surveys were conducted is hereafter referred to as the 'PSS study area' (see EIAR Volume 3: Figure 6.6). Due to access restrictions, areas outside the site boundary were not included in the surveys.

A watching brief for any protected species signs was undertaken during other survey visits (e.g. ornithology/vegetation surveys) to site 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:

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;

Sprints: 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. Sprints 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 Dean *et al.* (2017). 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 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. Field signs of badger are described in Neal and Cheeseman (1996), Bang and Dahlstrøm (2001), and Scottish Natural Heritage (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 Pine Marten

Signs of pine marten were searched for within the study area following guidance from O'Mahony *et al.*, (2006). Searches for pine marten scats were made along linear features such as fence lines, tracks and around rock piles and dense scrub where the species could establish a den. Dens can include the utilisation of upturned trees, tree cavities, rocks or manmade structures such as log piles or large bird boxes.

4.5 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:

Sightings: visual sightings of red squirrels;

Dreys: usually built close to the main stem of a tree, over 3m from ground level and over 50x30cm in size (Gurnell *et al.*, 2009); and

Feeding signs: predated cone (cone cores) searches in areas of woodland.

4.6 Wildcat

The study area was assessed for its suitability to support wildcats. This included searching for signs of wildcat prey (such as small rodents and rabbits) and shelter availability (such as cairns and woodland).

The following field signs were then searched for (as described in Kitchener, 1995):

- Scats;
- Dens;
- Scratch marks; and
- Feeding remains.

4.7 Other Protected Species

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.

5 RESULTS AND DISCUSSION

There was no evidence of badger, red squirrel, pine marten or wildcat recorded during the surveys. Evidence of water vole was recorded in the form of colonies, burrows, latrines and runs. Evidence of otter was recorded in the form of spraints. No protected features of otters were recorded.

All results are listed within Annex 2 of this report and locations illustrated in EIAR Volume 3: Figure 6.6.

The weather conditions during the surveys in June 2017 were variable, with heavy rain spells, and low mist and rain. The water levels within the watercourses were considered to be bank full, and there is the possibility that some field signs for otter (e.g. spraints) and water vole (e.g. droppings and latrines) could have been washed away. The surveys in August 2017 were conducted in dry conditions with sunny spells. The watercourses during these surveys were considered to be of normal flows (i.e. not

very low flows or in spate). As the second survey visit for water vole found evidence of both otter and water vole, the weather conditions during the June surveys are not considered to have affected the integrity of the results. The surveys during the third visit in July 2018 were conducted within a prolonged dry spell of weather with watercourses reduced to lower levels yet remained at a level that was considered to be without any negative impact upon the results.

5.1 Otter

Evidence of otter was recorded in the form of spraints at four locations within the study area. No protected features (i.e. holts or couches) were recorded during the survey.

Two spraints were recorded in June along two tributaries to the west of the study area, namely along the Allt Luaidhe and an unnamed tributary to the Allt Féith a' Mhoraire. Spraints were recorded in two locations along the upper reaches of the Blackcorrie Burn during the survey visit in August.

The watercourses within the study area offer variable suitability for otters. The fisheries surveys conducted for the site (EIAR Volume 4: Technical Appendix 6.4: Electrofishing & Habitats Survey Report) recorded trout populations with a mixed of age classes, which were considered in some cases to be potentially isolated populations. Numerous individuals of common frog (*Rana temporaria*) were recorded across the study area during the survey. The study area is likely to provide suitable foraging opportunities to any otters using the watercourses, given the prey resource recorded during the surveys.

The River Spey is located approximately 2.8 km to the south and is fed by the watercourses which drain the study area. The Spey is likely to offer good opportunities for foraging, commuting and sheltering otter. The River Spey is also designated as an SAC and SSSI, with otter being one of the ecological qualifying features. It is likely that otters will use the watercourses within the study area periodically for foraging and commuting.

5.2 Water Vole

Evidence of water vole was recorded across the study area, with colonies, burrows, latrines and runs recorded during the surveys.

Water vole burrows were recorded at 109 locations across the study area during both the June and August 2017 surveys, with each record relating to either a single burrow, or a collection of burrows within an area. This also included burrows which were of a size and structure which was considered suitable for water vole but where no other diagnostics of water vole were present to provide confirmation. A full outline of the records is provided in Annex 2.

