



## **Protected Mammal Survey**

Donich Water

For

Hydroplan

**Final**

10<sup>th</sup> September 2015

[www.wildsurveys.co.uk](http://www.wildsurveys.co.uk)

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## Executive Summary

Wild Surveys Ltd was commissioned by Hydroplan to undertake an ecological constraints survey and desk study along the Donich Water, Lochgoilhead, National Grid reference NN205021 (approx. centre of route) surveying up to 250 m buffer around the proposed development site. The aim of the survey was to identify the presence of any protected mammals on site. It is understood that the report is to be used to inform the planning conditions.

The route surveyed crosses areas of felled and standing conifer plantation and small water courses.

A desk study was undertaken to review information available within the public domain. Publically available databases, local wildlife groups and our own internal records were consulted for historical evidence of protected species in and around the site. In addition, a walkover survey was carried out on 25<sup>th</sup> August and 9<sup>th</sup> September 2015 by two experienced ecologists to identify the broad habitat types present as well as any field signs of protected or notable species.

Field sign of otters (*Lutra lutra*) was noted in the form of an old spraint under a bridge at NN20275 01946 approximately 125m from the end of the tailrace. No holts or couches were found. Feeding signs of red squirrel (*Sciurus vulgaris*) were noted in several places along the route and two dreys were located next to the tail race at NN20447 02167 and adjacent to the path at NN20382 02134 and a red squirrel, which was sighted at the pump-house area. Badger (*Meles meles*) faeces was noted at NN20552 02196, however no actual setts were found.

Although suitable habitat exists to support pine marten (*Martes martes*) and water vole (*Arvicola amphibious*) in places, no field signs were noted to suggest that either species are present in this area. None of the trees identified for removal are suitable for supporting roosting bats (*Chiroptera sp*).

As red squirrels and their dreys are protected by law, a licence will be required to remove the drey on the tree which is being felled to accommodate the tailrace prior to the tree being felled. Although the second drey is not on a tree which is earmarked for removal, it is immediately adjacent to the route and therefore any works would potentially cause a disturbance and as such would therefore also require a licence.

## **1 Introduction**

### **1.1 Project objectives**

- 1.1.1 Wild Surveys Ltd was commissioned by Hydroplan to undertake an ecological constraints survey and desk study at Donich water, Lochgoilhead, National Grid reference NN205021 (approx. centre of site). This report presents the results of the survey carried out. The location of the survey is shown in **Appendix 1**.
- 1.1.2 Wild Surveys understands that the survey was carried out prior to works starting on the Donich water hydro-scheme.
- 1.1.3 Based on the habitat types present within and adjacent to the site, the survey aimed to identify the presence or absence of a number of protected species in order to provide a baseline for the site and to make recommendations for avoidance, mitigation and/or for any further survey effort, where required. Full surveys were carried out on 25<sup>th</sup> August and 9<sup>th</sup> September 2015 for otter, red squirrel, pine marten, water vole and badger. No trees with features suitable for supporting roosting bats are earmarked for removal and no suitable habitat exists along the line of the route to support Scottish wildcat (*Felis sylvestris*) therefore these species are not mentioned again in this report.

### **1.2 Site Location**

- 1.2.1 The site surveyed is located to the east of the village of Lochgoilhead, Argyll. Site location can be found in **Appendix 1**.

## **2 Methodology**

### **2.1 Desk Study**

- 2.1.1 A data search was undertaken by Wild Surveys Ltd to review information available within the public domain. Publically available databases, local wildlife groups and our own internal records were consulted for historical evidence of protected species in and around the site. This information was gathered to identify the status of these protected species within 2 km (5km for bats) of the site.
- 2.1.2 In addition, a search using MAGIC, SNHi sitelink and the relevant Local Authority nature conservation sites was carried out to discover any statutory or non-statutory designated sites within 2 km. These would include:
- Local Nature Reserve (LNR);
  - Local Authority designated site, *e.g.* Site of Importance for Nature Conservation (SINC);
  - Wildlife Nature Reserve (SWT, RSPB, etc.);
  - Site of Special Scientific Interest (SSSI);
  - Special Area for Conservation (SAC); and
  - Special Protection Area (SPA).

### **2.2 Protected Species Survey**

- 2.2.1 Habitats within the survey area are dominated by felled and standing conifer plantation with water courses also present. Given the habitat types on site particular attention was given to the potential presence of the following species: otter, red squirrel, one marten, water vole and badger. Dedicated surveys were carried out for these species on 25<sup>th</sup> August and 9<sup>th</sup> September 2015. Methodologies are detailed below for each of these species.

