

Dunoon to Whistlefield (non s37) OHL
Works
Environmental Appraisal

Appendix G - Protected Species Data



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CONTENTS

LIST OF ABBREVIATIONS	III
1. INTRODUCTION	1
1.1 Project Background	1
1.2 Purpose of this Baseline Report	1
2. METHODOLOGY	2
2.1 Desk Study	2
2.2 Habitat Suitability Site Survey	2
2.3 Species Site Surveys	3
2.4 Limitations and Assumptions	9
3. RESULTS	11
3.1 Desk Study	11
3.2 Field Survey	12
4. CONCLUSION	18
ANNEX A – TARGET NOTES AND OBSERVATION DATA	19

LIST OF ABBREVIATIONS

EcIA	Ecological Impact Assessment
eDNA	environmental Deoxyribonucleic Acid
EIA	Environmental Impact Assessment
EPS	European Protected Species
FWPM	Freshwater Pearl Mussel
INNS	Invasive Non-Native Species
LNR	Local Nature Reserve
OHL	Overhead Line
PBA	Protection of Badger Act 1992
PRA	Preliminary Roost Appraisal
PRF	Potential Roost Feature
SBL	Scottish Biodiversity List
SSSI	Site of Special Scientific Interest
WCA	Wildlife and Countryside Act 1981 as amended

1. INTRODUCTION

1.1 Project Background

1.1.1 WSP UK Ltd (WSP) was commissioned by Scottish and Southern Electricity Networks Transmission (SSEN Transmission) to undertake baseline protected species surveys for a new 132 kV twin circuit Overhead Line (OHL) running between Loch Long and Dunoon Substation located on the Cowal peninsula, Argyll and Bute, Scotland (hereafter the 'Rebuild Project'). The areas covered by these species surveys concurrently encompassed the areas associated with the Dunoon to Whistlefield OHL Works Environmental Appraisal (EA) (hereafter the 'Proposed Development'), specifically:

- upgrades required to the special crossing structures or their foundations (Towers 12 - 15), including access where necessary;
- re-conductoring of the existing Loch Long crossing, replacing the wires which carry the current and the associated fittings and fixtures, but re-using the four existing special structures which support the Loch Long crossing span; and
- removal of the existing OHL conductors and dismantling of redundant towers.

1.1.2 The Proposed Development is the focus of this document. The location of the Proposed Development is shown in **Figures 6.3: Bat Results** to **6.9: INNS Observations**. An additional confidential figure (**Figure 6.10: Confidential Badger Results**), pertaining to species subject to persecution, has been produced and is to be used for decision-making only and is not to be released into the public realm.

1.2 Purpose of this Baseline Report

1.2.1 This appendix presents baseline ecological information relevant to the Proposed Development. This Appendix should be read in conjunction with the EA for full details of the Proposed Development.

1.2.2 Baseline data have been collected from a desk-based review of existing information; habitat suitability site surveys; and species-specific detailed site surveys.

1.2.3 Specifically, this Appendix presents the methods and results¹ of the following ecology studies:

- desk-based review of existing protected species information;
- protected species habitat suitability survey;
- bat species site survey;
- badger *Meles meles*¹ site survey;
- red squirrel *Sciurus vulgaris* site survey;
- pine marten *Martes martes* site survey;
- otter *Lutra lutra* site survey;
- water vole *Arvicola amphibius* site survey;
- reptile species;
- amphibian species;
- invertebrate species;
- freshwater pearl mussel *Margaritifera margaritifera* (FWPM) site survey; and
- incidental observations of invasive non-native species of flora (INNS) recorded during the above species site surveys.

¹ Confidential badger results data are included in **Appendix G: Confidential Badger Data**.

2. METHODOLOGY

2.1 Desk Study

2.1.1 A desk-based review was undertaken in July to August 2020. The desk study was undertaken to identify existing protected species information and related potential constraints and opportunities at the Proposed Development site and its adjacent context. Full methods for the desk study are set out in **Appendix E: Habitats Data**.

2.2 Habitat Suitability Site Survey

2.2.1 An initial protected species habitat suitability survey was carried out between 13 and 22 October 2020. The survey aimed to classify the suitability of terrestrial habitats within proximity of the Proposed Development to support the following species:

- bat species;
- badger;
- red squirrel;
- pine marten; and
- reptile species.

2.2.2 In addition, the survey aimed to classify the suitability of any encountered watercourses for the following riparian mammal species:

- otter; and
- water vole.

2.2.3 In combination, the areas assed in the field are hereafter referred to as the 'Survey Area'. Observations and distinct habitat parcels within the Survey Area were mapped in the field, using Geographical Information System (GIS) software on Global Positioning System (GPS) enabled hand-held devices. Any observed target species field signs or notable features too small to map, such as structures with bat roosting potential, were recorded as individual point locations. Once recorded, the data were later quality assured utilising desktop GIS software.

2.2.4 Each distinct terrestrial habitat parcel was assigned an overall suitability category for each of the targeted species, in accordance with the criteria detailed in **Table 2-1**. In addition, the same suitability categories were allocated to any watercourses encountered during the Study for the targeted riparian mammal species, at the specific location that the watercourse was encountered/observed.

Table 2-1: Suitability Criteria

Overall Suitability	Description
Negligible	Negligible potential for resting sites, foraging resource or commuting habitat.
Low	Area with low abundance of foraging resources and negligible or low potential for resting sites. The species may utilise the habitat as part of a wider territory.
Moderate	Habitat with low availability or suitability for resting sites but ample foraging resources and commuting potential connecting to other suitable habitat.
High	Abundance of resting site opportunities, foraging resources and commuting routes connecting to other suitable habitat.

