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Glen Earrach Pumped Storage Hydro

Environmental Impact Assessment Report

Volume 5: Appendices
Appendix 7.4: Mammals

Glen Earrach Energy Ltd

Quality information

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1. Introduction

1.1 Purpose

- 1.1.1 This appendix accompanies **Chapter 7: Terrestrial Ecology** of the EIAR (**Volume 2: Main Report**). It describes in detail the desk study and field survey carried out to establish baseline conditions in the Zone of Influence (Zol) of the Proposed Development with respect to protected or otherwise important mammals.
- 1.1.2 This appendix is supported by the following figures located within **Volume 3: Figures**:
- **Figure 7.4: Terrestrial ecology survey areas and camera trap locations;**
 - **Figure 7.11: Water vole survey results and incidental records;**
 - **Figure 7.12: Pine marten, badger and red squirrel survey results and incidental records; and**
 - **Figure 7.13: Incidental records of other important and notable species.**
- 1.1.3 The following protected mammal species were subject to targeted field surveys:
- Otter *Lutra lutra*;
 - Water vole *Arvicola amphibius*;
 - Badger *Meles meles*;
 - Pine marten *Martes martes*;
 - Wildcat *Felis sylvestris*.
- 1.1.4 Additionally, observations of red squirrel *Sciurus vulgaris*, and any other important mammals such as mountain hare *Lepus timidus*, were recorded during surveys for the above species and also incidentally during other ecological surveys. The general suitability of the Proposed Development Site for all relevant mammals was also assessed.
- 7.1.1 This appendix is also supported by the following appendices (**Volume 6: Confidential Appendices**):
- **Confidential Appendix 7.2 Sensitive Terrestrial Ecology Information** complete with associated figure **Figure 7.10: Otter Survey Results and Incidental Records.**
- 1.1.5 Otters are regarded by NatureScot as 'sensitive'¹, for which reason the precise location of holts and lay-ups of otters are confined to **Confidential Appendix 7.2 Sensitive Terrestrial Ecology Information**, complete with associated figures.
- 1.1.6 Throughout this appendix, species are given their common and scientific names when first referred to and their common names only thereafter. All distances are cited as the shortest distance 'as the crow flies', unless otherwise specified. Locations are given as Ordnance Survey Grid References (OSGR).

1.2 Legislative and Planning Policy Context

Relevant Legislation

Bats

- 1.2.1 All species of bats native to Scotland are European Protected Species and are protected through listing on Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), commonly referred to as the 'Habitats Regulations'. It is an offence to deliberately or recklessly:
- Capture, injure, kill or harass a bat;

¹ SNH (2023). Sensitive Species of Scotland List. Available from: <https://www.nature.scot/doc/sensitive-species-scotland-list>.

- Disturb a bat while at a place used for shelter/protection (e.g., a 'roost'), or whilst rearing/caring for its young;
- Obstruct access to or deny a bat use of a breeding site or resting place;
- Disturb a bat such that local species distribution / abundance is likely to be significantly affected;
- Disturb a bat such that its ability to survive, breed or rear / care for young is likely to be impaired; or
- Disturb a bat whilst migrating or hibernating.

Otter

1.2.2 Otters are strictly protected through listing on Schedule 2 of Habitats Regulations. It is an offence to deliberately or recklessly:

- Capture, injure or kill an otter;
- Harass an otter or group of otters;
- Disturb an otter while it is occupying a structure or place used for shelter or protection;
- Disturb an otter while it is rearing or otherwise caring for its young;
- Obstruct access to a breeding site or resting place, or otherwise deny an otter use of a breeding site or resting place;
- Disturb an otter in a manner or in circumstances likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young; or
- Damage or destroy an otter breeding site or resting place, whether or not this is done deliberately or recklessly, and whether or not it is occupied by otter at the time.

1.2.3 Under the Nature Conservation (Scotland) Act 2004, public bodies in Scotland have a duty to further the conservation of biodiversity. The Scottish Biodiversity List (SBL) is a list of habitats, plants and animals that Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland. The purpose of the SBL is to identify habitats and species that are of highest priority for biodiversity conservation, thereby helping public bodies to carry out their biodiversity duty. The otter is listed on the SBL, and consequently public bodies should have regard to otter when implementing their biodiversity duty under the Nature Conservation (Scotland) Act 2004.

Water Vole

1.2.4 Water voles receive partial protection in Scotland under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) (the 'WCA'). This protects water vole burrows and places of shelter/protection used by water voles. It is an offence to intentionally or recklessly:

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

1.2.5 Water vole is listed on the SBL, and consequently public bodies should have regard to water vole when implementing their biodiversity duty under the Nature Conservation (Scotland) Act 2004.

Wildcat

1.2.6 Wildcats are strictly protected through listing on Schedule 2 of the Habitats Regulations. It is an offence to deliberately or recklessly:

- Capture, injure, kill or harass a wildcat;
- Disturb a wildcat in a den or any other structure or place it uses for shelter or protection;
- Disturb a wildcat while it is rearing or otherwise caring for its young;
- Obstruct access to a den or other structure or place wildcats use for shelter or protection or otherwise deny the animal use of that place;
- Disturb a wildcat in a manner or in circumstances likely to significantly affect the local distribution or abundance of the species; or
- Disturb a wildcat in a manner or in circumstances likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young.

1.2.7 It is also an offence to:

- Damage or destroy a breeding site or resting place of such an animal (whether or not deliberately or recklessly).

1.2.8 Wildcat is listed on the SBL, and consequently public bodies should have regard to wildcat when implementing their biodiversity duty under the Nature Conservation (Scotland) Act 2004.

Pine Marten

1.2.9 Pine martens are fully protected under Schedules 5 of the WCA. It is an offence to intentionally or recklessly:

- Kill, injure or take a pine marten;
- Damage, destroy or obstruct access to a nest or den – i.e. any structure or place which such an animal uses for shelter or protection; or
- Disturb such an animal when it is occupying a nest or den for shelter or protection (except when it is inside a dwelling house).

1.2.10 Pine marten is listed on the SBL, and consequently public bodies should have regard to pine marten when implementing their biodiversity duty under the Nature Conservation (Scotland) Act 2004.

Red Squirrel

1.2.11 Red squirrels are fully protected under Schedule 5 of the WCA. This makes it an offence to intentionally or recklessly:

- Kill, injure or take a red squirrel;
- Damage, destroy or obstruct access to a drey or any other structure or place which a red squirrel uses for shelter or protection; or
- Disturb a red squirrel when it is occupying a structure or place for shelter or protection.

1.2.12 Red squirrel is listed on the SBL, and consequently public bodies should have regard to red squirrel when implementing their biodiversity duty under the Nature Conservation (Scotland) Act 2004.

Badger

1.2.13 Badgers are protected in the UK under the Protection of Badgers Act 1992 (as amended). Badgers receive dedicated protection due to a long history of persecution and this prohibits activities not applicable to other protected species. Offences under the Protection of Badgers Act include:

- Wilfully taking, injuring or killing a badger;
- Cruelty to a badger; or
- Intentional or reckless interference with a badger sett.

Mountain Hare

1.2.14 Mountain hare is now listed on Schedule 5 of the WCA. It was added primarily so that control of mountain hare can only take place under licence for a demonstrable reason, to conserve the species. Whilst it is thus an offence to intentionally or recklessly kill, injure or take a mountain hare, hares are highly mobile (including leverets, which are precocial) and together with standard measures to minimise risk of harm to mammals (such as providing means of escape from excavations) it is unlikely that construction activities would cause such offences.

1.2.15 Inclusion on Schedule 5 also affords protection to places of shelter similarly to other Schedule 5 species. However, refuges of mountain hares are most frequently depressions in dense vegetation ('forms'), which may not be easily detectable, and each hare would likely have many and not be dependent on any one form. Mountain hares occasionally make use of holes, or burrows in peat (particularly leverets, but as noted above leverets are precocial and mobile) (Harris and Yalden, 2008)², however NatureScot do not implement a means of licensing works that might affect such refuges (licensing for mountain hare is for regulating control activities).

1.2.16 Mountain hare is listed on the SBL, and consequently public bodies should have regard to mountain hare when implementing their biodiversity duty under the Nature Conservation (Scotland) Act 2004.

² Harris, S. and Yalden, D.W. (2008). Mammals of the British Isles: Handbook (4th Edition). The Mammal Society, Southampton.

Relevant Planning Policy

- 1.2.17 Relevant national and local planning policy is discussed in **Chapter 7: Terrestrial Ecology** of the EIAR (**Volume 2: Main Report**).

The Highland Council Local Biodiversity Action Plan

- 1.2.18 The local biodiversity action plan for The Highland Council is Highland Nature: Biodiversity Action Plan 2021 – 2026 (herein referred to as the 'Local Biodiversity Action Plan (LBAP)'). Details of the plan relevant to the Proposed Development are provided in **Chapter 7: Terrestrial Ecology** of the EIAR (**Volume 2: Main Report**).
- 1.2.19 Specifically relevant to this appendix are the priority species listed within The Highland Council's LBAP: red squirrel, wildcat, water vole, pine marten, mountain hare, hedgehog *Erinaceus europaeus*, brown long-eared bat *Plecotus auritus*, Daubenton's bat *Myotis daubentonii*, Natterer's bat *Myotis nattereri*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and Nathusius' pipistrelle *Pipistrellus nathusii*.

2. Methods

2.1.1 For the purposes of this EIA, protected and important mammal species are defined as:

- All mammals listed on Schedules 2 and 4 of the Habitats Regulations;
- All mammals listed on Schedule 5 of the WCA (as it applies in Scotland);
- All qualifying or notified species of Special Areas of Conservation (SAC) within 10 km of the Proposed Development Site or of Sites of Special Scientific Interest (SSSI) within 2 km of the Proposed Development Site; and
- Species listed on the SBL or Highland Nature: Biodiversity Action Plan 2021 - 2026.

2.2 Desk Study

2.2.1 A desk study was carried out to identify:

- International nature conservation designations for which mammals are qualifying/notified species within 10 km of the Proposed Development Site;
- National statutory nature conservation designations for which mammals are qualifying/notified species within 2 km of the Proposed Development Site;
- Local non-statutory nature conservation designations within 1 km of the Proposed Development Site for which mammal species are an identified reason for designation or, where no designation information is available, for which mammals are likely to be part of the reason for site selection; and
- Records of protected / important species within 1 km of the Proposed Development Site (or further where necessary for additional context).

2.2.2 The distances used in the desk study are hereafter referred to as the 'Study Area'. The desk study was carried out using the data sources detailed in **Table 2-1: Desk study data sources**.