#### **Otter**

- 2.2.2 All watercourses on the site, and within 250m of the site, where possible, were surveyed to assess the site's potential to support otter and to search for any field signs which would indicate use. Field signs include:

- Holts – below ground resting places;
- Couches – above ground resting places;
- Prints; and
- Spraints – faeces used as territorial markers.

- 2.2.3 Otters can be surveyed for at any time of year; however, it is our practice to leave at least two dry days before surveying a watercourse, as heavy rain can wash away evidence. Further information on the legal protection afforded to otter can be found in **Appendix 2 and 3**.

#### **Red Squirrel**

- 2.2.4 An assessment was made of the site for its potential to support red squirrels. Signs of red squirrel include:

- Squirrel dreys within trees;
- Feeding remains (*e.g.* chewed cones, split nuts); and
- Sightings of red squirrels.

2.2.5 Surveys for red squirrel signs are best carried out in the season which corresponds to food availability for the tree crop present. For example, broadleaved tree seeds are usually available from autumn, declining through winter and spring. Further information on the legal protection afforded to red squirrel can be found in **Appendix 4**.

#### **Pine Marten**

2.2.6 All areas of potentially suitable habitat (*e.g.* rocky areas, woodland, stone walls) were surveyed for pine marten, both within the site boundary and within a 50m buffer. Information on the legal protection afforded to pine marten can be found in **Appendix 4**. The following field signs were searched for:

- Droppings (faeces);
- Prints;
- Paths;
- Resting sites; and
- Feeding remains.

#### **Water vole**

2.2.7 All watercourses on the site, and within a 50m buffer of the site were surveyed where possible for water vole and the following field signs were searched for:

- Droppings – faeces recognisable by their size, shape and content, and (if not too dried out) also distinguishable from rat droppings by their smell;
- Latrines – faeces are often deposited at discrete locations known as latrines;
- Feeding stations – food items are often brought to feeding stations along pathways and haul out platforms, recognizable by 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 vegetation cover, may be distinguishable from rat by size; and
- Runways in vegetation – low tunnels pushed through vegetation near the water's edge, less obvious than rat runs.

2.2.8 Although water voles do not hibernate they are not very active above ground during the winter; therefore, surveys are best carried out between March and October. An assessment of bank suitability can however, be made out-with the active season.

2.2.9 The survey included searching for field signs of badgers both within the site boundary and within a buffer of 50m, including:

- Presence of holes with evidence of badgers such as footprints, discarded hairs; etc.;
- Presence of dung pits or latrines;

- Presence of well-used runs with subsidiary evidence of badger activity; and
- Presence of other indications of badger activity such as signs of foraging, snuffle marks and footprints.

2.2.10 In addition, any mammal holes which were either dug by badger or could be used by badger (known as setts) were also noted. Sett classification is described as:

- Main – several holes with large spoil heaps and obvious paths emanating from and between sett entrances;
- Annexe – normally less than 150 m from main sett, comprising several holes, may not be in use all the time, even if main sett is very active;
- Subsidiary – usually at least 50 m from main sett with no obvious paths connecting to other setts;
- Outlier – little spoil outside holes, no obvious paths connecting to other sets and only used sporadically, may be used by foxes and rabbits; and
- Day nests – bundles of grass or other vegetation above ground where badgers may sleep during the day, or in some occasions breed.

2.2.11 Badger surveys can be carried out at any time of the year. However, the optimum period is between November and March when vegetation has died back and signs can be more easily seen. Information on the legal protection afforded to badger can be found in **Appendix 5**.

## 2.3 Limitations to Survey

### Physical Limitations

2.3.1 There were no physical limitations to carrying out the surveys.

### Seasonal Limitations

2.3.2 Although the surveys were carried out, out-with the optimal season for badger, most of the habitat is conifer woodland and therefore this should not be considered as a limitation to carrying out the surveys.

2.3.3 There are seasonal limitations to all species and habitats surveys. A table of optimal survey periods can be found in **Appendix 7**.

### **3 Results**

#### **3.1 Desk Study**

- 3.1.1 Donich Water falls within Loch Lomond and the Trossachs National Park (LLTNP). There are no other designated sites within 2km of the pipe route. The results of the designated site search can be found in **Appendix 8**.
- 3.1.2 Loch Lomond and the Trossachs National Park Biodiversity Action Plan (LBAP) have Habitat Programmes in place for woodland and forests as well as mountains and moorland. They have Species programmes in place for red squirrel and water vole. The results of the designated site search can be found in **Appendix 8**.
- 3.1.3 From the desk study it has been established that records exist for otter, red squirrel, pine marten, water vole, badger and Scottish wildcat within the 10km square NN20. Some of these are historic records and some are for records close to the site. The results of the designated site search can be found in **Appendix 8**.