There were at least 13 records of latrines recorded across the study area, although there were numerous additional records of droppings and latrines recorded within the vicinity of water vole burrows. There were four sightings of water voles during the surveys. Water vole runs were also recorded within the study area.

Water voles are a mobile species and are effective dispersers. They are known to move their colonies along watercourses over time and can disperse over land and along waterways (Waterside Ecology, 2014). The movement of water voles between areas of suitable habitat can not only boost existing population numbers, but also results in the colonisation of new or previously occupied suitable habitat (Waterside Ecology, 2014). It can be expected that the burrow locations of active burrows will

continuously change over time. Given this behaviour, it is considered likely that the location of active burrows will change over time and the location of active burrows will change across the site from year to year.

5.3 Badger

There were no field signs or protected features (i.e. setts or day nests) recorded during the survey.

The study area is considered to have variable suitability for badgers. The substrate throughout the majority of the study area is considered to be sub-optimal for sett building, given its very wet and peaty nature. Although it is not unknown for badgers to build setts in peat, it is likely that any badgers would utilise those areas with a more suitable substrate. There are a number of suitable habitats present within the vicinity of the site, such as the forested habitat located to the south of the site or around the gatehouse at the start of the Stronelairg Wind Farm access track to the north. It is possible that badgers would utilise habitats within the study area for foraging and commuting if they are present within the wider area, although there was no recorded evidence to suggest that any does so.

5.4 Pine Marten

There was no evidence of pine marten recorded during the surveys.

There is limited suitable habitat within the study area for pine marten. The study area is considered to be sub-optimal for the species considering its open nature and lack of tree cover. Pine marten prefer forested areas (Halliwell, 1997), although there is the potential for pine marten to use open land for hunting due to the increased access to prey species. However, these habitats offer an increased risk of predation from foxes and raptor species (MacPherson, 2014).

The home ranges of pine marten are variable in Scotland, by both location and sex, with previous studies recording home ranges of males in Galloway as up to 33 km² (Bright and Smithson, 1997) and home ranges of females in Morangie as less than 1 km² (Caryl, 2008). There are records of pine marten within the wider vicinity of the site and it is possible that the forested areas to the south and south west of the site both within and outside of the site boundary would offer suitable habitat for sheltering and commuting. There is the potential for pine marten to occasionally use the habitat within the study area for foraging and commuting if they are present within the wider area.

5.5 Red Squirrel

There was no evidence of red squirrel recorded during the surveys.

The open habitat present within the study area does not offer suitable habitat for red squirrel. There are several blocks of coniferous forestry present to the south and south west of the site both within and outside of the site boundary as well as around the gatehouse area located at the start of the Stronelairg Wind Farm access track to the north, which have the potential to support red squirrel. These forestry blocks also have good connectivity with the other woodland which fringe the River Spey and Loch Ness, to the east of Fort Augustus. Given the lack of suitable habitat, it is unlikely that red squirrel would use the study area for foraging, commuting or shelter.

5.6 Wildcat

Wildcat is presumed to be present within the wider Glenshero Estate, with a camera trap near the Spey Dam to the southeast of the site recording evidence of a probable (although unconfirmed) wildcat in February and April 2018. Surveyors that carried out protected species surveys were aware

that wildcat was a potential presence within the survey area, and so kept a close look out for any signs or suitable habitat features. On completion of these surveys no wildcat signs or potential features (e.g. possible dens) were observed. The site is considered to be of low suitability for wildcat for the following reasons:

- The species is not generally found in Scotland at altitudes above 650 m above sea level. Nearly all of the proposed turbine locations are in open habitat above 600 m.
- Wildcats prefer diverse habitats of woodland edges, scrub, moorland and grassland, which is absent from the site. Habitats within the site are mainly open expanses of wet heath and blanket bog, with minimal opportunities for shelter. This contrasts with the lower-lying, forested areas around the Spey Dam where probable sightings were recorded.
- The site has snow coverage for long periods of the year which would impede the movements of individuals.
- A National Biodiversity Network (NBN) Atlas data search held only one historic record in the vicinity, near Glenshero lodge (over 5km from the nearest turbines), dating from 1940.
- The site is over 30km from the closest Wildcat Priority Habitat identified by SNH, near Aviemore.

During consultation, the above information was presented to SNH (email dated 15 February 2018), who confirmed that they were content with this evidence and that no further wildcat surveys would be required.