Table 2-1: Desk study data sources

Data Source	Date last accessed	Data obtained
The Highland Council website (https://www.highland.gov.uk/)	30 October 2024	• Local Development Plan policies relevant to nature conservation; • Information on relevant planning applications for cumulative assessment.
The Highland Council Open Map Data website (https://map-highland.opendata.arcgis.com/)	30 October 2024	• Information on local non-statutory nature conservation designations.
Highland Environment Forum website (https://www.highlandenvironmentforum.info/biodiversity/action-plan/)	30 October 2024	• Details on local priority species and habitats contained within the Highland Nature: Biodiversity Action Plan 2021 – 2026.
NatureScot SiteLink website (https://sitelink.nature.scot/home)	14 October 2024	• Information on international and national statutory designations within the ZoI of the Development.
NBN Atlas Scotland (https://scotland.nbnatlas.org/)	08 November 2024	• Commercially available records of important species within 1 km of the Proposed Development Site (or further, where necessary), made from 2004 onwards, including those collated by Highland Biological Records Group (HBRG).
Ordnance Survey (OS) 1:25,000 and 1:50,000 maps and aerial photography (https://www.bing.com/maps/)	08 November 2024	• Habitats and connectivity relevant to interpretation of planning policy and potential protected/important species constraints.
Saving Scotland's Red Squirrels (https://scottishsquirrels.org.uk/)	08 November 2024	• Commercially available records of red squirrel and grey squirrel within 1 km of the Proposed Development Site.

2.3 Field Survey

- 2.3.1
- Field surveys for otter, water vole, badger, pine marten, and wildcat were conducted to search for evidence of these species within the Proposed Development Site and the wider surrounding area. A description of the field survey methods employed is provided below.
- 2.3.2
- The survey buffers were based on the design as it stood at the time of scoping (hereafter the 'Scoping Layout'), and involved applying appropriate distances around above ground infrastructure (including access routes), and varied according to survey type. The areas within the survey buffers are referred to together as the 'survey area'. Surveys covered suitable habitat for each target feature within the survey areas. The adopted field survey areas for each survey type, along with location of camera traps, are shown on **Figure 7.4: Terrestrial Ecology Survey Areas and Camera Trap Locations (Volume 3: Figures)**.
- 2.3.3
- Red squirrel is the only squirrel species in the vicinity of the Proposed Development and can be assumed to use all established woodland. The Proposed Development would have limited impact on woodland given that where access passes through woodland it will largely use existing forestry tracks. Although there would be localised woodland loss around the Lower Control Works (LCW), this would be small in comparison to the woodland resource along and inland of this part of Loch Ness. Impacts on red squirrel would therefore be limited, with no effect on local conservation status, and possible impacts on individual dreys can be addressed by standard temporal avoidance and pre-construction checks. Therefore no targeted red squirrel survey was carried out, but the locations of camera traps which recorded the species were noted.
- 2.3.4
- No specific survey was carried out for mountain hare, however incidental observations during various ecological surveys were noted. Mountain hare, although a priority species in Scotland (and now subject to legal protection, although offences are unlikely from construction activities), is widespread in suitable upland moorland.
- 2.3.5
- There was also no specific survey for hedgehog or brown hare *Lepus europaeus*, which, although also priority species in Scotland, have no legal protection. Hedgehog and brown hare are likely to occur in the lower altitude parts of the Proposed Development Site such as, for hedgehog, woodland around the LCW or, for brown hare, open agricultural land around access from the River Enrick. However, both species can reliably be assumed absent from the higher altitude parts of the Proposed Development Site, where there is no suitable habitat.
- 2.3.6
- Evidence of mammals was mapped and field notes recorded using ESRI FieldMaps or similar portable GIS software on GPS-enabled tablets using current aerial imagery.

Bats

Daytime Bat Walkover

- 2.3.7
- Daytime Bat Walkover (DBW) was carried out in accordance with guidelines published by the Bat Conservation Trust (BCT)³ and covered suitable habitat within a minimum of 50 m from the Scoping Layout (excluding below ground components) (as shown on **Figure 7.4: Terrestrial ecology survey areas and camera trap locations (Volume 3: Figures)**). The DWB assessed the habitats for roosting, commuting, and foraging bats, with reference to connectivity to the wider landscape.
- 2.3.8
- The DBW was carried out between 08 April 2024 – 07 August 2024, alongside the extensive other mammal surveys carried out for the Proposed Development.
- 2.3.9
- The general suitability of the habitat within the Proposed Development Site (and surrounding area) was classified according to the definitions provided by the BCT³ (see **Table 2-2: Bat commuting/foraging suitability categories (taken from Collins (2023))**).

Table 2-2: Bat commuting/foraging suitability categories (taken from Collins (2023))

Suitability	Description of foraging and commuting habitats
Negligible	No obvious habitats features likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream but isolated (i.e. not very well connected to the surrounding landscape by other habitats).

³ Collins, J. (ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition)*. Bat Conservation Trust, London.

Suitability	Description of foraging and commuting habitats
	Suitable but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Close to and connected to known roosts.

Source: *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition)*.

2.3.10 The majority of habitats within Proposed Development Site, including the Headpond (and including habitats only relevant following design updates), are located on open moorland and are obviously unsuitable for roosting bats, containing neither trees nor viable structures, and only upland habitats of negligible suitability for roosting bats. As such, no targeted Ground Level Tree Assessment (GLTA) was considered necessary for the majority of the survey area.

2.3.11 However, woodland around the LCW and Pre-Construction Works is potentially suitable for roosting bats, containing more mature, broadleaved trees. However, this area was not subject to GLTA.

Otter Survey

2.3.12 Otter surveys were carried out along suitable watercourses and waterbodies within 200 m of the Scoping Layout (excluding below ground components) as far as access was feasible and safe. The surveys followed guidance in the following published literature:

- *Monitoring the Otter Lutra lutra, Conserving Natura 2000 Rivers Monitoring Series No. 10.*⁴;
- *Otter Breeding Sites. Conservation and Management, Conserving Natura 2000 Rivers Conservation Techniques Series No. 5*⁵; and
- *National survey of otter Lutra lutra distribution in Scotland 2003-04*⁶.

2.3.13 Evidence of otter searched for included refuges (holts and lay-ups – a holt is a well-enclosed otter refuge, such as a burrow, whilst a lay-up or couch is semi-enclosed and of lesser importance), spraints (faeces), footprints, trails and foraging signs. Where found, spraints were recorded as fresh, recent or old, according to their apparent age.

2.3.14 Otter survey took place on 8 – 12 April, 29 April – 03 May, and 10 – 14 June 2024.

2.3.15 An attempt was also made to classify any holts that were found as non-natal or as having the potential for natal use. Although there is limited available information on natal holts, they are typically difficult to find, since breeding female otters tend to be secretive and locate them in the most well-hidden and secure holts (or sometimes 'nest' in reedbeds) that minimise risk of disturbance and cub predation^{5,2}. Infanticide by unrelated adult male otters is known to occur⁷, and since male and female otters share the same watercourses for foraging and commuting, this is likely a significant risk to breeding females, and probably part of the reason that natal holts are typically more secure. Whilst natal holts have been known up to 100 m from water, they have had direct covered habitat connectivity (such as continuous woodland) to water. Some natal holts have been found beside watercourses or lakes, but these (or the paths to them) were afforded security by being situated amongst reedbed, in hollow trees, amongst or through dense scrub, or in terrain of difficult access (such as high up an inaccessible and undisturbed wooded slope). Thus typical and more obvious holts in riverbanks that are not particularly well-hidden and relatively accessible (and also if likely to frequently flood) are unlikely to be natal holts.

⁴ Chanin, P. (2003). *Monitoring the Otter Lutra lutra, Conserving Natura 2000 Rivers Monitoring Series No. 10*. English Nature, Peterborough.

⁵ Liles, G. (2003). *Otter Breeding Sites. Conservation and Management, Conserving Natura 2000 Rivers Conservation Techniques Series No. 5*. English Nature, Peterborough.

⁶ Strachan, R. (2007). *National survey of otter Lutra lutra distribution in Scotland 2003-04*. Scottish Natural Heritage Commissioned Report No. 211 (ROAME No. F03AC309).

⁷ Kruuk, H. (2006). *Otters: Ecology, behaviour and conservation*. Oxford Academic, Oxford.

Water Vole Survey

- 2.3.16 Water vole surveys were carried out along suitable watercourses and waterbodies within 200 m of the Scoping Layout (excluding below ground components), as far as access was feasible and safe, and not constrained by possible breeding red-throated diver *Gavia stellata* (see **Limitations**). Where incidental evidence was encountered during the extensive coverage of the survey area for other surveys, this was also recorded. The surveys followed guidance in the following published literature:
- *Water Vole Conservation Handbook (3rd Edition)*⁸; and
 - *The Water Vole Mitigation Handbook*⁹.
- 2.3.17 Evidence of water vole searched for included latrines, footprints, droppings, burrows, trails and foraging evidence. Surveyors walked in the channel of watercourses where possible and visually inspected all parts of the banks. Where dense vegetation prevented this, searches for field signs were made as far as access allowed.
- 2.3.18 The Water Vole Mitigation Handbook⁹ recommends that two water vole survey visits are carried out, and that these are spaced out, ideally by two months, to account for variations in habitat suitability across the water vole breeding season. In upland Scotland, the optimum months for water vole survey are given as June, July and August. For elsewhere in the UK recommended dates are given as mid-April to end of June for a spring visit and July to September the same year for an early autumn visit.
- 2.3.19 Water vole survey 1 was carried out on 12 – 18 April, 29 April – 03 May, and 10 – 14 June 2024, and water vole survey 2 on 29 July – 02 August and 05 – 07 August 2024.
- 2.3.20 Individual latrines and droppings were recorded separately, as were burrows during water vole survey 1. However, during water vole survey 2 the number of burrows in some locations were so great that they were instead recorded as “lines” of continuous burrows, with the total number of burrows recorded. This can be seen on **Figure 7.11: Water vole survey results and incidental records (Volume 3: Figures)**.
- 2.3.21 Also identified during the surveys were the locations of suitable habitat. Suitable habitats comprised grassy banks of a soft substrate along slow flowing, narrow watercourses or around pools, or flushes dominated by rush or purple moor-grass *Molinia caerulea*. Some parts of smaller watercourses are partially underground and these have been included where known and where the terrestrial habitat is suitable for the species. For the purpose of this assessment “suitable” habitat also includes that considered to be “sub-optimal”. Rockier, faster flowing or larger watercourses (e.g. the Allt Saigh or River Coiltie) are considered unsuitable. For areas which were not visited, such as those along the northern access route where it crosses moorland, habitat data and a general impression of the area gained during other surveys was used alongside aerial imagery to assess suitability. Lengths of suitable habitat are shown on **Figure 7.11: Water vole survey results and incidental records (Volume 3: Figures)**.