#### **3.2 Protected Species Survey**

##### **Otter**

- 3.2.1 Field signs of otter in the form of footprints and an old spraint were noted at NN20275 01946. Although suitable habitat exists along the water course for holts and couches, no further field signs were identified.

##### **Red Squirrel**

- 3.2.2 Small scattered patches of stripped spruce cones on stumps were noted along the route. Two dreys were identified at NN20382 02134 along the route of the tail race, and at NN20447 02167 where the pipe runs adjacent to a footpath. A red squirrel was also seen crossing from the trees at the tailrace into an adjacent garden during the visit on 9<sup>th</sup> September
- 3.2.3 Therefore a licence will now be required to remove and/or disturb the dreys prior to works commencing providing it can be established that neither are being used for breeding purposes. As we are now out of the optimum season for breeding, this is unlikely, however we recommend that this is confirmed by monitoring and/or climbing and inspection by endoscope prior to removal.

##### **Pine Marten**

- 3.2.3 Suitable habitat exists to support pine marten, especially lower down where the pipe runs through conifer woodland, however no field signs were noted to suggest that they are present on this site.

##### **Water Vole**

- 3.2.4 Habitat exists to support water vole higher up where the water is slower and the bank profile and vegetation are more suitable, however no field signs were found to suggest that they are present on this site.



**Badger**

- 3.2.5 A single badger faeces was found where the route runs adjacent to the footpath at NN20552 02196. No further evidence of badger was noted and no setts were identified.

## **4 Conclusions and Recommendations**

### **4.1 Conclusions**

- 4.1.1 The route lies within Loch Lomond and The Trossachs National Park. There are records listed of protected mammals, however none are listed specifically for this site.
- 4.1.2 Otters are known to be present on the site, however no holts or couches have been identified.
- 4.1.3 Red squirrels are known to be present on the site with two dreys having been identified within the site boundary.
- 4.1.4 Suitable habitat exists to support pine marten, however no field signs were found to suggest that they are present in this area.
- 4.1.5 Suitable habitat exists in places to support water vole, however no field signs were found to suggest that they are present in this area.
- 4.1.6 Suitable habitat exists to support badger along the length of the pipe route, and a single faeces was found to confirm their presence. No setts were located.

### **4.2 Recommendations**

- 4.2.1 If no works have taken place before September 2015, we recommend that the site is re-surveyed to update the ecological baseline.

#### **Licensing Requirements**

- 4.2.2 As two dreys have been identified, a licence will now be required from SNH before works can take place to these areas. This will only be granted if it can be established that neither are being used for breeding purposes. This can be confirmed by monitoring and/or climbing and inspection with an endoscope under licence.

#### **Mitigation**

- 4.2.3 The following methods should be employed during construction in order to protect any protected mammal species using the site:
  - A temporary ramp to be placed in trenches over 0.5 m deep in order to allow a potentially trapped animal to exit the trench;
  - Any open pipes should be capped to prevent animals gaining access;
  - All excavations and pipe systems should be checked at the start of each working day;
  - Site construction fencing should not interfere with the passage of animals through river corridors;
  - Lighting to be directed away from watercourses and lochs, and any lighting on bridges or within 30 m of burns to be low-intensity lighting; and
  - Existing vegetation along the watercourses should be retained wherever possible.

- 4.2.4 All site staff must be made aware of the presence of otter, red squirrel and badger within the site boundary and the legal protection afforded them. Should any sightings of these species or signs of these animals be noted on site, all works in the vicinity must stop and the project ecologist contact for advice. Contact details can be found in Section 5.
- 4.2.5 Scottish Environmental Protection Agency (SEPA) guidelines should be followed to avoid any pollution or run-off into watercourses.
- 4.2.6 As compensation for the loss of the two dreys, it is recommended that two artificial boxes specifically designed for attracting red squirrels are installed on suitable trees close to the original locations.

## 5 Contacts and References

### 5.1 Contacts

#### 5.1.1

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Linwood Road  
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#### 5.1.2 Scottish Natural Heritage

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[www.snh.gov.uk](http://www.snh.gov.uk)