2.2.5 The Study was conducted in the field on foot, access permitting. Vehicles and/or binoculars were utilised to assess distant areas or features where topographic, safety or landowner access limitations were apparent. Each distinct habitat parcel was assessed to a level of detail sufficient to allow

general suitability categories to be assigned, without the requirement for a detailed transect of each area.

2.2.6 The assessment of the habitat's suitability to support the targeted species and identification of field signs was based on standard sources of guidance on habitat suitability and field sign assessment. This was supplemented by professional experience and judgement. The applicable guidance included:

- Bat species (Collins, 2016²);
- Badger (Scottish Badgers, 2018³ and NatureScot, 2018⁴);
- Red squirrel (Gurnell et al., 2009⁵ and NatureScot, 2020a⁶);
- Pine marten (Cresswell et al., 2012⁷ and NatureScot, 2020b⁸);
- Reptile Species (Gent et al., 2003⁹ and NatureScot, 2020c¹⁰);
- Otter (Chanin, 2003¹¹ and NatureScot, 2020d¹²); and
- Water vole (Dean et al., 2016¹³ and NatureScot, 2020e¹⁴).

2.3 Species Site Surveys

2.3.1 A suite of species-specific site surveys was carried out, between September and November 2021, to inform the baseline biodiversity aspects of the Proposed Development's EA. The scope of these surveys was informed by the results of the initial protected species habitat suitability survey and the route of the chosen alignment for the Rebuild Project.

2.3.2 All surveys were carried out by WSP ecologists of 'Capable' or above competency, as per the CIEEM Competency Framework¹⁵.

2.3.3 A proportionate field survey approach was employed to capture current data from areas identified as presenting 'moderate' to 'high' suitability for the following species, which were targeted during the protected species habitat suitability survey (**Section 2.2**):

- bat species;
- badger;
- red squirrel;
- pine marten;

² Collins J. (ed.) (2016). Bat Surveys for Professional Ecologists, Good Practice Guidelines (3rd Edition). The Bat Conservation Trust, London.

³ Scottish Badgers (2018). Surveying for Badgers: Good Practice Guidelines, Version 1. Scottish Badgers, Forfar, Angus.

⁴ NatureScot (2018). Licensing Guidance. What is a badger sett? Available at: https://www.nature.scot/sites/default/files/2018-10/Guidance%20-%20Licensing%20-%20Badgers%20-%20What%20is%20a%20Badger%20sett_.pdf

⁵ Gurnell, J., Lurz, P., McDonald, R. and Pepper, H. (2009). Practical Techniques for Surveying and Monitoring Squirrels. Practice Note. Forestry Commission, Edinburgh.

⁶ NatureScot (2020a). Standing Advice for Planning Consultations, Protected Species: Red Squirrel. Available at: <https://www.nature.scot/doc/standing-advice-planning-consultations-red-squirrels>

⁷ Cresswell WJ, Birks J, Dean M, Pacheco M, Trehwella WJ, Wells D and Wray S (2012). UK BAP Mammals: Interim Guidelines for Survey Methodologies, Impact Assessment and Mitigation. The Mammal Society, Southampton.

⁸ NatureScot (2020b). Standing Advice for Planning Consultations, Protected Species: Pine Marten. Available at: <https://www.nature.scot/doc/standing-advice-planning-consultations-pine-martens>

⁹ Gent, A. and Gibson, S. (2003). Herpetofauna Workers' Manual. Joint Nature Conservation Committee (JNCC), Peterborough.

¹⁰ NatureScot (2020c). Standing Advice for Planning Consultations, Protected Species: Reptiles (Adder, Slow Worm & Common lizard). Available at: <https://www.nature.scot/doc/standing-advice-planning-consultations-reptiles-adder-slow-worm-common-lizard>

¹¹ Chanin P (2003). Monitoring the Otter *Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough.

¹² NatureScot (2020d). Standing Advice for Planning Consultations, Protected Species: Otter. Available at: <https://www.nature.scot/doc/standing-advice-planning-consultations-otters>

¹³ Dean, M., Strachan, R., Gow, D. and Andrews R. (2016). The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series). Eds. Fiona Matthews and Paul Chanin. The Mammal Society, London.

¹⁴ NatureScot (2020e). Standing Advice for Planning Consultations, Protected Species: Water Vole. Available at: <https://www.nature.scot/doc/standing-advice-planning-consultations-water-voles>

¹⁵ CIEEM (2022). Competency Framework. Available at: <https://cieem.net/resource/competency-framework/>

- otter;
- water vole; and
- FWPM.

- 2.3.4 Additional surveys for these species were carried out between July and October 2022 to additional, applicable survey buffers, in areas where the Rebuild Project had been altered and where not already covered by the 2020 Habitat Suitability Site Survey.
- 2.3.5 Incidental observations of reptile species were recorded concurrently with the other species surveys.
- 2.3.6 The resulting survey area for each species is presented in **Figures 6.3: Bat Results to 6.8: Freshwater Pearl Mussel Results**. This approach is described in **Section 2.4**.
- 2.3.7 The targeted protected species surveys were carried out following the methodologies described below for bat species; badger; squirrel species; pine marten; otter; water vole; and FWPM. Incidental observations of any other protected or notable species were also target noted (**Annex A**). The recorded data for each species are presented in **Annex A**.

Bat Species

- 2.3.8 Bat surveys were undertaken in accordance with current industry² and NatureScot¹⁶ guidance. Deviations to guidance are further discussed in **Section 2.4**. Surveys were conducted in areas identified as presenting 'moderate' to 'high' suitability for bat species occurring within 30 m of the Rebuild Project.