Pine Marten and Wildcat Survey

- 2.3.22 Survey for pine marten and wildcat was carried out in suitable habitat within 50 m of the Scoping Layout (excluding below ground components), extended to 200 m along watercourses, as far as access was feasible and safe. The survey followed guidance in the following published literature:
- *Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation*¹⁰.
- 2.3.23 Evidence searched for included dens, scats, footprints, foraging remains and trails.
- 2.3.24 Pine marten and wildcat survey was carried out between 08 April – 07 August 2024, as part of the extensive coverage of the survey area during other mammal surveys, focussing on locations with potential for dens, such as slopes with rock outcrops and boulders. Where incidental evidence of pine marten and wildcat was encountered during the other surveys, this was also recorded.

⁸ Strachan, R., Moorhouse, T. and Gelling, M. (2011). *Water Vole Conservation Handbook (3rd Edition)*. Wildlife Conservation Research Unit, University of Oxford.

⁹ Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016). *The Water Vole Mitigation Handbook*, Mammal Society Mitigation Guidance Series. The Mammal Society, London.

¹⁰ Cresswell, W.J., Birks, J.D.S., Dean, M., Pacheco, M., Trehwella, W.J., Wells, D. and Wray, S. (eds.) (2012). *UK BAP Mammals: Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation*. The Mammal Society, Southampton.

Badger Survey

2.3.25 Survey for badger was carried out in suitable habitat within 50 m of Scoping Layout (excluding below ground components), extended to 200 m along watercourses, as far as access was feasible and safe. The survey followed guidance in the following published literature:

- *Surveying Badgers – An occasional publication of the Mammal Society, No. 9*¹¹;
- *Surveying for Badgers: Good Practice Guidelines*¹².

2.3.26 Evidence searched for included setts, spoil heaps, bedding, guard hairs, latrines, footprints, trails, scratch marks and foraging activity. If present, setts were classed as main, annexe, subsidiary or outlier, where possible, and holes described as well-used, partially-used, or disused.

2.3.27 Badger survey was carried out between 24 – 28 June 2024. Where incidental evidence of badger was encountered during the extensive coverage of the survey area for other mammal surveys, this was also recorded.

Camera Trap Survey

2.3.28 Ten motion sensitive trail cameras were positioned in a variety of habitats in and around the Proposed Development Site with potential suitability to support the target protected mammal species.

2.3.29 Cameras were deployed between 24 – 26 June 2024 and were collected between 11 – 12 November 2024. Cameras were deployed for between 137 and 140 days, with the exception of CT08, which had a shorter recording period, for which see **Limitations**. Camera trap footage was recorded as a combination of motion capture images and videos on SD cards. The locations of camera traps are noted below in **Table 2-3: Location and dates of camera trap** and shown in **Figure 7.4: Terrestrial ecology survey areas and camera trap locations (Volume 3: Figures)**.

Table 2-3: Location and dates of camera trap deployment

Camera trap reference	OSGR	Relationship to Proposed Development	Description	Deployment date	Collection date	Days deployed
CT01	NH 47661 27500	171 m south of existing Balnain access track	Within a mixed, mainly coniferous woodland. Looking out towards the intersection between two mammal paths. Numerous signs of pine marten and badger recorded nearby, including a pine marten den (PM02) and scats, and a badger latrine.	27 June 2024	11 November 2024	137 days
CT02	NH 48358 27165	910 m southeast of existing Balnain access track.	At fence at western boundary of mature Scots pine <i>Pinus sylvestris</i> and larch <i>Larix decidua</i> plantation, looking towards a push under.	25 June 2024	11 November 2024	139 days
CT03	NH 48512 26659	137 m southeast of existing Balnain access track.	At fence between southern boundary of larch plantation and area of birches <i>Betula</i> spp, looking towards a push under.	25 June 2024	11 November 2024	139 days

¹¹ Harris, S., Cresswell, P. and Jefferies, D. (1989). *Surveying Badgers – An occasional publication of the Mammal Society*, No. 9. Mammal Society, London.

¹² Scottish Badgers (2018). *Surveying for Badgers: Good Practice Guidelines*. Version 1.

Camera trap reference	OSGR	Relationship to Proposed Development	Description	Deployment date	Collection date	Days deployed
CT04	NH 48512 26659	64 m west of existing Balnain access track; 130 m west of Proposed northern access track.	Pointing toward a dry, artificial drainage channel where a mammal path leads into the adjacent birch woodland. Near a pine marten den (PM04) and an otter lay-up (OR05).	27 June 2024	11 November 2024	137 days
CT05	NH 47746 24828	1.6 km east of Proposed northern access track.	At southwest corner of conifer plantation, looking towards a large gap under a fence, likely used by deer. Near badger snuffling / footprints.	25 June 2024	12 November 2024	140 days
CT06	NH 47259 23278	1.4 km east of the Headpond.	Facing possible pine marten den (PM06), comprising a cavity under overhanging rock. Droppings were also recorded nearby.	25 June 2024	12 November 2024	140 days
CT07	NH 45185 22774	Within Headpond.	In moorland facing a mammal path adjacent to active water vole burrows. West of Loch nam Breac Dearga.	26 June 2024	12 November 2024	139 days
CT08	NH 45524 22435	Within Headpond.	In moorland on a steep slope, approximately 70 m east of Loch nam Breac Dearga. Facing a mammal trail through vegetation.	26 June 2024	01 August 2024 (see Limitations)	36 days
CT09	NH 47668 22123	330 m northwest of LCW.	At fence of western boundary of conifer plantation, looking towards one large and one small push under. Adjacent to deer path.	25 June 2024	12 November 2024	140 days
CT10	NH 43797 19370	63 m north of existing Alltsigh access track.	Adjacent to a watercourse in gorge at edge of conifer plantation pointing towards a gap under fence.	26 June 2024	13 November 2024	140 days

2.4 Desk-Based Analysis

Water Vole

- 2.4.1 The method outlined in The Water Vole Mitigation Handbook⁹ was used to calculate Relative Population Density (RPD) from the density of latrines found during survey, and thus the parts of the survey area most valuable to water vole.
- 2.4.2 The number of latrines per 100 m of bankside habitat was calculated for watercourses within the Proposed Development Site. Obviously distinct clusters of water vole evidence were calculated separately.

- 2.4.3 The number of latrines per 100 m is compared with **Table 2-4: Calculation of water vole Relative Population Density** (adapted from The Water Vole Mitigation Handbook⁹) to determine the RPD of each cluster of evidence.

Table 2-4: Calculation of water vole Relative Population Density (taken from Dean (2016))

Relative Population Density	Approximate number of latrines per 100 m of bankside habitat	
	Water vole survey 1 (First half of survey season, mid-April to end of June)	Water vole survey 2 (Second half of survey season, July to September)
High	10 or more	20 or more
Medium	3 – 9	6 - 19
Low	≤ 2 (or none, but with other confirmatory field signs)	≤ 5 (or none, but with other confirmatory field signs)

Source: *The Water Vole Mitigation Handbook*

Camera Trap Survey

- 2.4.4 Trail camera footage / images were analysed to determine the number of days on which videos / photographs of different species were recorded and the total 'number of visits' (i.e. the number of discreet instances of a species at the camera). Individuals of some species can be difficult to distinguish from one another, and where images were taken less than five minutes apart these were assumed to be the same individual, and were recorded as one 'visit'.

2.5 Limitations

- 2.5.1 The aim of the desk study was to help characterise the baseline context of the Proposed Development and provide valuable background information that may not be captured by field survey alone. Information obtained during desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for particular species does not necessarily mean they do not occur in the Study Area. Likewise, the presence of records for a particular species does not automatically mean that these still occur within the area of interest or are relevant to the Proposed Development.
- 2.5.2 The surveys areas were created based on early layouts of the of the Proposed Development. Since the survey areas were devised, and since most of the terrestrial ecology survey work was completed, the design of the Proposed Development has changed. Most significantly, the access routes have changed. Access to the Headpond from the east has been disregarded and replaced with access from the north. This will utilise existing Forestry and Land Scotland (FLS) tracks between Balnain, on the River Enrick, to the River Coiltie, before running southwest across the open moorland to the Headpond area. Access over the open moorland would require the construction of a new access track. The majority of this area was not subject to terrestrial ecology survey (see **Figure 7.4: Terrestrial ecology survey areas and camera trap locations (Volume 3: Figures)**). From aerial imagery, habitat survey and observations made during ornithological surveys (which covered a significantly larger area than the other ecology surveys) similar habitat is known to be present in this area to the surveyed parts of the open moorland, including habitats with the potential to support the species found within the survey area. However, the relatively small amount of suitable habitat for otter, bats and pine marten present here, and the relatively minor nature of works (when compared to construction of the Headpond) means this is unlikely to alter the result of the assessment for these species. The habitat could support significant additional populations of water vole, however additional impacts from construction of the track would be very unlikely to alter the magnitude of the effects described in the assessment given that an already extensive area of suitable water vole habitat and confirmed activity will be lost.
- 2.5.3 Also due to design changes, the LCW has moved northeast along the bank of Loch Ness. The surveys therefore did not fully cover an appropriate buffer around this area. It is possible that unrecorded otter or pine marten refuges are present in this area. However the very small number of possible additional refuges that could be present are unlikely to alter the result of the assessment.
- 2.5.4 The DBW identified one main group of trees with the potential to support roosting bats, located on the bank of Loch Ness around the LCW, south of the A82. A general impression of the suitability of this area for roosting bats was gained during visits to this area. However, full GLTA for features with bat roost suitability was not carried out here due to safety concerns surrounding proximity to the busy and fast A82 road, the steep banks, the large amount of fly-tipped rubbish and the poor visibility due to foliage at the time of survey. Furthermore, as described

above, the LCW changed location following the surveys and an appropriate buffer was also not covered for other species. This is considered a limitation to the assessment as insufficient data is available to fully assess the importance of this woodland to roosting bats. An alternative habitat-based assessment has been completed in the knowledge that the amount of habitat lost is a tiny proportion of that available.