### 5.2 References

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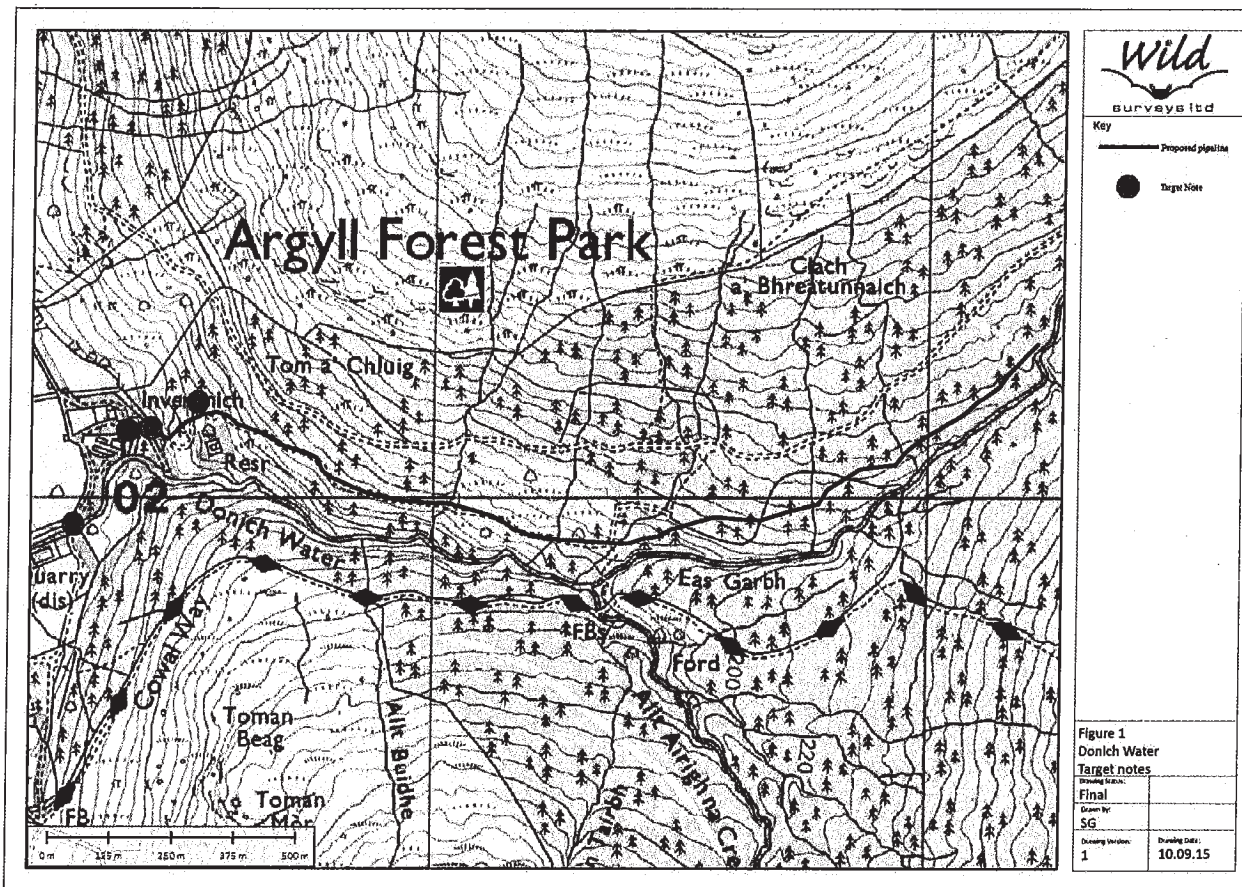
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## Appendix 1 – Site Location and Photographs



Typical of the habitat present on site



Badger faeces on the path



Squirrel drey at tailrace location



## Appendix 2 – Legal and Environmental Context

### Legal Context – Habitats

Certain areas within Scotland have been identified based on its exceptional habitat and thus granted protection as a statutory designated site either under European or domestic legislation. Local and non-statutory designations, for example local nature reserves, can also have bearing on permitted activities within them. European designated sites, sometimes referred to as Natura sites, have been created under the *Conservation (Natural Habitats, &c.) Regulations 1994* (as amended in Scotland) as well as the *Directive 2009/147/EC of the European Parliament and of the Council on the Conservation of Wild Birds* (often referred to as the 'Birds Directive'). These sites are called Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) for birds. There are also national designations, which include Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs), National Parks, and various designations for landscape. There can be restrictions on certain actions and developments within and adjacent to designated sites which may affect proposed development plans. Local designations, for example local nature reserves, can also have bearing on permitted activities within them.

### Legal Context – European Protected Species (EPS)

There are several species native to Scotland which receive full protection from European legislation. All British bat species, otters (*Lutra lutra*), wildcat (*Felis silvestris*), great crested newts (*Triturus cristatus*), and natterjack toads (*Epidalea calamita*), as well as all cetaceans, some reptiles and fish, are protected under European law which has been translated into Scots law under the *Conservation (Natural Habitats, &c.) Regulations 1994* (as amended in Scotland), often referred to as the Habitats Regulations. As such, bats, otters and great crested newt are fully protected from killing, taking or disturbance whilst in their places of shelter and their resting/breeding sites are also protected from obstruction, damage or destruction, even if these animals are not present. Licences can be granted by the licensing authority, Scottish Natural Heritage (SNH) for certain purposes provided the requirements under the legislation can be met.