Trees and Rockfaces

- 2.3.9 A ground-level bat Preliminary Roost Appraisal (PRA) was undertaken across the targeted woodland habitats and incidentally encountered rockfaces within these areas. The survey aimed to identify and appraise Potential Roost Features (PRFs) for bats.
- 2.3.10 Trees in the targeted habitats were inspected to assess their suitability to support bat roosts and to search for evidence of their current or historic use by roosting bats. Definitive evidence of bat presence includes live sightings and droppings. Scratch marks and urine staining can also indicate their presence.
- 2.3.11 The trees were categorised for their bat roost suitability, taking into account the habitat surrounding the Proposed Development. Suitability is categorised as 'High'; 'Moderate'; 'Low'; or 'Negligible' according to the presence of PRFs which bats could use for roosting; and the relative value of these features for shelter and protection by single or colonies of bats at different times of year in the locality.

Bridges and Structures

- 2.3.12 Dunoon Substation
- 2.3.13 Due to a new water supply that was planned for construction at the Dunoon Substation between November 2021 and January 2022, additional bat surveys were completed to the single building within the substation compound. These additional surveys are included within this appendix due to their correlating relevance to the Proposed Development.
- 2.3.14 An internal and external PRA was undertaken to the substation building during July 2021. The survey aimed to identify and appraise PRFs for bats. The survey assessed the building's suitability to support bat roosts via a search for PRFs and any evidence indicating the current, or historic, use of the building by roosting bats.

¹⁶ NatureScot (no date). Planning and Development: Protected Species. Available at: <https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/planning-and-development-protected-species>

- 2.3.15 In addition, environmental Deoxyribonucleic Acid (eDNA) analysis was carried out to small mammal droppings collected from the building during the structure's PRA. The eDNA analysis was completed by an accredited environmental laboratory during August 2021.
- 2.3.16 A subsequent programme of emergence/re-entry bat activity surveys were completed for the substation building, comprising a dusk emergence and dawn re-entry survey during August and September 2021.
- 2.3.17 Additional Bridges and Structures
- 2.3.18 A ground-level bat Preliminary Roost Appraisal (PRA) was undertaken to accessible and incidentally encountered bridges and structures within the targeted bat habitat areas. The survey aimed to identify and appraise PRFs for bats.
- 2.3.19 Bridges and structures in the targeted habitats were inspected to assess their suitability to support bat roosts and to search for evidence of their current or historic use by roosting bats. Definitive evidence of bat presence includes live sightings and droppings. Scratch marks and urine staining can also indicate their presence.
- 2.3.20 The bridges and structures were categorised for their bat roost suitability, taking into account the habitat surrounding the Proposed Development. Suitability is categorised as 'High'; 'Moderate'; 'Low'; or 'Negligible' according to the presence of PRFs which bats could use for roosting; and the relative value of these features for shelter and protection by single or colonies of bats at different times of year in the locality.
- 2.3.21 Private dwellings and commercial buildings were not assessed where access was not arranged and direct impacts were not envisioned.

Badger

- 2.3.22 The badger survey comprised a search for field signs across the targeted terrestrial habitats, following methods outlined by Scottish Badgers¹⁷ and broadly aligning with standing advice for planning consultants from NatureScot¹⁶. Deviations to guidance are further discussed in **Section 2.4**. Surveys were conducted to areas identified as presenting 'moderate' to 'high' suitability for badgers occurring within 100 m of the Rebuild Project.
- 2.3.23 Badger field signs that were searched for included:
- setts;
 - prints;
 - latrines (dung pits used as territorial markers);
 - guard hairs; and
 - foraging signs (snuffle holes).
- 2.3.24 Where sufficient field evidence and/or surround sett information has been identified, setts identified in the field were categorised based on the following criteria:
- Main setts – These usually have a large number of holes with large spoil heaps, and the sett generally looks well used. They usually have well-used paths to and from the sett and between sett entrances. Although normally the breeding sett is in continual use, it is possible to find a main sett that has become disused because of excessive digging or for some other reason, in which case it is recorded as a disused main sett.

¹⁷ Scottish Badgers (2018). Surveying for Badgers. Good Practice Guidelines (V1). Available at: https://www.scottishbadgers.org.uk/wp-content/uploads/2020/12/Surveying-for-Badgers-Good-Practice-Guidelines_V1-2020-2455979.pdf

- Annex setts – These are always close to a main sett, usually less than 150 m away, and are usually connected to the main sett by one or more obvious, well-worn paths. They consist of several holes, but are not necessarily in use all the time, even if the main sett is very active.
- Subsidiary setts – These often have only a few holes, are usually at least 50 m from a main sett, and do not have an obvious path connecting them with another sett. They are not continuously active.
- Outlier setts – These usually only have one or two holes, often have little spoil outside the hole, have no obvious path connecting them with another sett, and are only used sporadically. When not in use by badgers, they are often taken over by foxes or even rabbits. However, they can still be recognised as badger setts by the shape of the tunnel (not entrance hole), which is at least 250-300 mm wide at the base with a rounded or flattened oval roof (roughly 200 mm high).