- 2.5.5 The trees elsewhere within the Proposed Development Site are considered very unlikely to be of significant importance to roosting bats for reasons described above under Bats. These trees are also mostly located along existing access tracks, and as such tree loss is expected to be minimal. Thus the lack of GLTA surveys at all locations (excluding the LCW) is not considered a limitation within the context of this assessment. This does not negate legal requirements relating to bat roosts should any trees require felling for the Proposed Development.
- 2.5.6 Access to several areas was limited for safety reasons. Specifically, watercourses on access routes from the north (existing Balnain access track) and southwest (Alltsigh access track) are often located in steep sided valleys within dense conifer plantation, some of which have been felled by wind-blow. These areas could not be safely accessed by surveyors. In addition, only the south bank of the River Coiltie was surveyed due to restricted access. These are not considered significant limitations as works in these areas are limited to upgrades to existing access tracks, and any unidentified features are unlikely to be impacted.
- 2.5.7 The Water Vole Mitigation Handbook⁹ recommends that two water vole survey visits are carried out, and that these are spaced out, ideally by two months, to account for variations in habitat suitability across the water vole breeding season. In upland Scotland, the optimum months for water vole survey are given as June, July and August. It was not possible to fit all water vole surveys into this narrow window, or to allow two months between visits at all locations, due to the time taken to complete full survey across this large site. However, all locations received two visits, at least one of which was within the optimal survey window. The open hill around the Headpond area and upper Alltsigh access track, the only place with a substantial amount of suitable habitat (and also the place where the most significant work is planned), received its first visit in April, outside of the optimal season. However, the second visit in late July / early August was within the optimal season under optimal conditions and identified a large amount of water vole evidence in the majority of suitable habitat. Thus, the timings of water vole survey are not considered to be a significant limitation to the assessment.
- 2.5.8 In one location, water vole survey 2 was limited to within 50 m of the Proposed Development due to the possible presence of breeding red-throated diver on a nearby lochan, and the risk of disturbing them during survey. However, sufficient information on the presence of water vole was collected from elsewhere, and, regardless, water vole within the unsurveyed area will not be impacted by works.
- 2.5.9 Camera trap CT08 was missing when surveyors returned to collect it on 12 November 2024, and is assumed to have been stolen. Thus images/videos recorded by this camera between the 01 August and 12 November were not available. This is not considered a significant limitation to the assessment given that images/videos recorded during the earlier survey period 26 June – 01 August were available from this location, the area around CT08 was subject to survey and the other nine camera traps functioned for the whole period and recorded the majority of species expected to be present.
- 2.5.10 It was not always possible to confirm species recorded on camera traps. This was due to a combination of poor photograph quality and individuals moving quickly. Where it was considered likely that such a record was a protected or otherwise important mammal species, this was recorded as a 'possible' record of that species on a precautionary basis. However, the majority of camera trap photographs and videos were clear, and ID of species was confirmed. Given the extensive data recorded during camera trap surveys, this is not considered to constrain the findings of this Report.
- 2.5.11 The likelihood of deviations from baseline conditions increases with elapsed time since survey. While the baseline is not expected to change sufficiently to alter the impact assessment by the time of construction, the precise situation regarding protected/notable species may nevertheless differ (for example, new otter holts may become established). It is not likely that baseline habitats would significantly change for several years at least in the absence of other development or significant changes to land management.

3. Results

3.1 Nature Conservation Sites with Mammal Interests

- 3.1.1 There are no statutory or non-statutory nature conservation sites designated for mammal species within the desk study search distances.

3.2 Bats

- 3.2.1 The NBN Atlas Scotland returned twelve records of bats comprising seven records of brown long-eared bat, two records of soprano pipistrelle, two records of unidentified pipistrelle species *Pipistrellus* sp. and a single record of an unidentified bat species. One of the records was noted to be of a dead brown long-eared bat, and the NBN data search does not specify roosts, thus the other records are assumed to be of flying bats. All records were from the lower slopes around Loch Ness associated with Grottaig or Foyers, or from near Balnain.
- 3.2.2 The Proposed Development Site is considered to be of extremely limited value to foraging and commuting bats for the following reasons:
- Bat roosting opportunities are extremely limited within the vicinity of the Headpond area and thus bats would need to travel significant distances to use the area;
 - The Headpond area lacks woodland habitat, tree-lines or hedges which would provide the best foraging resource for bats;
- 3.2.3 Although upland habitats can support good populations of invertebrate prey, the Proposed Development Site is very exposed and the lack of vegetated linear features which could be used as sheltered commuting routes means that most parts of the Headpond area are isolated from the wider landscape; and
- More suitable habitat within the Proposed Development Site (e.g. broadleaved woodland around the LCW, between Loch Ness and the A82), is localised and covers a tiny proportion of the Proposed Development Site as a whole.
- 3.2.4 The Proposed Development Site has therefore been assessed as having Low suitability for potential flight-paths and foraging habitats, according to the assessment criteria detailed in the BCT Good Practice Guidelines².
- 3.2.5 DBW identified one main group of trees with the potential to support roosting bats, located around the LCW, between the A82 and Loch Ness. This woodland comprises mature birch, oak and hazel which is continuous with the woodland strip along the loch side, and some of which is ancient woodland of semi-natural origin. GLTA for features with bat roost suitability was not carried out here due to safety concerns, and would not have covered the full area required given that the design of the LCW changed after the surveys were complete. A general impression of the suitability of this area to support roosting bats was gained during other surveys, and it was noted that the majority of trees appear to be immature or semi-mature and therefore are less likely to provide high quality roosting habitat for roosts of multiple bats.
- 3.2.6 The majority of trees elsewhere within the Proposed Development Site are within non-native conifer plantation or are lone or scattered birch and pine, including immature and stunted trees, such as along the River Coiltie in the vicinity of temporary compound TC01. These trees have extremely limited suitability for roosting bats because they generally lack the crevices and cavities possessed by older, larger and more damaged trees, and, although they may be used by individual or small numbers of bats, are very unlikely to have the larger cavities required for breeding / hibernation roosts.

3.3 Otter

- 3.3.1 The NBN Atlas held a single record of otter from 2004, from a small tributary of the River Enrick, approximately 340 m north of the northern access track.
- 3.3.2 The majority of the larger watercourses within the survey area are suitable for refuge creation by otter, particularly the Allt Saigh, Allt Loch an t-Sionnaich, River Coiltie and River Enrick. The waterbodies including Loch nam Breac Dearga are also locally suitable. All watercourses and waterbodies within the survey area have the potential to be used by foraging and commuting otter. The bank of Loch Ness is suboptimal for refuge creation around the LCW area due to the often bare, rocky substrate.

- 3.3.3 During the field surveys, a large quantity of otter field signs were found throughout the survey area. Where otter refuges contained otter spraints, they are considered “confirmed” features. In total, 29 otter refuges comprising two holts (OR14 and OR17), and 27 lay-ups were identified within the survey area. Spraints were frequently found on the majority of watercourses and on the banks of waterbodies. One otter holt, OR14, on the bank of Loch nan Oighreagan appeared suitable for use as a natal holt.
- 3.3.4 The distance at which disturbance is likely is dependent on the nature of the refuge and relevant works. For these purposes, and in accordance with NatureScot advice¹³, disturbance of non-natal otter refuges is considered possible at up to 30 m from works (or up to 100 m for severe works such as piling or blasting), and for natal holts potentially up to 200 m.
- 3.3.5 Details of otter refuges and otter evidence are set out in **Confidential Appendix 7.2 Sensitive Terrestrial Ecology Information (Volume 6: Confidential Appendices)**.
- 3.3.6 Otter was not recorded by any of the camera traps.
- 3.3.7 All otter evidence is presented on **Figure 7.10: Otter survey results and incidental records** in **Confidential Appendix 7.2 Sensitive Terrestrial Ecology Information (Volume 6: Confidential Appendices)**. Photographs of refuges are provided in the **Photograph Annex** within **Confidential Appendix 7.2 Sensitive Terrestrial Ecology Information**. Due to the footprint of the Proposed Development evolving throughout the survey period, some otter evidence that was identified during surveys and incidentally is now more than 200 m from the Proposed Development. Otter refuges beyond this distance are extremely unlikely to be impacted by the Proposed Development.

3.4 Wildcat

- 3.4.1 The desk study indicated that the Proposed Development Site, and wider parts of the Highlands, is within the range of wildcat based on information provided by the Mammal Society¹⁴.
- 3.4.2 The Proposed Development is located in proximity to an area investigated by NatureScot as a potential priority area for wildcat conservation, referred to as Stratherrick. A study commissioned by NatureScot¹⁵ into the presence of wildcat in this area resulted in a recording of a single hybrid cat but no other evidence of wildcat, either through genetic analysis of scats or by live capture. It was concluded by the study that there is little evidence of a sizeable population of wildcat in this area and it was recommended that Stratherrick should not be taken forward as a priority area for the conservation of this species.
- 3.4.3 The Scottish Wildcat Action: Final Summary Report¹⁶ reported on records of wildcat submitted to iRecord by the public between April 2015 and March 2020, and these also indicate “plausible” (as opposed to “Correct”) record(s) of hybrid wildcat in the Study Area. The nearest records of non-hybrid wildcat from the dataset are ‘Correct’ records from near Foyers (on the south bank of Loch Ness), 9.5 km south of the Proposed Development, and Cannich, 11.2 km northwest of the Proposed Development.
- 3.4.4 The NBN Atlas did not hold any recent records of wildcat within 1 km of the Proposed Development Site. The closest recent records held by the NBN were from 2013 and 2007, both from Aigas, approximately 19.9 km north of the Proposed Development Site.
- 3.4.5 Suitable habitat for wildcat is present within the survey area. Wildcats mostly use mosaics of habitat for shelter and foraging. In Scotland, they tend to use woodland and riparian edges, young or old pine woodland, conifer plantations (including clear-fell), rough grassland and scrub; they do not favour open moorland (although have been known to use it in summer where near woodland and supporting rabbit prey and rocky areas suitable for dens) and also avoid long-lying and/or deep snow¹⁷. Consequently, the extensive and very open upland moorland habitat constituting the majority of the Proposed Development Site (and all of the Headpond area) are suboptimal for wildcat. The absence of rabbits and low numbers of hares further decreases the suitability. However, there is

¹³ <https://www.nature.scot/doc/standing-advice-planning-consultations-otters>

¹⁴ Mammal Society (2018) Species – Wildcat. [Online] Available from: <https://www.mammal.org.uk/species-hub/full-species-hub/discover-mammals/species-wildcat/> (Accessed 12 November 2024)

¹⁵ Littlewood, N.A., Campbell, R.D., Dinnie, L., Gilbert, L., Hooper, R., Iason, G., Irvine, J., Kilshaw, K., Kitchener, A., Lackova, P., Newey, S., Ogden, R. and Ross, A. (2014). *Survey and scoping of wildcat priority areas*. Scottish Natural Heritage Commissioned Report No. 768.