### Legal Context – Wildlife and Countryside Act Species (WCAS)

There are also many species in Scotland which receive protection from national legislation. Red squirrel (*Sciurus vulgaris*), pine marten (*Martes martes*), and water voles (*Arvicola amphibious*) (along with several other species) are protected under the *Wildlife and Countryside Act 1981* (as amended in Scotland). Red squirrels and pine marten are fully protected from killing, taking, obstructing access to their shelter or disturbance whilst in their shelter. However, water vole protection in Scotland is limited to protection from damage, destruction or obstruction of access to their shelters and to disturbance while a water vole is occupying its shelter. Water voles are not currently protected from killing or taking in Scotland. Licences can be granted by the licensing authority, SNH, for certain purposes provided the requirements under the legislation can be met. A more detailed summary of the protection afforded to WCAS can be found in **Appendix 4**.

### Legal Context – Badgers

Badgers (*Meles meles*) are protected by the Protection of Badgers Act 1992 (as amended in Scotland). The purpose of the Act is to protect the animals from deliberate cruelty and from the incidental effect of lawful activities which could cause them harm. Therefore badgers are fully protected from deliberate or reckless killing, taking or interference of their setts. Licences can be granted by the licensing authority, SNH, for certain purposes provided the requirements under the legislation can be met.

### Legal Context – Birds

All wild birds are protected under the *Wildlife and Countryside Act 1981* (as amended in Scotland) from killing, taking, destroying eggs, damaging or destroying nests while in use, and obstructing access to nests in use.

Certain species of birds receive extra protection from disturbance during nesting, harassment, and destruction of nests at any time.

#### **Legal Context – Non-native Species**

Non-native invasive species were searched for during the survey. The recently amended *Wildlife and Countryside Act 1981* strengthens the control of non-native species, redefining what non-native means and outlining what the legal responsibilities of landowners are. One offence which has not changed is the planting or otherwise causing non-native species to grow in the wild. In addition, certain species pose such a high risk to native species and habitats as to be considered invasive; it is an offence to even possess these species. The *Wildlife and Countryside Act 1981 (Keeping and Release and Notification Requirements) (Scotland) Order* (as amended) and the *Wildlife and Countryside Act 1981 (Exceptions to section 14) (Scotland) Order* (as amended) those invasive non-native species and the non-native species exempted from offence. Advice can also be found in the Code of Practice on Non-Native Species, published by the Scottish Government in 2012.

#### **Environmental Context**

In addition to statutory protection of habitats and species, there are several mechanisms for non-statutory protection which can influence planning policy. These include priority habitats and species under UK-wide and Local Biodiversity Action Plans (BAPs) as well as inclusion on the Scottish Biodiversity List.



## Appendix 3 – European Protected Species and the Law

Bats, otters, great crested newts, natterjack toad, wildcat, cetaceans, and several other animals are protected under European law, in Annexes II and IV of *Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora* (The Habitats Directive 1992). The Habitats Directive is translated into Scots law under the **Conservation (Natural Habitats, &c.) Regulations 1994** (as amended in Scotland), often referred to as the Habitats Regulations, with these species being classified as European protected species. Under these regulations it is an offence to:

- **Damage or destroy a breeding site or resting place of such an animal; and to**

deliberately or recklessly:

- **Capture, injure or kill a wild animal of a European protected species;**
- **Harass a wild animal or group of wild animals of a European protected species;**
- **Disturb such an animal while it is occupying a structure or place which it uses for shelter or protection;**
- **Disturb such an animal while it is rearing or otherwise caring for its young;**
- **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;**
- **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; and**
- **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.**

There are also several plant, fungi, and lichen species protected under this legislation. EPS animals can potentially return to the same resting site every year; therefore, bat roosts, otter holts, etc. are protected even if there are no animals there all year round. These laws are not designed to prevent work, but to minimize its impact on the long-term survival of EPS. As such, some activities affecting EPS or their places of shelter may need to be done under and in accordance with the terms of a licence issued by the licensing authority, Scottish Natural Heritage. Licences allow certain otherwise illegal actions to be undertaken legitimately. Such activities might include:

- Blocking, filling or installing grilles over old mines or tunnels;
- Building, alteration or maintenance work;
- Getting rid of unwanted bat colonies;
- Tree felling;
- Re-roofing;
- Remedial timber treatment;
- Rewiring or plumbing in roofs;
- Demolition;
- Maintenance or construction of watercourse crossings (e.g. culverts under roads, bridges);
- Vegetation clearance along riparian corridors;
- Any disturbing (e.g. loud or night works) within proximity to watercourses;
- Dewatering or infilling ponds;
- Removal of woodpiles and debris near waterbodies; and
- Translocation of species.