5.7 Reptiles

Three common lizards were recorded during the survey, one in the June 2017 survey and two in the August 2017 survey. The study area offers suitable habitat for common lizards, given the availability of open, sunny areas for basking and prey resource present on site.

5.8 Other Species

A number of mammal holes were recorded to the east of the study area. Mountain hare and fox hair was recorded at the entrance to these mammal holes.

6 CONCLUSIONS

The study area offers suitability for otter given the suitability of the watercourses for offering foraging and commuting opportunities. Four spraints were recorded within the study area, showing that otters are utilising the watercourses on site.

There were numerous water vole colonies recorded across the study area. Latrines and runs were also recorded during the surveys. There are several watercourses that offer suitable habitat, with a slow flow, soft and peaty banks and good terrestrial habitat. There is the potential for the water voles to utilise the other suitable habitats within the study area for dispersal and potential colonisation.

There was no evidence of badger recorded during the surveys. There was variable habitat suitability for badgers within the study area, with limitations to suitable substrate for sett building. There is suitable habitat present within the wider vicinity of the site, with the potential for badgers to be utilising the site periodically for foraging and commuting.

No evidence of pine marten was recorded during the surveys. There is limited habitat suitability within the study area, given the lack of tree cover and predominantly open nature. Pine marten are known to be present within the wider area, and so there is the potential for them to use areas of the site periodically for foraging.

There is limited habitat availability for red squirrel given the lack of tree cover within the study area. Suitable habitat is present within the wider area, and there is the potential for red squirrel to utilise these areas for foraging, commuting and shelter.

There was no evidence of wildcat recorded during the surveys. There is a limited amount of structures which offer suitability for denning.

There were three sightings of common lizard recorded during the surveys. The study area offers suitable habitat for supporting reptiles, given the sunny area offering basking opportunities and good habitat for supporting a prey resource.

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Annex 1. Legal Protection

Otters and **wildcats** receive protection under the Conservation Regulations (1994) (as amended) only¹.

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.

Wildcat is listed on Annexes II and V of the Habitats Directive (1994).

¹ 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 10².

Wildlife and Countryside Act (1981) (as amended)
Nature Conservation (Scotland) Act 2004 (as amended)
Protection of Badgers Act 1992 (as amended)

Under Wildlife and Countryside Act (1981) 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 Wildlife and Countryside Act (1981) 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.
- Wildlife and Countryside Act (1981) Section 3(a) states those conditions referred to in Subsection 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.

² 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 and **pine martens** 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 uses 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.

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	NN 48356 98877	On boulder - old spraint.	
Otter	Spraint	NN 47533 99595	On boulder midstream at confluence, Old spraint.	
Otter	Spraint	NN 53292 99719	Spraint on large rock adjacent to watercourse. Contains bones. Recent.	1
Otter	Spraint	NN 53263 99746	Two old spraints on rock at confluence of watercourses. Old and weathered. Only staining no bones remain.	
Water Vole	Burrow	NN 49488 99182	Water vole burrow.	
Water Vole	Burrow	NN 49482 99182	Burrow with a few droppings.	
Water Vole	Burrow	NN 49582 99418	Water vole burrow.	
Water Vole	Burrow	NN 49614 99425	Water vole burrow.	
Water Vole	Burrow	NN 49619 99426	Water vole burrow.	
Water Vole	Burrow	NN 49620 99432	Water vole burrow.	
Water Vole	Burrow	NN 49623 99438	Water vole burrow.	
Water Vole	Burrow	NN 49629 99467	Water vole burrow.	
Water Vole	Burrow	NN 49631 99495	Water vole burrow.	
Water Vole	Burrow	NH 54973 00173	Large network of burrows. No recent signs of use e.g. Cuttings or latrines or prints. Size of burrows suggest water vole.	
Water Vole	Burrow	NH 55319 00492	8 visible burrows in right bank.	
Water Vole	Burrow	NH 55605 00488	Colony with 20-30 burrows.	
Water Vole	Burrow	NH 55619 00470	10 - 15 burrows.	
Water Vole	Burrow	NH 51896 00133	4 - 5 burrows above bog pools and peat hags. No further signs found.	
Water Vole	Burrow	NH 53125 00664	Few burrows with droppings.	
Water Vole	Burrow	NH 53021 99935	Two entrances 0.5 m from water edge.	
Water Vole	Burrow	NH 53091 99872	Two entrances holes found. No food or droppings found. Approx. 1 m from watercourse. Grassy embankment with some rush and patches of sphagnum moss.	
Water Vole	Burrow	NH 53141 99846	In grassy embankment above stream. 0.5 m from edge of burn.	
Water Vole	Burrow	NH 53743 00805	At least 10 burrows of variable near watercourse. In grassland habitat.	
Water Vole	Burrow	NH 54195 00151	Approx. 10 m upstream from other collection of burrows.	
Water Vole	Burrow	NH 54183 00180	Network of burrows, approx. around 10 next to watercourse.	2
Water Vole	Burrow	NH 54225 00201	Beneath heather along edge of watercourse.	
Water Vole	Burrow	NH 54602 00770	Beside watercourse in grass vegetation.	
Water Vole	Burrow	NH 54648 00759	1 m from watercourse in embankment.	
Water Vole	Burrow	NH 50311 00249	Water vole burrow.	
Water Vole	Burrow	NH 50338 00262	Several burrows.	