¹⁶ Campbell R. D., Gaywood M.J., & Kitchener A.C. (eds.) (2023). Scottish Wildcat Action: Final Summary Report. NatureScot, Inverness.

¹⁷ Kilshaw, K., Campbell, R.D., Kortland, K. and Macdonald, D.W. (2023). Scottish Wildcat Action final report: Ecology. NatureScot, Inverness.

denning potential associated with the rocky parts of the Proposed Development Site, such as on the slopes south of Loch nam Breac Dearga.

3.4.6 No evidence of wildcat was found anywhere within the survey areas, including on camera traps.

3.5 Water Vole

3.5.1 The NBN Atlas held two records of water vole, both from the northeast of the Study Area. The records were from 2024 and 2014, and both are associated with the Grottaig Burn.

3.5.2 In total, the NBN Atlas Scotland held 91 commercially-available records of water vole within NHZ 7, made from 2004 onwards. These are scattered throughout the NHZ.

3.5.3 Suitable habitat was identified during water vole surveys, or, for areas that were not subject to water vole survey, from habitat data alongside aerial imagery. Suitable habitat is located mainly in flat or shallowly sloping areas and comprises grassy banks of a soft substrate along slow flowing, narrow watercourses or around pools, and also flushes and other damp areas dominated by soft rush or purple moor-grass. Some parts of smaller watercourses are partially underground, and these have been included where known and where the terrestrial habitat is suitable for the species. Suitable habitat also includes that considered to be sub-optimal. Rockier, faster flowing or larger watercourses (e.g. the Allt Saigh or River Coiltie) are considered unsuitable.

3.5.4 A large amount of evidence of water vole was identified within the survey area over the course of two survey visits. This was concentrated within the Headpond and along Allt Loch nam Breac Dearga, with smaller areas of more scattered evidence identified elsewhere in the survey area and incidentally further afield during other surveys. In and around the Headpond evidence was dense along large stretches of the watercourses, including extensive burrows, with other field signs such as latrines, feeding remains and clipped vegetation.

3.5.5 Other than the Headpond area and immediately surrounding it, evidence of water vole was not found within the Proposed Development Site, though this is likely in part due to changes to the design Proposed Development meaning some areas were not surveyed. Burrows were incidentally identified near to the proposed access track from the River Coiltie to the Headpond, but no latrines / droppings were found to indicate current use, and full survey of these areas was not carried out. In many areas of suitable habitat incidentally visited during the course of other fieldwork beyond the water vole survey area, evidence of the species was noted.

3.5.6 Although numerous water vole burrows were identified, only latrines and droppings can be used to confirm current occupation by water voles. This is due to the ability for burrows to persist, potentially between years, and because the occupation of burrows by other species such as rat *Rattus norvegicus* cannot be ruled out.

3.5.7 Latrines and droppings were found less frequently than burrows, and were more often present as localised clusters, always associated with nearby burrows when found in the Headpond area. Several of the more isolated burrows had no latrines / droppings associated with them on either water vole survey 1 or water vole survey 2 indicating that they may have persisted from previous years and may now be unoccupied;

3.5.8 A much greater amount of water vole evidence was identified during water vole survey 2 compared to water vole survey 1.

3.5.9 Four areas were found to support Medium RPDs of water voles, as calculated from numbers of latrines:

- One within the Headpond area, within the Embankment to the north (WV09 – 17 latrines along 126 m);
- One within the Headpond area, within the Embankment to the southwest (WV17 – 6 latrines along 72 m);
- One to the west of the Headpond area along Allt Loch nam Breac Dearga (WV16 – 14 latrines along 212 m); and
- One to the west of the Headpond area along a tributary of Allt Loch nam Breac Dearga (WV16 – 11 latrines along 197 m). This location is separated from the other Allt Loch nam Breac Dearga location above by approximately 120 m and an intermediate Low RPD stretch of watercourse.

3.5.10 All other areas were found to have Low RPD.

3.5.11 The Water Vole Mitigation Handbook⁹ also states that “*Water voles can exist as a dispersed meta-population, within individual sites at the periphery showing water voles present in some years and absent in others as sites*”

are colonised, abandoned and recolonised, depending on chance extinctions events and local populations fluctuations."

- 3.5.12 Water voles are considered to be capable of recolonising suitable habitat within 1-2 km of source populations¹⁸, and they may travel over land (rather than always along watercourses) to do so^{19,20}. The distances between blocks of suitable habitat in the Headpond area are well within this, and it is considered that the Headpond area supports a single connected population of water voles, comprising multiple distinct colonies. These colonies (and thus the population as a whole) likely extend into adjacent suitable unsurveyed habitat. As suggested above by The Water Vole Mitigation Handbook⁹, not all suitable habitat is occupied at all times.
- 3.5.13 The boundaries of distinct colonies cannot easily be determined, and professional judgement has been used to determine the best way in which to spatially separate the evidence found to allow it to be effectively described. This was done by looking at clusters of, or sometimes individual, evidence of water vole.
- 3.5.14 These clusters have been numbered, and the evidence found in each numbered location is set out in **Table 3-1: Summary of water vole survey** results. Note that some of the evidence present is located outside of the survey area, and this is presented for context. **Figure 7.11: Water vole survey results and incidental records (Volume 3: Figures)** shows the locations of recorded water vole evidence, and examples of evidence are shown in the Photograph Annex at the end of the appendix.
- 3.5.15 Water voles were not recorded by any of the camera traps. However, a single image was recorded on camera trap CT02 which resembled American mink *Neovison vison*. The individual photographed could not be conclusively identified but appeared to be a mustelid of appropriate size for mink, and with darker fur than would be expected for pine marten. American mink, an invasive non-native species, predate water vole and are considered one of the leading causes of their decline. American mink are known in the wider area, and the NBN Atlas held records of the species mainly from lower lying areas around Drumnadrochit and Invermoriston. Their presence at CT02 cannot therefore be ruled out.

¹⁸ Capreolus Wildlife Consultancy (2005). *The ecology and conservation of water voles in upland habitats*. Scottish Natural Heritage Commissioned Report No. 099 (ROAME No. F99AC320).

¹⁹ Telfer, S. (2000). *Dispersal and metapopulation dynamics in water vole populations*. D. Phil. thesis. University of Aberdeen.

²⁰ Telfer, S., Holt, A., Donaldson, R. and Lambin, X. (2001). *Metapopulation processes and persistence in remnant water vole populations*. *Oikos* 95: 31–42.

Table 3-1: Summary of water vole survey results

Reference	Description of area	Evidence identified during water vole survey 1	Evidence identified during water vole survey 2	Evidence identified incidentally	Relationship to Proposed Development	Central OSGR
WV01	Suboptimal watercourse. The watercourse has a moderate flow, with dense bog myrtle <i>Myrica gale</i> , bracken <i>Pteridium aquilinum</i> , and grasses on the banks.	No targeted survey carried out.	No targeted survey carried out.	Latrine containing six droppings on a rock in a suboptimal watercourse.	168 m north of existing Balnain access track.	NH 46619 27176
WV02	Small and flat stream, Alt Glas Beag, surrounded by grassy vegetation	No targeted survey carried out.	No targeted survey carried out.	A single burrow incidentally recorded during other survey.	107 m south east of proposed northern access track.	NH 46414 25489
WV03	Largely hidden stream, tributary of River Coiltie, surrounded by <i>Molinia</i> dominated vegetation.	No targeted survey carried out.	No targeted survey carried out.	Numerous burrows incidentally recorded during other survey.	312 m northeast of proposed northern access track.	NH 45824 25019
WV04	Watercourse adjacent to track. Grassy banks, with a stone and mud substrate, slow flowing with some steps.	Possible burrows located along the top of the bank. Some vegetation appeared shortened. No other evidence recorded.	No evidence identified.	N/A	1.3 km west of proposed northern access track.	NH 47776 25325
WV05	Flat area surrounded by rushes.	No targeted survey carried out.	No targeted survey carried out.	Burrow on top of bank, with others likely present, although full survey not carried out due to location outside of survey area.	1.6 km west of proposed northern access track.	NH 47629 24319
WV06	Flat grass dominated area.	No targeted survey carried out.	No targeted survey carried out.	Several burrows incidentally recorded during other survey.	19 m south east of proposed northern access track.	NH 45397 23707
WV07	Grass dominated banks of Grotai Burn.	No targeted survey carried out.	No targeted survey carried out.	Several burrows recorded. Runs and slide into water nearby noted to south. No other evidence recorded	637 m northwest of the LCW and 1.5 km south east of the proposed Headpond.	NH 47417 22355
WV08	Small watercourse surrounded by rushes and heather.	No evidence identified.	Two clusters of disused/historical burrows, comprising five burrows in total. Some clipping of rushes noted nearby. No other evidence of water vole recorded.	N/A	Within proposed Headpond.	NH 45534 23019

Reference	Description of area	Evidence identified during water vole survey 1	Evidence identified during water vole survey 2	Evidence identified incidentally	Relationship to Proposed Development	Central OSGR
WV09	Peaty ditch surrounded by grassy vegetation and heather. The watercourse is deep, with low to no flow, and muddy banks in places. The watercourse extends below ground towards south, occasionally surfacing.	Numerous burrows were recorded along length of watercourse, concentrated to the south with a smaller number to the north near Loch nan Oighreagan. No other evidence was recorded.	Survey only extended to the 50 m buffer due to possibility of nesting birds on Loch nan Oighreagan. 559 burrows were recorded densely along a continuous stretch. Extensive other evidence recorded along the length included 17 latrines and nine individual droppings (of all ages), and vegetation clipped in places. Includes section with Medium RPD	N/A	Partly within footprint of proposed Headpond and Saddle Dam 1.	NH 45059 23209
WV10	Small watercourse overgrown with grass, very little water present.	No evidence identified.	Two disused and collapsed burrows recorded during second survey. No other evidence recorded.	N/A	Within proposed Headpond.	NH 45364 22782
WV11	Ditch is approximately 50 cm wide, and 40 cm deep with a substrate of mud, pebbles and stones. Low to no flow recorded. Eroded banks present. To the west, the watercourse splits into a fork, with the northern side being shallow and peaty, and the southern side having high banks which are eroded and grassy.	During first survey numerous burrows recorded along length of watercourse with occasional gaps. No other evidence was recorded.	During the second survey, approximately 399 burrows were recorded, located continuously along the watercourse, with occasional gaps. At the western extent, burrows were also recorded scattered through grassland, suggesting the presence of an underground watercourse. Some burrows appeared collapsed. Extensive other evidence recorded along the length includes five latrines and six individual droppings (both recent and old), feeding remains and clear runs.	N/A	Within proposed Headpond.	NH 45140 22830
WV12	A flat, damp, grassy area, suggestive of an underground watercourse.	No evidence identified.	42 burrows which did not appear recently used. Burrows were sparser to the west.	N/A	Within proposed Headpond.	NH 44856 22794