Red Squirrel

- 2.3.25 The survey involved a systematic search of all targeted woodland areas. Visual observations of red squirrels and squirrel field signs were searched for.
- 2.3.26 The surveyors walked transects (approximately 10-15 m apart) throughout woodland blocks and treelines stopping at least every 50 m to look for signs of dreys and/or red squirrels. The survey was completed in accordance with survey guidance for initial non-intrusive visual surveys⁷ and NatureScot¹⁶ guidance. Incidental sightings of grey squirrel *Sciurus carolinensis* were also recorded, if observed. Deviations to guidance are further discussed in **Section 2.4**. Surveys were conducted to areas identified as presenting 'moderate' to 'high' suitability for red squirrels occurring within 50 m of the Rebuild Project.
- 2.3.27 The field signs typically associated with squirrel species include the following:
- Dreys - Distinctive bundles of twigs in trees that are usually 15 years or older and can be conifer or broadleaf species.
 - Feeding signs – Frequently comprising chewed conifer cones. Often discarded on prominent features at 'feeding stations'.
 - Footprints – Squirrel tracks may be found on soft mud, sand and snow etc. Often within, or at the edges or, woodland areas.
 - Sightings – Direct sightings of red squirrels.

Pine Marten

- 2.3.28 The survey involved a systematic search of all targeted habitat areas for pine marten field signs and potential den sites. The survey was completed in accordance with survey guidance for initial non-intrusive visual surveys⁷ and NatureScot¹⁶ guidance. Deviations to guidance are further discussed in **Section 2.4**. Surveys were conducted to areas identified as presenting 'moderate' to 'high' suitability for pine martens occurring within:
- 250 m of the Rebuild Project (less the Rebuild Project's proposed access routes); and
 - 100 m of the Rebuild Project's proposed access routes.
- 2.3.29 The field signs typically associated with pine marten include the following:
- Potential scats – Pine marten faeces known be used to mark territories. Pine martens are elusive and largely nocturnal, which makes them difficult to see, but their scats (droppings) are often quite distinctive (in structure, smell and content) and are the most commonly encountered field sign. Often observed on prominent rock outcrops, mounds or tussocks; or at the edges of woodland blocks, rides or pathways.
 - Footprints – Pine marten tracks may be found on soft mud, sand and snow etc. Often within, or within proximity of, dense coniferous woodland areas.

- Potential den sites.
- Sightings – Direct sightings of pine marten.

Otter

2.3.30 Field signs of otters were searched for along the targeted watercourses, 200 m upstream and downstream of the Rebuild Project's proposed crossings. Watercourses were surveyed on foot, in-channel, where flow rates and depths safely allowed. Otherwise, the watercourses were surveyed from 2 m back from the waters' edge due to health and safety requirements utilising binoculars, as required. The survey was undertaken broadly following methodologies from standard guidance documents^{18, 19} with reference to NatureScot protected species advice for developers¹⁶. Deviations to guidance are further discussed in **Section 2.4**.

2.3.31 The field signs typically associated with otter include the following.

- Holts – These are underground or enclosed features where otters live. They can be, for example, tunnels within bank sides; underneath root systems or boulder piles; and even fabricated structures such as disused drains. Holts are used by otters to rest up during the day and are the usual site of natal or breeding sites. Otters may use holts permanently or temporarily.
- Couches – These are above-ground resting sites. They may be partially sheltered or fully exposed. Couches may be regularly used, especially in reed beds and on in-stream islands. Couches can be very difficult to identify and may consist of an area of flattened grass or earth.
- Spraint – Otter faeces known as spraint may be used to mark territories, often observed on in-stream boulders. They can be present within or outside the entrances of holts and couches. Spraints have a characteristic smell and often contain fish remains. Features with two or more spraints of mixed age are considered to be spraint sites, with signs of regular use.
- Prints – Characteristic footprints of otter are often observed in soft ground and muddy areas.
- Anal jelly – Like spraint, anal jelly is often observed on prominent in-stream boulders.
- Feeding signs – Remains of prey items may be found at preferred feeding stations. Remains of fish, crabs, or skinned amphibians can indicate the presence of otter.
- Pathways – These are terrestrial routes that otters take when moving between resting sites and watercourses, or at high flow conditions when they will travel along bank sides in preference to swimming.

Water Vole

2.3.32 Field signs of water voles were searched for along the targeted watercourses, 100 m upstream and downstream of the Rebuild Project's proposed crossings. Watercourses were surveyed on foot, in-channel, where flow rates and depths safely allowed. Otherwise, the watercourses were surveyed from 2 m back from the waters' edge due to health and safety requirements utilising binoculars, as required. The survey was undertaken broadly following methodologies from standard guidance documents²⁰ with reference to NatureScot protected species advice for developers¹⁶. Deviations to guidance are further discussed in **Section 2.4**.

2.3.33 The field signs typically associated with water vole include the following:

- Droppings – Water vole faeces is recognisable by their size, shape and content. If not too dried-out these are also distinguishable from rat droppings by their smell.

¹⁸ Chanin, P. R. F. (2003a). Ecology of the European otter *Lutra lutra*. Conserving Natura 2000 Rivers Conservation Ecology Series No. 10, English Nature, Peterborough.

¹⁹ Chanin, P. (2003b). Monitoring the Otter *Lutra*. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough.

²⁰ Strachan, R. (2011). The Water Vole Conservation Handbook. EA/EN/WildCRU, Oxford. Water vole Conservation handbook (3rd edition).

- Feeding stations – Food items are often brought to feeding stations along pathways and hauled onto platforms. Recognisable as neat piles of chewed vegetation up to 10 cm long.
- Burrows – These appear as a series of holes along the water's edge, distinguishable from rat burrows by size and position.
- Lawns – These may appear as grazed areas around land holes.
- Nests – Where the water table is high, above ground woven nests may be found.
- Prints – Water vole footprints may be found at water's edge and lead into bankside vegetation. May be distinguishable from rat footprints by size.
- Runways – These are low tunnels pushed through vegetation near the water's edge, less obvious than rat runs.