Water Vole	Burrow	NH 50475 00240	Several burrows.
Water Vole	Burrow	NH 50491 00242	Several burrows.
Water Vole	Burrow	NH 50543 00258	Several burrows.
Water Vole	Burrow	NH 50561 00265	Burrow with clippings.
Water Vole	Burrow	NH 50611 00270	Burrow with clippings.
Water Vole	Burrow	NH 50781 00307	Burrow with bedding mat.
Water Vole	Burrow	NH 50682 00299	5 burrows. Lawns around entrances. No droppings or prints. Runs along burrows.
Water Vole	Burrow	NH 50660 00281	3 burrows with latrine outside of entrance.
Water Vole	Burrow	NH 50648 00277	Two burrows.
Water Vole	Burrow	NH 50650 00284	1 water vole burrow.
Water Vole	Burrow	NH 50530 00254	4 burrows. No droppings, clippings, lawns or footprints.
Water Vole	Burrow	NH 50524 00253	1 burrow.
Water Vole	Burrow	NH 50518 00252	2 burrows with droppings at entrance.
Water Vole	Burrow	NH 50499 00247	7 burrows with two containing droppings, one fresh and one old.
Water Vole	Burrow	NH 50486 00232	13 burrows with a few containing fresh droppings.
Water Vole	Burrow	NH 50479 00232	4 burrows with two with fresh droppings.
Water Vole	Burrow	NH 50469 00238	21 burrows some with fresh droppings and lawn around entrances.
Water Vole	Burrow	NH 50462 00231	1 burrow.
Water Vole	Burrow	NH 50454 00234	23 burrows some with droppings, clippings and lawn around entrances.
Water Vole	Burrow	NH 50444 00242	10 burrows
Water Vole	Burrow	NH 50439 00243	12 burrows
Water Vole	Burrow	NH 50350 00250	2 burrow with droppings
Water Vole	Burrow	NH 50324 00262	8 burrows
Water Vole	Burrow	NH 50289 00251	10 burrows
Water Vole	Burrow	NH 50278 00237	15 burrows
Water Vole	Burrow	NH 50122 00185	1 burrow
Water Vole	Burrow	NH 50168 00270	6 burrows
Water Vole	Burrow	NH 50181 00291	5 burrows with 1 latrine
Water Vole	Burrow	NH 50195 00323	3 burrows with clippings at entrance
Water Vole	Burrow	NH 50272 00443	9 burrows with droppings outside some burrows. However droppings could be field vole as old and swollen.
Water Vole	Burrow	NH 50321 00580	1 burrow
Water Vole	Burrow	NH 50261 00506	2 burrows
Water Vole	Burrow	NH 49966 00094	1 burrow
Water Vole	Burrow	NH 49893 00116	1 burrow
Water Vole	Burrow	NN 50063 99993	2 burrows
Water Vole	Burrow	NN 50116 99884	1 potential water vole burrow amongst smaller burrows which are likely to be field vole burrows with field vole droppings.
Water Vole	Burrow	NN 50220 99647	2 potential burrows.
Water Vole	Burrow	NN 50674 98758	Potential burrow. No other signs.