Reference	Description of area	Evidence identified during water vole survey 1	Evidence identified during water vole survey 2	Evidence identified incidentally	Relationship to Proposed Development	Central OSGR
WV13	A peaty and mossy ditch, about 30 cm across at widest point. Unknown depth.	A small number of possible disused burrows noted.	Intermittent evidence scattered along ditch, with eight burrows recorded. Other evidence associated with burrows was limited and included a single dropping and run-like activity, with some of the burrows noted to be partially-used or disused.	N/A	Within proposed Headpond.	NH 44705 22460
WV14	A shallow, mossy ditch with banks that are generally considered unsuitable for water vole.	A small number of flooded burrows with no other evidence were recorded in the west.	Four disused burrows recorded at top of bank at fork of ditch. The burrows recorded in the west during survey 1 were not re-recorded. No other evidence.	N/A	Within proposed Headpond.	NH 44977 22407
WV15	Several tributaries of Allt Loch nan Breac Dearga. . Towards south is c. 1 m wide with glide to run as a flow, boulder substrate, rock banks. Approximately 40 cm in depth. Further north the flow is slower, with no flow in areas, approximately 30 cm in width with vegetated, overhanging banks. Some rocky and shallow areas to north, and ditch goes underground in some areas.	To north, the watercourse was flooded, with several disused possible burrows noted along a c. 10 m stretch. No other evidence to north. Large central section with several patches of closely associated activity. Numerous burrows noted during water vole survey 1 with one latrine and one individual dropping, both located to the southwest of the area where most water vole burrows were identified.	To the north, five burrows were recorded along the bank top and bank toe, and adjacent to mud bridges. Three burrows were well used with lawns, and two were likely disused. In same location as in water vole survey 1. To the south, over 360 burrows recorded, along the bank tops, bank toe and adjacent to mud bridges. 33 latrines and 25 single droppings of mixed age were recorded, as were runs and feeding remains, particularly to southwest. Includes two sections with Medium RPD	N/A	Partly within proposed Headpond, and Main Dam, will be crossed by proposed access to Valve House.	NH 44292 22125
WV16	Tributaries of Allt Loch an t-Sionnaich. To west the ditch is c. 1 m wide and 40 cm in depth at pools, with a variable flow and stone substate. To east the watercourse is mainly underground, or under overhanging bank, and measures c. 20 cm in width. Surrounded by grassy vegetation.	A small localised cluster of burrows in the north, with one nearby fresh latrine and recent individual droppings.	Burrows mainly in the east and west along the bank tops, bank toe and adjacent to mud bridges with approximately 68 burrows recorded in total. Some runs noted nearby to burrows. Also recorded were six latrines of mixed ages and one individual dropping.	N/A	Partly within proposed Headpond and Main Dam. Immediately adjacent to Valve house and 10 m east of Secondary bund.	NH 44604 21922

Reference	Description of area	Evidence identified during water vole survey 1	Evidence identified during water vole survey 2	Evidence identified incidentally	Relationship to Proposed Development	Central OSGR
			Includes section with Medium RPD			
WV17	Watercourse is c. 20 cm in width and is under overhanging, grassy banks. Variable depth.	Burrows recorded in two clusters during first survey, in the north and south, with no other evidence recorded.	Burrows were recorded in broadly the same locations, in larger numbers and extent, with approximately 56 recorded on the bank top, bank toe and adjacent to mud bridges. Fresh feeding remains were recorded at some burrows. Other evidence recorded comprised two latrines with both old and recent droppings, and two single lone droppings.	N/A	Outside Proposed Development Site.	NH 44183 21658
WV18	Ditch with slow to no flow, c. 30 cm wide, and c. 40 cm in depth. Ditch has overhanging, grassy banks.	Evidence recorded in as two clusters of burrows during both surveys, at the north and the south of the watercourse, and generally denser to south. Also a single, recent latrine in the south.	149 burrows recorded to the south and 49 to the north. Evidence limited to single disused burrow within suboptimal middle section. Latrines, of which there were two, and single droppings, three, were concentrated in the south.	N/A	Outside Proposed Development Site.	NH 43950 21791
WV19	A very minor stream, c. 5 cm deep, surrounded by grassland and heather.	Small cluster of burrows over c. 13 m stretch. No other evidence.	Four burrows noted to be overgrown and potentially disused. Several recent droppings were noted in a run next to one well-used burrow.	N/A	Outside Proposed Development Site.	NH 43649 21705
WV20	Minor drainage ditch, tributary of Allt Loch an t-Sionnaich.	Two burrows recorded along watercourse. No other evidence.	73 burrows recorded along length of ditch during second survey. Burrows were recorded both in dense stretches and scattered individually. Well-used runs were noted. Four latrines and one individual dropping were recorded, and were generally recent or fresh.	N/A	Outside Proposed Development Site.	NH 43703 21532
WV21	Allt Loch an t-Sionnaich. Surrounded by purple moor grass. Becomes shallow and rocky to north.	Short section with continuous burrows stops where habitat becomes suboptimal to north. No other evidence.	Approximately 8+ scattered burrows with associated individual droppings.	N/A	Outside Proposed Development Site.	NH 43554 21098

Reference	Description of area	Evidence identified during water vole survey 1	Evidence identified during water vole survey 2	Evidence identified incidentally	Relationship to Proposed Development	Central OSGR
WV22	Tributary of Allt Loch an t-Sionnaich, surrounded by a mosaic of purple moor grass heath. Becomes shallow and rocky to north.	No evidence identified.	A c. 15 m stretch of twelve recently used burrows. Clipped vegetation was noted at some burrows. Both old and recent droppings were recorded.	N/A	Outside Proposed Development Site.	NH 43371 20934
WV23	Small and flat ditch surrounded by grassy vegetation.	No targeted survey carried out.	No targeted survey carried out.	Several burrows incidentally recorded in grassy ditch bank during other survey.	Outside Proposed Development Site.	NH 42614 22153

3.6 Pine Marten

- 3.6.1 The NBN Atlas held eleven records of pine marten, all from the immediate banks of Loch Ness and likely recorded from the A82 or from roads around Foyers.
- 3.6.2 Localised parts of the survey area, particularly where there is mature semi-natural woodland such as around the LCW, provide good habitat for pine marten, including mature trees with a possibility of dens. Areas of mature conifer plantation, such as at along the existing Balnain access track, are also suitable, though may provide fewer sheltering opportunities. The higher altitude open moorland is less favourable given the distance from the woodland habitat and relative scarcity of potential sheltering opportunities. Pine marten could possibly shelter within riparian boulders along the various watercourses that traverse these areas, although evidence of pine marten presence was sparse in these areas (see further below).
- 3.6.3 There were no sightings of live pine martens within the Proposed Development Site itself. However, there was a single incidental sighting of pine marten by AECOM ecologists along the A831 road, approximately 500 m north of the Proposed Development Site. Evidence of pine marten was recorded within the survey area confirming the presence of this species (see further below).
- 3.6.4 Nine possible pine marten dens were identified. None of these were confirmed as dens, due to a lack of pine marten evidence. Details of these are set out in **Table 3-2: Possible pine marten dens identified during field surveys**.

Table 3-2: Possible pine marten dens identified during field surveys

Reference	Description	Relationship to Proposed Development	OSGR
PM01	A possible den comprising a hole under tree roots with a tunnel extending >1 m back. No evidence at feature, but numerous pine marten scats identified on nearby track.	15 m from the existing Balnain access track.	NH 45710 29440
PM02	Possible den comprising a single entrance within mainly coniferous mixed woodland, measuring approximately 10 cm x 8 cm. Tunnel extends back as far as visible. The burrow is considered too small to currently be used by pine marten, although there is potential for future enlargement. No evidence at feature, but numerous pine marten scats identified on nearby track.	130 m south east of existing Balnain access track.	NH 47634 27533
PM03	On tributary of River Coiltie. Possible den comprising gap in boulders along bank of (approximately 25 x 65 cm). Gap is dry and extends back east as far as visible. No evidence at feature, but numerous pine marten scats identified on nearby track.	30 m south of existing Balnain access track / proposed northern access track.	NH 46704 26990
PM04	Possible den within birch woodland, comprising a cavity under a large boulder measuring 40 x 60 cm. Vegetation flattened at entrance indicating use. Cavity extends down under boulder. No evidence at feature, but numerous pine marten scats identified on nearby track.	21 m north of proposed northern access track.	NH 46569 26905
PM05	Possible den not in a typical location, recorded within an open area of heather. Good size and extends back as far as visible. No other evidence at feature or nearby.	280 m south of proposed northern access track.	NH 45915 24397
PM06	A cavity under overhanging rock. The back was not visible, however it looked like a mammal may have entered. No evidence at feature, but pine marten scat recorded 48 m northeast.	1.4 km east of proposed Headpond.	NH 47262 23276
PM07	Possible den located under bedrock, appeared inactive at the time of survey with web over entrance, but seemed well worn inside. No other evidence at feature or nearby.	712 m south of proposed Headpond.	NH 46526 22481

Reference	Description	Relationship to Proposed Development	OSGR
PM08	A long tunnel which extends into the ground at the edge of a conifer plantation. No other evidence at feature or nearby.	290 m northwest of LCW.	NH 47739 22149
PM09	A single entrance within an area of woodland at bank of the Tailpond. Circular entrance measuring approximately 15-20 cm in diameter. Ragged roots at entrance appear to be from collapsed ground rather than digging. No other evidence associated with burrow, but given suitable habitat for pine marten in woodland, there is potential for this hole to be used in future. No other evidence at feature or nearby.	Within footprint of LCW.	NH 48057 21752

3.6.5 Pine marten scats were abundant along the existing Balnain access track. Scats were rarer in the open upland habitats towards the centre of the Proposed Development Site, although were occasionally recorded. A smaller number of scats were also recorded along the existing Alltigh access track.