Freshwater Pearl Mussel (FWPM)

- 2.3.34 NatureScot requested during the Rebuild Project's consultation stages that a FWPM study was undertaken. FWPM surveys were undertaken in line with NatureScot guidance²¹ on three watercourses crossed by the Rebuild Project, namely the: River Eachaig; Little Eachaig River; and Glenfinart Burn. These sections of watercourse were assessed due to their proximity to Rebuild Project, which are concurrently also applicable to the Proposed Development.
- 2.3.35 Surveys were undertaken by a NatureScot FWPM licensed surveyor with 15 years' experience undertaking FWPM surveys and an Assistant Ecologist with two years' experience. The surveys were undertaken between 22 and 24 September 2021.
- 2.3.36 Surveys comprised an initial habitat-based assessment of 100 m upstream and 500 m downstream (hereafter the 'FWPM Survey Area') of the Rebuild Project (where access permitted), in order to assess watercourse suitability in terms of potential to support FWPM. A standard field survey recording form was used in line with NatureScot protocol²³ and included (but was not limited to) a review of the following parameters:
- flow type;
 - substrate;
 - in-channel vegetation;
 - shading; and
 - turbidity/levels of suspended sediment.
- 2.3.37 Where accessible and where habitat suitability was considered of sufficient interest, the watercourse was entered, and suitable areas searched using a bathyscope. The watercourse was covered in an upstream direction with the aim of identifying any FWPM present. Areas of suitability were mapped by target notes (TN#), and the length of which depended on the suitability, the width of the river, safe access and the presence of natural or fabricated 'breakpoints', such as inflows and bridge structures.

Invasive Non-Native Species

- 2.3.38 Incidental observations of INNS were recorded concurrently with the species-specific site surveys. The observations were focussed on the floral INNS species listed by NatureScot as potentially causing the most damage to biodiversity²².

²¹ NatureScot (2010). Freshwater peal mussel survey protocol – for use in site-specific projects. Available online: <https://www.nature.scot/sites/default/files/2018-10/Freshwater%20pearl%20mussel%20survey%20-%20protocol%20for%20use%20in%20site%20specific%20projects.pdf>

²² NatureScot (no date). Invasive Non-Native Plants. Available at: <https://www.nature.scot/professional-advice/protected-areas-and-species/protected-species/invasive-non-native-species/invasive-non-native-plants>

2.4 Limitations and Assumptions

2.4.1 The surveys covered areas identified as presenting 'moderate' to 'high' suitability for each targeted species during the protected species habitat suitability survey (**Section 2.2**). Considering the extent and the type of works associated with the Proposed Development, it was essential to identify a proportionate approach for data collection which would still remain robust and sufficient to inform the EA and mitigation. This approach was considered proportionate with reference to the type of works associated with the Proposed Development.

2.4.2 Despite the aim to provide detailed baseline conditions, the following limitations apply to the assessments presented within this appendix. A precautionary approach has been applied within the EA and any recommended mitigation.

- Instances where sections of the Survey Area were inaccessible due to access permissions or health and safety restrictions, remote surveying was carried out where possible. This involved using binoculars and / or interpreting suitability based on the surrounding habitat and conditions.
- Portions of habitat were unable to be physically or visually assessed due to: fallen and wind-blown trees; dense scrub, bracken and rhododendron; dense, young coniferous plantations; steep embankments and rocky outcrops; and active timber harvesting operations ("No Access" areas: **Figures 6.3: Bat Results to 6.9: INNS Observations and 6.10: Confidential Badger Results**). The absence of observations within these areas does not confirm absence of protected species.
- Private buildings and maintained amenity gardens associated with private gardens were not accessed. However, the potential for private woodlands and housing to support protected species (such as roosting bats) was remotely recorded, where possible, due to the potential for disturbance during the Proposed Development's construction.
- Where suitable features that can be used as resting sites (such as squirrel dreys; or pine marten dens) have been identified within the Survey Area, but the presence or current use by a protected species has not been confirmed, they have been recorded as 'potential' rest areas (i.e. 'potential squirrel drey'; or 'potential pine marten den site'). For the purposes of the EA Report, this allows the habitat suitability for the applicable species to be assessed and the availability of resting sites recorded. This information can then inform the potential impact and mitigation.
- Whilst the results (**Section 3**) outlines identified signs of squirrel species foraging activity within the Survey Area, they do not confirm the presence or absence of red squirrels specifically, unless directly sighted. Confirmation of squirrel species at locations of foraging or other non-direct field signs, typically requires visual sightings or more intensive survey effort, including DNA testing of hairs or droppings, for confirmation. However, red squirrels were observed across the length of the Survey Area (**Figure 6.4: Squirrel Results**).
- DNA analysis is required to confirm potential pine marten scat provenance and to distinguish from similar sized mammals, such as fox *Vulpes vulpes*.
- The INNS observations recorded concurrently with the species-specific site surveys (**Section 2.3.38**) do not constitute a dedicated survey for all INNS. Should a dedicated INNS assessment be required, it is recommended to be undertaken during the period of June/July, when the majority of key floral INNS are most likely to be able to be identified.
- The upper portions of broadleaved trees in leaf, or evergreen coniferous trees, may be obscured by the trees' foliage. This has the potential to prevent the visual observation of upper features such as squirrel dreys; or bat PRFs. Additionally, it is not always possible to distinguish a drey from a bird's nest from ground level, or its current activity/occupation. In these instances, a precautionary approach is applied, and the feature is recorded as a potential drey.