### **If a licence is required:**

Further survey will be required in order to gain sufficient information in order to supply a sufficient baseline and to inform the necessary mitigation plan required to support a licence application.

Application forms can be found on the SNH website along with guidance:

<http://www.snh.gov.uk/protecting-scotlands-nature/species-licensing/forms-and-guidance/>

Please note the need to provide clear justifications as to the purpose of the licence and any alternatives which may have been considered. Supporting information will be required to specifically support an application and depending on the findings of this survey, further survey work may be required, along

with a detailed mitigation plan specific to the bat interest on this site and to the works proposed. SNH also generally require that all other consents, such as planning permission and historic building consent, are in place before a licence will be considered.

A Habitats Regulations licence may be granted by Scottish Natural Heritage if the following three tests are met:

1. That the licence application must demonstrably relate to one of the purposes specified in Regulation 44(2) of the Habitats Regulations. These purposes include, among others:
  - Preserving public health or public safety;
  - Other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment;  
or
  - Preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber or any other form of property, or to fisheries.
2. That there is no satisfactory alternative; and
3. That the development will not be detrimental to maintenance of the populations of the species at a favourable conservation status.

**If an EPS is found during the period of development:**

The project ecologist (contact details given in Section 5) should be contacted immediately for advice before proceeding with works. Advice from SNH may be required; the project ecologist should be able to determine this.

## Appendix 4 – Wildlife and Countryside Act Species and the Law

Red squirrel, pine marten, water vole, freshwater pearl mussel, as well as some species of fish and other invertebrates protected under national legislation, *the Wildlife and Countryside Act (1981)* (as amended in Scotland) Schedule 5. Several plants are also protected under this piece of legislation under Schedule 8. Species such as pine marten and red squirrel are fully protected, making it an offence to intentionally or recklessly:

- Kill, injure, or take any wild animal included in Schedule 5;
- Damage or destroy any structure or place which any wild animal specified in Schedule 5 uses for shelter or protection;
- Disturb any such animal while it is occupying a structure or place which it uses for shelter or protection; and
- Obstruct access to any structure or place which any such animal uses for shelter or protection.

The water vole, though in sharp decline in the UK, and is listed on Schedule 5 in respect of section 9(4) only, *i.e.* their habitat is protected but the animals themselves are not, except while they are in their shelters. So while it is not an offence to kill, injure or take a water vole in Scotland, the other offences regarding damage to shelter and disturbance still apply. Although water voles are not currently protected from killing or taking in Scotland, England and Wales gave water vole full protection in April 2008, and they are expected to receive full protection in Scotland in the near future.

### If a licence is required:

The recent *Wildlife and Natural Environment (Scotland) Act 2012* provided a new licensing purpose to apply to Schedules 5 and 8 species listed in the Wildlife and Countryside Act. The new purpose is designed to mimic the tests required for EPS species. Therefore there is still a need to provide clear justifications as to the purpose of the licence and any alternatives which may have been considered. Supporting information will be required to specifically support an application and depending on the findings of this survey, further survey work may be required, along with a detailed mitigation plan specific to the Schedule 5 interest on this site and to the works proposed. SNH also generally require that all other consents, such as planning permission and historic building consent, are in place before a licence will be considered.

The relevant purposes for which a licence can be granted include:

- Preserving public health or public safety;
- Preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber, or any other form of property or to fisheries; or
- For any other social, economic or environmental purpose; provided that
  - a. Undertaking the conduct authorized by the licence will give rise to or contribute towards the achievement of, a significant social, economic or environmental benefit; and
  - b. There is no other satisfactory solution.

Application forms can be found on the SNH website along with guidance:

<http://www.snh.gov.uk/protecting-scotlands-nature/species-licensing/forms-and-guidance/>

### If a Schedule 5 species is found during the period of development:

The project ecologist (contact details given in Section 5.1) should be contacted immediately for advice before proceeding with works. Advice from SNH may be required; the project ecologist should be able to determine this.

## **Appendix 5 – Badgers and the Law**

Badgers are protected by the *Protection of Badgers Act 1992* (as amended in Scotland).

The purpose of the Act is to protect the animals from deliberate cruelty and from the incidental effect of lawful activities which could cause them harm. Under this legislation it is an offence to deliberately or recklessly:

- Kill, injure, take, possess or cruelly ill-treat a badger or attempt to do so;
- Damaging or destroying it;
- Obstruct access to, or any entrance of, a badger sett; and
- Disturb a badger whilst it is occupying a sett.