3.6.6 Pine marten was recorded by camera traps CT01, CT04, CT05, CT09 and CT10.

3.6.7 Pine martens preferentially scat in prominent areas, such as on tracks, and scats are easier to find on tracks when compared with vegetation. It is possible that the presence of pine marten has been underestimated in areas without tracks. Pine marten scats also cannot be identified with absolute certainty without carrying out genetic analysis, which was not done. However, the recorded scats were typical of pine marten (dark, of the correct size/proportions, and twisted and/or looped), and the live sighting, and recordings of pine marten by camera traps, considerably increases the confidence with which the scats at the north of the Proposed Development Site can be attributed to pine marten.

3.6.8 All pine marten evidence is shown on **Figure 7.12: Pine marten, badger and red squirrel survey results and incidental records (Volume 3: Figures)**.

3.7 Red Squirrel

3.7.1 Recent records of red squirrel were held by the NBN Atlas (as provided by Scottish Wildlife Trust, the Mammal Society, Highland Biological Recording Group), and are numerous and widespread within the Study Area. Records were returned particularly from woodlands at the north of the Study Area, and also the woodlands along the banks of Loch Ness, to the east of the Study Area. These records likely reflect the places that red squirrels are most likely to be observed by members of the public. These results are broadly reflected by the Saving Scotland's Red Squirrels website. The desk study sources identified above indicate that grey squirrel *Sciurus carolinensis* are absent from the Study Area.

3.7.2 Highly suitable mature, semi-natural woodland habitat for red squirrel is present along the banks of the Tailpond. Though less suitable, the species likely also uses the blocks of mature commercial plantation near and within the Proposed Development Site. These commercial plantations are dominated by Sitka spruce *Picea sitchensis* which is less favourable for red squirrel than native conifer woodland, with typically low red squirrel densities. Harris & Yalden²¹, Bryce *et al.*²¹ and Lurz *et al.*²² all indicate that red squirrel density is lowest in Sitka spruce-dominated plantation, owing to factors such as small seed size (pine-dominated woodland is the most favourable). For these reasons, red squirrel density in conifer plantation within the survey area, which is dominated by Sitka spruce, can be expected to be low.

3.7.3 As noted above, no dedicated red squirrel survey was carried out, and there were no incidental observations made of live red squirrels, of dreys or of other evidence, whilst surveying for other protected mammals. However, they were recorded by camera traps CT01, CT02, CT05 and CT10.

3.7.4 The locations of camera traps which recorded red squirrel are shown on **Figure 7.12: Pine marten, badger and red squirrel survey results and incidental records (Volume 3: Figures)**.

²¹ Bryce, J., Cartmel, S. and Quine, C.P. (2005). Habitat Use by Red and Grey Squirrels: Results of Two Recent Studies and Implications for Management. Information Note, Forestry Commission, Edinburgh.

²² Lurz, P.W., Garson, P.J. and Rushton, S.P. (1995). The ecology of squirrels in spruce dominated plantations: implications for forest management. Forest ecology and management, 79(1-2), pp.79-90.

3.8 Badger

- 3.8.1 No recent records of badger were held by NBN Atlas within the desk study search distances.
- 3.8.2 Habitats within the Proposed Development Site are generally sub-optimal for badger, being dominated by open, upland habitats. Areas of broadleaved woodland are considered more suitable, though sloping broadleaved woodland around the LCW is likely too rocky for sett creation.
- 3.8.3 Badger evidence was limited within the survey area, and where present, was located within woodland. Evidence was limited to latrines, individual droppings, footprints, snuffle holes and evidence of digging. No badger setts were found.
- 3.8.4 Evidence comprised:
- A dung pit within an area of riparian woodland adjacent to the River Enrick, in the vicinity of the existing Balnain access track. The dung pit was located within the entrance of an old mammal burrow (of insufficient size for use as a badger sett), and clear trails were observed leading away from the pit;
 - A latrine comprising four dung pits also adjacent to the River Enrick, in the vicinity of the existing Balnain access track;
 - A latrine and a single dung pit further south, also in the vicinity of the existing Balnain access track;
 - Several footprints, snuffle holes and evidence of digging in close proximity to each other along the now irrelevant access track from the east;
 - A single badger dropping in the vicinity of the existing Alltsigh access track; and
 - Several snuffle holes recorded in vicinity, along a mammal path within an area of mainly coniferous mixed plantation north of the River Coiltie.
- 3.8.5 No other evidence of badger was found.
- 3.8.6 Badger was recorded by camera traps CT01, CT02, CT03, CT04, CT05, CT06, CT09 and CT10.
- 3.8.7 Given the extensive coverage of the survey area during other surveys, badger is considered to be largely absent within 200 m of the Proposed Development, with the exception of the areas described above. However, even within the areas where badger is known to occur, no badger setts were identified.
- 3.8.8 All badger evidence is shown on **Figure 7.12: Pine marten, badger and red squirrel survey results and incidental records (Volume 3: Figures)**, and examples of evidence are shown in the Photograph Annex at the end of the appendix.

3.9 Other Important Mammal Species

- 3.9.1 The NBN Atlas held three records of mountain hare, two of which are from the 1 km grid square containing Loch nam Breac Dearga. Two incidental sightings of mountain hare were made over the course of the surveys, one from where the Alltsigh track exits the conifer plantation, and one on the eastern slopes of Meall Fuar-mhonaigh.
- 3.9.2 The desk study returned eight records of hedgehog, all of which were from Foyers, on the opposite side of Loch Ness from the Proposed Development Site. Hedgehogs were not observed incidentally during surveys.
- 3.9.3 The NBN Atlas held seven records of brown hare, all from low-lying areas near Drumnadrochit and Foyers. A single incidental record of brown hare was made during the surveys of an individual on the forest track to the north, between the Rivers Enrick and Coiltie.
- 3.9.4 The NBN Atlas held two records of American mink. American mink was potentially recorded at CT02 (see **Water Vole** section, above).
- 3.9.5 No records of any other important mammal species were identified by the desk study, and no sightings or evidence of other important mammal species were recorded during the field surveys. **Figure 7.13: Incidental records of other important species (Volume 3: Figures)** shows the locations of evidence of other important mammal species incidentally identified during field survey.
- 3.9.6 A single likely fox *Vulpes vulpes* den was identified during the extensive field survey for mammals. This comprised a single circular entrance measuring 20 cm in diameter on a small mound of heather adjacent to a watercourse

at NH 46564 23506. The entrance extended back south as far as visible towards the watercourse. There was recent spoil with likely fox tail hairs present.

3.10 Wild deer

3.10.1 Deer are not an 'important' ecological feature in the context of the EclA guidelines, and do not warrant detailed impact assessment from the perspective of their conservation. However, they can impact habitat through grazing pressure, and the following points are noted:

- Red deer *Cervus elaphus* were regularly observed during field surveys, sometimes in large numbers, however details were not recorded given that they are not protected or important species;
- As noted elsewhere, overgrazing is evident in several parts of the Headpond area, and deer (primarily red deer in that location) would be a significant contributing factor; and
- A mix of red deer and roe deer *Capreolus capreolus* were recorded by all camera traps except for CT07 (located in the middle of the Headpond).

3.11 Feral pig

3.11.1 NatureScot use the term 'feral pig' to refer to wild boar *Sus scrofa*, hybrids between wild boar and domestic pigs *Sus scrofa domesticus* and other free-roaming pigs²³. Wild boar were historically native to Scotland prior to being hunted to extinction by 1300 AD²⁴. Feral pigs now exist as localised populations originating from escaped and released individuals. Wild boar are considered to be 'former natives', however due to hybridisation with domestic pigs, the free-roaming feral pigs in Scotland are not considered by NatureScot to be native, and are not subject to any legal protection.

3.11.2 The NBN Atlas held three records of feral pig.

3.11.3 Feral pig was recorded by camera traps CT01, CT03, CT05, CT09 and CT10. These cameras are all associated with woodland along the northern bank of Loch Ness and with woodland along the Divach Burn. No feral pigs were recorded in the Headpond or elsewhere on the open hill.

3.12 Camera Trap Survey

3.12.1 Ten locations across the survey area were monitored for records of protected and important mammal species using camera traps. The results returned from each camera trap are summarised in **Table 3-3: Results of camera trap survey** with a summary provided in **Table 3-4: Summary of camera trap survey results**.

3.12.2 Pine marten was recorded at five locations (CT01, CT04, CT05, CT09 and CT10), all located within suitable woodland. The vast majority of recordings were associated with CT01, with extensive pine marten activity recorded, including numerous records of two individuals at the same time. Indeed, pine martens were recorded on 81.8% of deployment days, with 402 visits in total. Scent-marking and scatting by pine martens was noted. The woodland at this location offers ample opportunities for pine marten foraging, with a possible pine marten den (PM02) and scats recorded nearby (see **Table 3-2: Possible pine marten dens identified during field surveys**). The next most visited location was CT10, which had significantly fewer visits, with 12 in total.

3.12.3 Red squirrel was recorded at four locations (CT01, CT02, CT05 and CT10). The majority of records were also associated with location CT01, with 62 visits in total. The next most visited location was CT10, with 32 visits, and with most activity recorded in October. Records at CT02 and CT05 were less numerous, with records from only two and one recording days at each location respectively.

3.12.4 Badger was recorded at eight camera trap locations (CT01, CT02, CT03, CT04, CT05, CT06, CT09 and CT10). There were 45 records of badger across the entire camera trapping period, with activity in all locations except those at the proposed Headpond (CT07 and CT08). Records were relatively equally distributed between camera traps, with slightly more records at CT04. At this location there were eleven visits of badger across 8% of all recording days. There was only one visit by badger at each of CT06 and CT10. Generally, badger activity was

²³ NatureScot (2024) *Managing feral pigs in Scotland* (online) Available online at: <https://www.nature.scot/professional-advice/land-and-sea-management/managing-wildlife/managing-feral-pigs-scotland>

²⁴ NatureScot, (2022). *Updated non-native species risk assessment of feral pigs in Scotland*. NatureScot Research Report 1288. Inverness. Available online at: <https://www.nature.scot/doc/naturescot-research-report-1288-updated-non-native-species-risk-assessment-feral-pigs-scotland>.

limited and sporadic across the survey period, and camera trapping did not identify any significant badger commuting routes.

- 3.12.5 A possible American mink was recorded by CT02. There were no other records of American mink at other camera trapping locations.
- 3.12.6 No other protected or otherwise important mammals were recorded on the other camera traps. There was activity by deer across all cameras, except CT07. Species recorded comprised red deer and roe deer, although it was not always possible to identify to species due to poor photographic quality or photographs and videos only capturing certain features (e.g. hooves). Feral pig was recorded at five camera trap locations (CT01, CT03, CT05, CT09 and CT10). Rodents (including rats, mice and shrew *Sorex* sp.) were recorded on numerous camera traps.
- 3.12.7 Wildcat, otter and water vole were not recorded by camera traps.