- The likely classification applied to setts observed is based on the scale and activity identified at the time of survey. However, further study would be required to confirm the definitive badger sett classification for size and activity of the applicable badger clan.
- During the FWPM surveys, sections of each watercourse could not be surveyed from within the channel due to the depth and/or flow rate of the river at the time of survey and thus could not be fully searched using a bathyscope to identify presence/absence of FWPM. However, it was considered that areas with faster flow rates provided limited suitability due to the increased discharge and flow rates. Additionally, areas that were too deep were viewed, where possible, with a bathyscope from areas that were wadable to reduce the potential of missing FWPM. As such, is not considered to represent a significant constraint to the findings recorded or conclusions drawn within this report.
- Ecological surveys are limited by factors which affect the presence species, such as the time of year and behaviour. The absence of field signs or visual observations should not be taken as conclusive proof that the species is not present or that it will not be present in the future.
- Ecological survey data will typically remain valid for up to 12 months, and up to 18 months with the following exceptions²³:
 - where a site may offer existing or new features which could be utilised by a mobile species within a short time frame;
 - where a mobile species is present on-site or in the wider area, and can create new features of relevance to the assessment; and
 - where country-specific or species-specific guidance dictates otherwise.

²³ Chartered Institute of Ecology and Environmental Management (2019). Advice Note on the Lifespan of Ecological Reports and Surveys. CIEEM, Winchester.

3. RESULTS

3.1 Desk Study

European Protected Species and Scottish Biodiversity List

3.1.1 The desk study identified records of several European Protected Species (EPS), protected under the Conservation (Natural Habitats &c.) Regulations 1994 (as amended)²⁴, those identified as priority species on the Scottish Biodiversity List²⁵ (SBL) and/or protected under national legislation such as the Wildlife and Countryside Act 1981²⁶ as amended (WCA) or Protection of Badger Act 1992²⁷ (PBA). The identified species/species groups include:

- Bats (EPS and SBL). Several bat species are known to be present within the Argyll and Bute area. Within the proximity of the Proposed Development, they are likely to utilise suitable built structures and mature woodland and trees for roosting and linear features (such as woodland edge and riparian corridors) for foraging and commuting.
- Badger (PBA). Badgers are known to be present in the Argyll and Bute area. Within the proximity of the Proposed Development, they are likely to preferentially utilise woodland for sett-building and foraging; and open areas for foraging and commuting.
- Red squirrel (WCA and SBL). Records of red squirrel, two of which were sighted in 2018, are present within the study area. Sightings include those recorded in Benmore Botanic Garden. Within the proximity of the Proposed Development, they are likely to utilise woodland (including linear woodlands and shelterbelts) for denning and foraging.
- Pine marten (WCA and SBL). No records were found during the desk study. Within the proximity of the Proposed Development, they are likely to utilise woodland (including linear woodlands and shelterbelts) for denning and foraging as well as more open heath and grassland areas for foraging (for voles etc).
- Otter (EPS and SBL). A sighting of otter was recorded in Benmore Botanic Garden in July 2016 and they are known to be widespread throughout Argyll and Bute. Within the proximity of the Proposed Development, they are likely to utilise running and standing freshwater and marine water habitat for shelter and foraging.
- Water vole (WCA and SBL). Water voles are known to be in the Argyll and Bute area; within the route options they are likely to utilise slow-flowing running and standing freshwater and riparian habitat for burrowing and foraging.
- Reptiles (WCA and SBL). Slow worm *Anguis fragilis*; adder *Vipera berus*; and common lizard *Zootoca vivipara* are known to be in the Argyll and Bute area. Within the proximity of the Proposed Development, they are likely to utilise stone walls; rock piles; woodland edge; dense tussocky grassland; and heath and open areas for basking, shelter and foraging.
- Amphibians (WCA²⁸, EPS²⁹ and SBL³⁰). Common toad *Bufo bufo*; common frog *Rana temporaria*; and palmate newt *Lissotriton helveticus* recorded in the study area. Great crested newt *Triturus cristatus* are known to be in the Argyll and Bute area; within the route options they are likely to utilise very slow-flowing running and standing freshwater and riparian habitat for

²⁴ UK Government (1994). The Conservation (Natural Habitats, &c.) Regulations 1994. Available at: <http://www.legislation.gov.uk/uksi/1994/2716/contents/made>

²⁵ The Scottish Biodiversity List is a list of animals, plants and habitats that Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland, as required by the Nature Conservation (Scotland) Act 2004.

²⁶ UK Government (1981). Wildlife and Countryside Act 1981. Available at: <https://www.legislation.gov.uk/ukpga/1981/69>

²⁷ UK Government (1992). Protection of Badgers Act 1992. Available at: <https://www.legislation.gov.uk/ukpga/1992/51/contents>

²⁸ Common frog; common toad; palmate newt; and smooth newt.

²⁹ Great crested newt.

³⁰ Great crested newt; natterjack toad *Epidalea calamita*; and common toad.

shelter and foraging and stone walls, rock piles, woodland edge, tussocky grassland and heath for shelter (including over winter/hibernation).

- Fish and FWPM (WCA³¹ and SBL³²). Notable fish species were recorded from nearby Loch Eck SSSI and Holy Loch LNR including powan *Coregonus clupeoides*; and European eel *Anguilla anguilla*. Brown trout *Salmo trutta*; and Atlantic salmon *Salmo salar* likely to be present along watercourses throughout the route options. NatureScot also requested during the Rebuild Project's consultation stages that a FWPM study was undertaken.