Water Vole	Burrow	NH 51034 00204	1 burrow which extends down into water.
Water Vole	Burrow	NN 49558 99499	2 burrows with droppings.
Water Vole	Burrow	NN 49509 99254	5 large burrows no signs.
Water Vole	Burrow	NN 49354 98833	7 potential water vole burrows. Field vole clippings and droppings.
Water Vole	Burrow	NN 49328 98923	At least 10 burrows with water vole droppings.
Water Vole	Burrow	NN 49317 98924	At least 20 burrows with water vole droppings.
Water Vole	Burrow	NN 49299 98938	At least 5 burrows no signs.
Water Vole	Burrow	NN 51082 98243	Large burrow. Potentially water vole. No other signs.
Water Vole	Burrow	NN 51081 98247	2 large burrows with water vole droppings. Droppings green and fresh. Large vole briefly sighted and squeaking noises heard from burrow.
Water Vole	Burrow	NN 51068 98256	Large burrow leading into burn.
Water Vole	Burrow	NN 51048 98291	Large burrow into burn.
Water Vole	Burrow	NN 51039 98333	Potential water vole burrow.
Water Vole	Burrow	NN 51028 98334	2 potential water vole burrows.
Water Vole	Burrow	NN 51004 98330	Potential burrow.
Water Vole	Burrow	NN 51663 99698	2 potential water vole burrows.
Water Vole	Burrow	NN 52827 99808	Water vole burrow with clippings.
Water Vole	Burrow	NH 51061 00189	Several burrows >= 6 no droppings found.
Water Vole	Burrow	NN 48111 99426	Many large possible water vole burrows 20+ and runs, one dropping found photo. Also being used by field vole.
Water Vole	Burrow	NN 48052 99367	Several burrows 6+ and fresh droppings. Also being used by field vole.
Water Vole	Burrow	NN 47954 99289	6+ burrows.
Water Vole	Burrow	NN 47945 99280	Several burrows.
Water Vole	Burrow	NH 49447 00691	Burrows 8+ probable water vole, large size, little other sign to confirm.
Water Vole	Burrow	NN 48343 99178	Likely water vole, large burrows. 10 plus burrows. Some field vole droppings only.
Water Vole	Burrow	NN 53190 99393	On water level. Lots of droppings at entrance and in water. Adjacent to watercourse approx. 1.5 m from channel. At least another four burrows in area
Water Vole	Burrow	NN 53285 99376	Burrow in peat hag. Dropping in tunnel and at entrance.
Water Vole	Burrow	NH 54284 00258	At least five burrows in area. Some directly exit to watercourse, others 2 m away. Droppings present. Well-worn paths between entrances. Field vole seen in area.

Water Vole	Burrow	NH 53125 00094	At least six burrows. Good size for water vole. No droppings observed. Some chewed rushes at entrance to one burrow approx. 20 cm long.
Water Vole	Burrow	NH 55760 00199	Potential burrows. Lots of field vole signs. No droppings or feeding signs of water vole
Water Vole	Burrow	NH 54161 00128	At least three burrows on grassy bank 0.5m from watercourse. Droppings in entrance. Field vole burrows also in wider vicinity.
Water Vole	Burrow	NN 53323 99377	Three burrows on bank of watercourse near Pooled area. Droppings around entrance. Clipped vegetation at entrance.
Water Vole	Burrow	NH 55764 00250	Patch of 10 or so burrows. Large enough to be potential water vole. No droppings or feeding signs recorded. Field vole droppings in area.
Water Vole	Burrow	NN 53413 99401	5 burrows large enough for water vole. No feeding remains or droppings observed. 1.5 m from east bank of watercourse.
Water Vole	Burrow	NH 52871 00409	At least six burrows approx. 3 m from watercourse. Droppings present. No other signs recorded.
Water Vole	Burrow	NH 54224 00214	At least four burrows next to watercourse. Water vole droppings seen in entrance to one. Field vole droppings also recorded. On grassy bank of slow moving section of watercourse.
Water Vole	Burrow	NN 53310 99381	Clipped rushes in burrow entrance. On grassy embankment next to watercourse.
Water Vole	Burrow	NH 54620 01034	At least four burrows with droppings at entrance. Approx. 0.5 m from watercourse on sat bank.
Water Vole	Burrow	NH 54543 01205	At least four burrows potential for water vole. Large enough. Two fresh droppings at entrance look to be water vole.
Water Vole	Burrow	NH 54222 00206	Burrow large enough for water vole. No droppings or feeding signs recorded.
Water Vole	Burrow	NH 53093 00153	On bank adjacent to watercourse. Large enough for water vole. No droppings.
Water Vole	Burrow	NH 52923 00721	Four burrows on grassy embankment. Near area of peat hags. Some weathered droppings but unable to determine species. Burrows large enough for water vole.