Table 3-3: Results of camera trap survey

Results of monitoring for important and notable mammal species								
Camera trap	Days deployed		Pine marten	Badger	Red squirrel	Possible mink	Feral pig	Wild deer
CT01	137	Number of visits by species	402	4	62	0	6	12
		Number of days species recorded	112	4	35	0	6	8
		Proportion of deployment days species recorded (%)	81.8%	2.9%	25.5%	0	4.4%	5.8%
CT02	139	Number of visits by species	0	8	5	1	0	29
		Number of days species recorded	0	5	2	1	0	21
		Proportion of deployment days species recorded (%)	0	3.6%	1.4%	0.7%	0	15.1%
CT03	139	Number of visits by species	0	6	0	0	1	4
		Number of days species recorded	0	5	0	0	1	3
		Proportion of deployment days species recorded (%)	0	3.6%	0	0	0.7%	2.15%
CT04	137	Number of visits by species	2	11	0	0	0	12
		Number of days species recorded	2	11	0	0	0	9
		Proportion of deployment days species recorded (%)	1.5%	8%	0	0	0	6.5%
CT05	140	Number of visits by species	1	7	1	0	1	28
		Number of days species recorded	1	4	1	0	1	19
		Proportion of deployment days species recorded (%)	0.7%	2.9%	0.7%	0	0.7%	13.6%
CT06	140	Number of visits by species	0	1	0	0	0	8
		Number of days species recorded	0	1	0	0	0	7
		Proportion of deployment days species recorded (%)	0	0.7%	0	0	0	2%
CT07	139	No important or notable mammals recorded.						
CT08	36	Number of visits by species	0	0	0	0	0	1
		Number of days species recorded	0	0	0	0	0	1
		Proportion of deployment days species recorded (%)	0	0	0	0	0	2.8%
CT09	140	Number of visits by species	3	4	0	0	3	14
		Number of days species recorded	3	4	0	0	2	13
		Proportion of deployment days species recorded (%)	2.1%	2.9%	0	0	1.4%	9.3%
CT10	140	Number of visits by species	12	1	32	0	6	22
		Number of days species recorded	9	1	19	0	4	20
		Proportion of deployment days species recorded (%)	6.4%	0.7%	13.6%	0	2.9%	14.3%

Table 3-4: Summary of camera trap survey results**Camera trap Description of evidence**

CT01	Extensive pine marten activity was recorded consistently, with visits on 81.8% of deployment days. Pine marten were generally recorded multiple times per day in both the early morning and evening, with 402 visits in total. There were 16 visits where two individuals were present, often displaying 'playful' behaviour and chasing each other. Scent-marking and scatting was noted on a number of occasions. Smaller individuals, likely juveniles, were also recorded. During one visit, a pine marten was noted carrying an unidentified prey item in its mouth. There were 62 visits by red squirrel, the majority of which were from September onwards, with two individuals recorded on one occasion. Red squirrel were recorded on 25.5% of deployment days. There were four visits by badger, all of individuals. Other mammal species recorded comprise feral pig, fallow deer <i>Dama dama</i>, red deer <i>Cervus elaphus</i>, sika deer <i>Cervus nippon</i>, roe deer <i>Capreolus capreolus</i> and fox.
CT02	Limited records of protected and otherwise important mammals were recorded at this location and comprised eight visits by badger and five visits by red squirrel. A single, poor-quality image of an unidentified mustelid was taken. The individual could not be definitively identified but appeared to be a mustelid of appropriate size for American mink, and with darker fur than would be expected for pine marten. As a precaution, this individual is considered to be a possible American mink. Other mammal species recorded comprised unidentified deer, fox and unidentified rodents.
CT03	Records of protected species recorded at CT03 were limited to six visit by badger. This included badgers using a push-under beneath the wire fence. Other mammal species recorded comprise feral pig, unidentified deer and fox.
CT04	Individual badgers were recorded visiting this location eleven times, on 8% of deployment days. Badgers were generally commuting past the camera. Individual pine martens were recorded visiting on two occasions only, in early August and September. Other mammal species recorded comprise unidentified deer, fox and unidentified rodents.
CT05	Badger was recorded visiting on seven occasions at this location, and was recorded each month between June and August. Badgers were noted commuting and going through a push-under beneath a fence. There were single visits of pine marten and red squirrel, the latter of which was seen foraging around. Other mammal species recorded comprise deer, for which extensive activity was recorded including multiple unidentified deer in a number of recordings, fox and feral pig. A dog was also recorded on one occasion, suggesting this area is used by walkers.
CT06	The only protected mammal species recorded at location CT06 was badger, of which a single individual visited once at the end of June. Unidentified deer were the only other mammals recorded by the camera.
CT07	No protected or otherwise important mammals, or other mammal species, were recorded at this camera trap location.
CT08	No protected or otherwise important mammals were recorded at this camera trap location. The only other mammal species recorded was a single visit by an unidentified deer. Recordings and photograph from this camera were not available for the full recording period (See Section 2.5.9 Limitations).
CT09	There were four visits by individual badgers, recorded in July and October. On one occasion badger was recorded emerging from under the fence. There were three visits by individual pine marten, from October and November. Other mammal species recorded comprise feral pig, unidentified deer, fox and unidentified rodents.
CT10	There were 32 visits by red squirrel. Red squirrel were recorded on 13.6% of deployment days, with the majority of activity recorded in October. There were twelve visits by pine marten, all recorded in July and August, across 6.4%

Camera trap Description of evidence

of deployment days. On one occasion two pine martens were recorded, with all other visits comprising single individuals. An individual badger visited once.

Other mammal species recorded comprise feral pig, unidentified deer and unidentified rodents.

4. Conclusion

- 4.1.1 Suitable habitat is present within the Proposed Development Site for several protected and otherwise important mammals
- 4.1.2 Extensive surveys for protected and otherwise important mammals was carried out within the survey area. Owing to changes to the Proposed Development design the mammal survey area does not cover all parts of Proposed Development Site. However, pre-works surveys would include inspections for mammals, and there is considered sufficient information for EIA purposes to provide representative results and to conduct a robust assessment in respect of mammals.
- 4.1.3 The following protected mammal species were confirmed as present from evidence found during surveys and/or from camera trap recordings: otter, water vole, pine marten, badger and red squirrel.
- 4.1.4 No evidence to confirm the presence of bats was recorded, however no targeted survey was undertaken beyond DBW. The Proposed Development Site around the Headpond and access tracks has only very limited suitability for commuting / foraging / roosting bats. Because of this, the Proposed Development Site as a whole has been assessed as having Low suitability for foraging and commuting bats. However, there is greater potential around the LCW and within the Pre-construction works area where there are more mature broadleaved trees which likely support at least some bat roosts.
- 4.1.5 A total of two otter holts and 27 lay-ups, and numerous spraints, were identified during the surveys, with evidence concentrated on the River Enrick, River Coiltie and Allt Saigh and tributaries. Two of these lay-ups would be destroyed by the Proposed Development within the proposed Headpond, and a further two should upgrades to the existing Alltsigh track take place.
- 4.1.6 Suitable habitat for wildcat is limited to cavities under boulders and rocky hillsides within the upland parts of the Proposed Development. No evidence of wildcat was identified during surveys or by camera traps, and this is consistent with the lack of desk study records. Wildcat is therefore considered absent from the Proposed Development Site.
- 4.1.7 There is extensive suitable habitat for water vole in uplands parts of the Proposed Development Site. Water vole evidence was concentrated within the Headpond area and adjacent land to the west and north. Extensive evidence in these areas include abundant burrows and latrines in almost all areas of suitable habitat. Four lengths of suitable habitat had sufficient amounts of evidence to be classed as Medium RPD, with all other locations classed as Low RPD. Outside of the Headpond area, evidence was more sparse and limited to individual or small numbers of burrows / latrines.
- 4.1.8 Upland parts of the Proposed Development Site are sub-optimal for pine marten, though rocky hillsides surrounding the Headpond and watercourses are suitable for refuge creation. More suitable woodland habitat for pine marten is present along the bank of Loch Ness, and along the existing Alltsigh and Balnain access tracks. Nine possible pine marten dens were identified during field survey, though none of these contained scats. However, though unconfirmed, these dens may be active, or could become active, and the species is known to be present within and around the Proposed Development Site from other evidence. Numerous scats were found during surveys, mostly on existing tracks. A live pine marten was seen by surveyors between the A831 and River Enrick and pine marten was also recorded by several camera traps, particularly CT01.
- 4.1.9 Desk study information indicates that red squirrel are ubiquitous in suitable woodland in the vicinity of the Proposed Development Area, including woodland at the LCW and along the existing Alltsigh and Balnain access tracks. Dreys therefore may become established within proposed tree-felling zones. Evidence of red squirrels was not identified incidentally during field surveys, but the species was frequently recorded by camera traps.

- 4.1.10 The Proposed Development Site is generally considered suboptimal for badger, being dominated by open, upland habitats, with some greater stability in lower lying areas. No badger setts were identified, and badger evidence within the survey area was limited to latrines, footprints and snuffle holes. The species was also recorded by several camera traps, though none of these appeared to identify frequently used badger commuting routes.
- 4.1.11 Mountain hare and brown hare were observed incidentally, and hedgehog is assumed to be present in suitable lower-lying woodland.
- 4.1.12 Also found to be present by their presence on camera trap recordings are wild deer species and feral pig which are not themselves protected/important but may be notable in a land management context.
- 4.1.13 American mink, an invasive non-native species which has contributed to the national population decline of water vole, is potentially present, as seen from a single poor-quality camera trap image.

Appendix A Photograph Annex

Otter refuges found during surveys are shown in the Photograph Annex of **Confidential Appendix 7.2 Sensitive Terrestrial Ecology Information (Volume 6: Confidential Appendices)**.

Examples of water vole evidence and suitable habitat recorded during surveys are shown in **Table A-1: Photographs of water vole evidence and habitat** below.

Table A-1: Photographs of water vole evidence and habitat

Reference and photographs

WV01	WV02	WV03
		
WV04	WV05	WV06
		
WV07	WV08	WV09
		
WV10	WV11	WV12
		

Reference and photographs

WV13



WV14



WV15



WV16



WV17



WV18



WV19



WV20



WV21



WV22



WV23



The possible pine marten dens during surveys are shown in **Table A-2: Photographs of possible pine marten dens** below.

Table A-2: Photographs of possible pine marten dens

Reference and photograph

PM01	PM02	PM03
		
PM04	PM05	PM06
		No photograph available.
PM07	PM08	PM09
		