### **If a licence is required:**

Application forms can be found on the SNH website along with guidance:

<http://www.snh.gov.uk/protecting-scotlands-nature/species-licensing/mammal-licensing/badgers-and-licensing/dev/>.

Please note supporting information will be required to specifically support an application and depending on the findings of this survey, further survey work may be required, along with a detailed mitigation plan specific to the badger interest on this site and to the works proposed. SNH also generally require that planning permission is in place before a licence will be considered.

### **If a badger is found during the period of development:**

The project ecologist (contact details given in Section 5.1) should be contacted immediately for advice before proceeding with works. Advice from SNH may be required; the project ecologist should be able to determine this.

## ■ Appendix 6 – Birds and the Law

All species of wild bird and their nests are also protected under the *Wildlife and Countryside Act 1981* (as amended in Scotland), which makes it illegal to deliberately or recklessly:

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built;
- At any other time takes, damages, destroys or otherwise interferes with any nest habitually used by any wild bird included in Schedule A1;
- Obstructs or prevents any wild bird from using its nest; and
- take or destroy an egg of any wild bird

There are also further offences for birds listed on Schedule 1 of the Act which includes deliberately or recklessly:

- Disturbing any wild Schedule 1 bird while it is building a nest or is in, on or near a nest containing eggs or young; and
- Disturbing a dependent young of such a bird.

**You should note that there is no licensable purpose of development for birds.**

Should there be a risk of one of the above offences it is strongly advised that works are either micro-sited to avoid the nests or timed to avoid the nesting season (1 March to 31 August), depending on the species and type of work.

### **If live nests are found:**

The project ecologist (contact details given in Section 5.1) should be contacted immediately for advice before proceeding with works. Advice from SNH may be required; the project ecologist should be able to determine this.

## Appendix 7 – Guidance on Optimal Survey Periods

Protected Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Habitats & Vegetation	Recommended time to surveys mosses and lichens only			Recommended time to undertake Phase 1 habitat surveys								Recommended time to surveys mosses and lichens only	
Badgers	Best time for field surveys			Surveys possible, but sub-optimal			Best time for field surveys						
Bats	Inspection of hibernation, tree and building roosts			Activity surveys only; invasive surveys to be avoided	Activity surveys and inspection of building roosts. Emergence counts.			Activity surveys only; invasive surveys to be avoided	Inspection of hibernation, tree and building roosts				
Birds	Winter birds	Breeding birds/migrant species		Breeding birds		Breeding birds/migrant species		Winter birds					
Otters	Year round surveying, though wet weather can limit visibility.			Surveys for otters can potentially be conducted all year round, preferably when weather condition are stable, though dense vegetation cover can be limiting			Year round surveying, though wet weather can limit visibility.						
Pine martens	Surveys can be carried out at any time of year, though better in spring and summer		Survey for breeding dens		Optimal survey period is spring to summer		Surveys can be carried out at any time of year, though better in spring and summer						
Red squirrels	Survey at any time of year, breeding females		Survey at any time of year weather permitting, optimal in spring and summer. Breeding females can be surveyed December to September			Survey at any time of year		Breeding females					
Water voles	Reduced WV activity	Initial surveys	Best time to survey		Surveys possible, but vegetation cover & weather conditions can be limiting		Initial surveys		Reduced WV activity				

## Appendix 8 – Desk Study Search Results

Location	Donich Water Proposed Hydro	Grid Squares	NN 205 021	Date of Search	10 <sup>th</sup> September 2015
Wild Surveys Data	No of Records within 5 km	Approximate distance in km	Site name/Grid Ref		Date
None held					
NBN Protected Species	No of Records within 2 km	Approximate distance in km	Site name/Grid Ref		Date
Badger	Present within 10km square		NN 10 NN 20		1973 1973
Otter	Present within 10km square		NN 10 NN 20		2010 1991
Water vole	Present within 10km square		NN 10 NN 20		1736 1960
Red squirrel	17	0.1km – 2km	Present within 5 1km squares including NN 203 019		2013
Pine marten	1	1.2km	Lochgoilhead NN 193 026		2015
Scottish wildcat	Present within 10km square		NN 10 NN 20		1736 1960
NBN Bat Species	No of Records within 5 km	Approximate distance in km	Site name/Grid Ref		Date
Common pipistrelle	0				
Soprano pipistrelle	1	2km	NN 245 04		2008
Nathusius pipistrelle	0				
Daubenton's	0				
Natterer's	0				
Whiskered	0				
Brown long eared	0				
Noctule	0				
Leislars	0				

**Loch Lomond and the Trossachs Biodiversity Action Plan**

**Bat Species known to occur within the area.**

- The bat species known to occur in this area are Soprano pipistrelle, Common pipistrelle, Daubenton's bat, Brown long-eared bat and Noctule bat.