Water Vole	Burrow	NH 54620 01060	At least nine burrows. Many good water vole size. Latrine present also.
Water Vole	Burrow	NN 53338 99384	Single burrow with dropping at entrance. Right next to watercourse on bank.
Water Vole	Burrow	NN 53143 99995	At least nine burrows adjacent to watercourse on grassy peaty embankment. Burrows large enough for water vole but no droppings or feeding signs recorded.
Water Vole	Burrow	NH 54172 00148	At least five burrows large enough for water vole. No droppings seen at entrance.
Water Vole	Burrow	NH 53099 00140	At least eight burrows. Well-worn paths between entrances. Good sized entrances with droppings present in area.
Water Vole	Dead	NN 49446 99124	Midstream on grassy boulder. Downstream of colony.
Water Vole	Footprint	NN 47965 99298	Water vole prints on peat bank.
Water Vole	Latrine	NH 53759 00798	In amongst burrows.
Water Vole	Latrine	NH 54604 00609	Water vole latrine.
Water Vole	Latrine	NH 54639 00765	In embankment.
Water Vole	Latrine	NH 54702 00739	Beneath piece of wood.
Water Vole	Latrine	NH 50146 00200	2 droppings.
Water Vole	Latrine	NN 48070 99382	Burrow and 3 droppings.
Water Vole	Latrine	NN 49409 99901	One dropping only, old.
Water Vole	Latrine	NN 53259 99382	Old weathered latrine on exposed peat from watercourse.
Water Vole	Latrine	NH 54172 00146	Latrine on peaty bank of watercourse. Some droppings fresh.
Water Vole	Latrine	NH 54621 01058	Near burrows. Approx. 0.5m from watercourse.
Water Vole	Latrine	NN 53253 99384	Fresh droppings on eroded peat.
Water Vole	Latrine	NN 53301 99380	On turned over peat in watercourse.
Water Vole	Latrine	NN 53322 99378	Latrine next to watercourse. 3
Water Vole	Latrine	NH 53093 00150	Pile of droppings adjacent to watercourse. Weathered. Some fresh droppings.
Water Vole	Other Field Signs	NN 49347 98917	Network of 20-30 burrows. Well-used although no signs of recent droppings or latrines.
Water Vole	Colony	NN 49471 99186	Colony 30-40 burrows. Some with droppings and clippings.
Water Vole	Colony	NN 49642 99512	Colony inhabiting upper reaches of burn. Surface burrows leading to burn undermining landscape.
Water Vole	Run	NH 50473 00240	Run, old dropping present.
Water Vole	Run	NH 50480 00242	Run to water.

Water Vole	Potential Burrow	NN 52394 99687	Potential water vole burrow.	
Water Vole	Potential Footprint	NH 54616 01039	Potential water vole prints along peaty bank adjacent to watercourse. Near burrows with droppings	4
Water Vole	Potential Footprint	NH 54555 01175	Potential prints in peaty bank adjacent to watercourse. Difficult to tell	
Water Vole	Sighting	NN 49589 99407	Seen at entrance to burrow.	
Water Vole	Sighting	NN 49618 99406	Entered burn.	
Water Vole	Sighting	NN 49636 99507	Crossed burn at upper section of colony.	
Water Vole	Sighting	NN 51216 98751	One vole seen entering burrows leading down to burn undermining terrain.	
Common lizard	Sighting	NH 48595 98471	Near stream, pregnant female.	
Common lizard	Sighting	NN 48854 97993	Pregnant female, in ditch.	
Common lizard	Sighting	NN 53623 98913	Sighting of common lizard.	
Mammal	Hole	NN 52652 98985	Probable fox den, no sign, not recently used.	
Mammal	Hole	NH 54855 00665	Six mammal holes present in small hillock. Evidence of hare and fox hair. Large boulders places inside one entrance. Bones on several of the spoil heaps.	

Annex 3. Photographs

Photo 1: Recent spraint on large rock adjacent to watercourse



Photo 2: Water vole burrow – part of a network of 10 burrows adjacent to watercourse



Photo 3: Latrine adjacent to watercourse



Photo 4: Potential water vole prints on mud bank adjacent to watercourse