3.2 Field Survey

Bat Species

Trees and Rockfaces

- 3.2.1 172 trees with PRFs were identified within the targeted bat habitats. Of these, one presented 'High' suitability for roosting bats; 124 with 'Moderate' suitability; and 47 with 'Low' suitability. Additionally, 12 rock faces were identified, three of which with 'Low' suitability and nine with 'Moderate' suitability.
- 3.2.2 Full PRA results for bat roost suitability are displayed in **Figure 6.3: Bat Results**. Data tables and target notes relating to bats are described in **Annex A**.
- 3.2.3 In addition to the identified PRFs, suitable foraging and commuting habitat was found across and between the targeted bat habitats, including: watercourses; mature woodland edges; and hedge lines. The majority of the woodlands comprised commercial forestry plantation, often present fewer opportunities for bat species than broadleaved trees. However, pockets of mature broadleaved trees were found throughout the targeted bat habitats, predominantly within riparian zones, with larger groups in the south, near Dunoon Substation, and in the centre, near Ardentinny.

Bridges and Structures

- 3.2.4 One bridge face was identified with 'Moderate' suitability within the target bat habitat areas.
- 3.2.5 Twenty roosting bats were observed roosting in seven different locations at the Dunoon Substation building, all of which were associated with the building's roof. All roosts contained a low number of soprano pipistrelle or common pipistrelle bats and are considered to be non-breeding, active season day roosts only. Bat droppings were collected from the wall of the transformer building's south-eastern corner. Upon laboratory analysis, these were confirmed to have originated from soprano pipistrelle bats.

Badger

- 3.2.6 Habitats with the potential to support badgers are present along the Proposed Development site. Due to the sensitivities associated with badger data, full results are described separately in **Appendix G: Confidential Badger Data**.

Red Squirrel

- 3.2.7 Mature woodland with the potential to support red squirrels is present across the majority of the Proposed Development site. This woodland primarily comprises coniferous plantation, with areas of broadleaved and mixed trees interspersed throughout.
- 3.2.8 Multiple visual observations of red squirrels confirms their presence at the Proposed Development site. In addition, multiple field signs of squirrel foraging and presence of potential dreys were observed throughout the targeted squirrel habitats.

³¹ Freshwater pearl mussel.

³² Atlantic salmon and sea trout.

- 3.2.9 Full results of red squirrel observations are displayed in **Figure 6.4: Squirrel Results**. Data tables and target notes relating to red squirrels are described in **Annex A**.
- 3.2.10 Based on their natural range³³ and the observed field evidence, red squirrels are considered to be present within optimal habitat along the entire Proposed Development.
- 3.2.11 Grey squirrels may also be present in some areas as portions of the Proposed Development site which falls within a Grey Squirrel Control Area³⁴. In areas of overlap between grey and red squirrel distributions, any otherwise indistinguishable evidence of squirrels is precautionarily assumed to be of red squirrels.

Pine Marten

- 3.2.12 The majority of the Proposed Development site falls within the known distribution range of pine marten within Scotland^{35, 36}. Suitable areas within the targeted pine marten habitats include: mature, well connected, woodlands with dense canopies; large, craggy rock outcrops; large piles of fallen/wind-blown trees; owl boxes; and dilapidated/accessible buildings and sheds.
- 3.2.13 Incidental potential evidence of pine marten activity was recorded, including: multiple potential scat droppings located, within or adjacent to woodland or on access tracks; and multiple potentially suitable den sites.
- 3.2.14 Full results of pine marten observations are displayed in **Figure 6.5: Pine Marten Results**. Data tables and target notes relating to pine martens are described in **Annex A**.

Otter

- 3.2.15 Otter evidence was identified within a number of the targeted otter watercourses. Confirmed otter resting sites were identified at: a tributary to the Glen Finart Burn, known as the Cuil Burn; and the Little Eachaig River. Otter spraint was identified at the River Eachaig; the Little Eachaig River. In addition, a number of potential resting sites were also identified.
- 3.2.16 Full results of otter observations are displayed in **Figure 6.6: Otter Results**. Data tables and target notes relating to otters are described in **Annex A**.
- 3.2.17 Otters are assumed to be present along substantial portions of the Proposed Development site. In particular, riparian habitats along the Proposed Development site provide suitable commuting, foraging and resting opportunities.

Water Vole

- 3.2.18 No water vole evidence was recorded during the targeted field surveys.
- 3.2.19 The targeted water vole watercourses displayed in **Figure 6.7: Water Vole Results**.

Freshwater Pearl Mussel

- 3.2.20 Details of each FWPM transect are described in **Table 3-1 to Table 3-3**. The relevant sections of each watercourse are displayed in **Figure 6.8: Freshwater Pearl Mussel Results**.

Little Eachaig River

- 3.2.21 No FWPM or their shells were observed in Little Eachaig River.

³³ The Mammal Society (no date). Species – Red Squirrel (online). Available at: <https://www.mammal.org.uk/species-hub/full-species-hub/discover-mammals/species-red-squirrel/>

³⁴ Scottish Forestry (no date). Species Conservation – Grey Squirrel Control. Accessed via Scotland's Environment Hub. Available at: <https://map.environment.gov.scot/sewebmap/>

³⁵ Croose, E., Birks, J.D.S., Schofield, H.W. and O'Reill, C. (2014). Distribution of the pine marten (*Martes martes*) in southern Scotland in 2013. Scottish Natural Heritage Commissioned Report No. 740.

³⁶ The Vincent Wildlife Trust (2020). The Pine Marten. Available at: <https://www.vwt.org.uk/species/pine-marten/>.

3.2.22 The prevailing habitat across the Little Eachaig River was considered sub-optimal in terms of supporting FWPM due to the unsuitable habitat observations described in **Table 3-1**. Only localised areas of optimal habitat, including areas of stable gravel/sand substrate between boulder and pebble substrates, were encountered. No significant evidence of modification was present within the watercourse. Flow structures within the FWPM Survey Area were consistent throughout the reach with run/riffle/glides flow types present.