**Habitat Programmes**

- Lochs, rivers and ponds
- Farmland
- Woodlands and forests
- Moorlands and mountains

**Species Programmes**

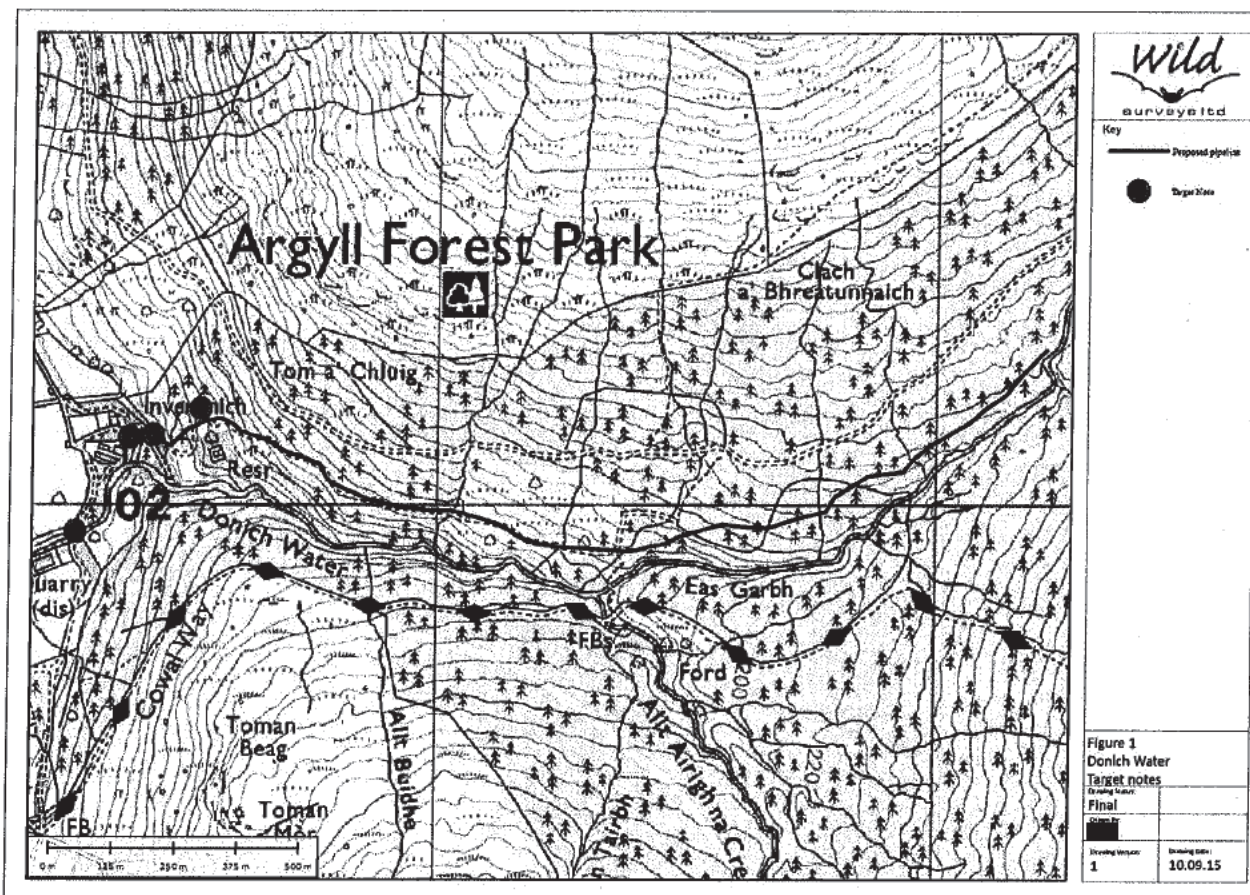
- There are no species programmes for bats but soprano pipistrelle and brown long eared bats are listed as priority species
- Red squirrel
- Water vole

**Designated Site Search- Statutory, Non Statutory and Local Nature Reserves within 2 km**

<b>Site Name, Location, Grid Reference</b>	<b>Status – feature</b>	<b>Approximate distance in km</b>
Loch Lomond and the Trossachs	National Park	0km (Site within)



**Figure 1 – Survey Results**



Target Note	OS Grid	Notes
1	NN 20447 02167	Squirrel drey in spruce next to pink marker
2	NN 20552 02196	Badger faeces at edge of path
3	NN 20382 02134	Squirrel drey in large spruce
4	NN20275 01946	Otter spraint (old) and prints under bridge