Table 3-1: FWPM status within the Little Eachaig River

Drawing Reference	Starting Grid Reference	FWPM Status (Present/Absent)	Description
1A	NS 13603 81749	Absent	The channel throughout this transect was c.10 m in width and had an average depth of 0.4 m. The surrounding land-use comprised riparian broad-leaved woodland and coniferous plantation. The substrate was dominated by sections of pebble and cobble with localised areas of stable gravel and coarse sand. Suitable habitat was present within this transect although no FWPM or their shells were identified within this transect.
2A	NS 13656 81776	Absent	The channel throughout this transect was c.10 m in width and had an average depth of 0.4 m. The surrounding land-use comprised riparian broad-leaved woodland and coniferous plantation. The substrate within this transect was more heterogenous with an even mixture of gravel, pebble and cobble. Large boulders were also present within this section creating a diversity in flow structure throughout the transect. Due to the presence of larger boulders, retention of smaller substrates suitable for FWPM, including gravels, was present. Overall, Suitable habitat was present within this transect although no FWPM or their shells were identified within this transect.
3A	NS 13703 81809	Absent	The channel throughout this transect was largely similar to Ref. 2A, however, the average width was c.12 m and had an average depth of 0.5 m. Suitable habitat was present within this transect although no FWPM or their shells were identified within this transect.
4A	NS 13824 81881	Absent	The channel throughout this transect was largely similar to Ref. 2A, however, the average width was c.12 m and had an average depth of 0.4 m. Additionally, a larger proportion of stable gravel substrate was present within this transect providing optimal anchoring habitat for FWPM. However, no FWPM or their shells were identified within this transect.
5A	NS 13883 81951	Absent	The channel throughout this transect was largely similar to Ref. 1A, however, the average width was c.12 m and had an average depth of 0.3 m. Sub-optimal FWPM habitat was present within this area, however small, localised areas of optimal habitat were also present. No FWPM or their shells were identified within this transect.

Eachaig River

3.2.23 No FWPM or their shells were observed in Eachaig River.

3.2.24 The prevailing habitat across the Eachaig River was considered sub-optimal in terms of supporting FWPM due to the unsuitable habitat observations described in **Table 3-1**. Only localised areas of optimal habitat, including areas of stable gravel/sand substrate between boulders and pebbles, were

encountered. Overall, the FWPM Survey Area was relatively homogenous with limited diversity in flow structure and substrate. No significant evidence of modification was present within the watercourse. However, several angling spots were present along the Eachaig River indicating a level of regular disturbance to the stream bed in these sections.

3.2.25 Details of each transect are described in **Table 3-2**.

Table 3-2: FWPM status within the Eachaig River

Drawing Reference	Starting Grid Reference	FWPM Status (Present/Absent)	Description
1B	NS 14486 83847	Absent	The channel throughout this transect was c.14 m in width and had an average depth of 0.8 m. The surrounding land-use comprised agricultural fields and linear riparian broad-leaved trees along both banksides. The substrate was homogenous and was dominated by pebble and cobble. Small areas of gravel were present although there was a relative absence of boulder substrates. The substrate was covered by a layer of filamentous algae and leaf litter. Overall, sub-optimal habitat was present within this transect although no FWPM or their shells were identified.
2B	NS 14537 83798	Absent	The channel and surrounding land-use throughout this transect was largely similar to Ref. 1B, however, the average width was c.13 m and had an average depth of 0.8 m. Sub-optimal habitat was present within this transect although no FWPM or their shells were identified within this transect.
3B	NS 14658 83637	Absent	The channel and surrounding land-use throughout this transect was largely similar to Ref. 1B. This transect had an average width of c.19 m with a wide stretch channelling into narrow run/riffles, exposing a large side bar on the right-hand bank. The average depth was 0.9 m with some areas greater than 1 m in depth. The substrate at this transect was pebble dominated and had little diversity in substrate types. No FWPM or their shells were identified within this transect.
4B	NS 14605 83243	Absent	The channel and surrounding land-use throughout this transect was largely similar to Ref. 1B, however, the average width was c.15 m and had an average depth of 0.5 m. Additionally, the substrate composition was homogenous with pebbles dominating the transect and a relative absence of gravels. No FWPM or their shells were identified within this transect.
5B	NS 14589 83173	Absent	The channel and surrounding land-use throughout this transect was largely similar to Ref. 1B, however, the average width was c.15 m and had an average depth of 0.5 m. Sub-optimal habitat was present within this transect although no FWPM or their shells were identified within this transect.

Glenfinart Burn

3.2.26 No FWPM or their shells were observed in Glenfinart Burn.

3.2.27 The prevailing habitat across the Site, in areas which were accessed, was considered optimal in terms of supporting FWPM. No significant evidence of modification was present within the watercourse. However, a series of artificial timber weirs were present along the FWPM Survey Area.

Additionally, a sewage outflow pipe was present at the downstream extent of the FWPM Survey Area.

3.2.28 Details of each transect are described in **Table 3-3**.

Table 3-3: FWPM status within the Glenfinart Burn

Drawing Reference	Starting Grid Reference	FWPM Status (Present/Absent)	Description
1C	NS 18024 89023	Absent	The channel throughout this transect was c.7 m in width and had an average depth of 0.8 m. The surrounding land-use comprised agricultural fields and linear riparian broad-leaved trees along both banksides. The substrate was homogenous and was dominated by pebble and cobble with occasional boulders. Small areas of gravel substrate were also present along the water margins. The substrate was covered by a layer leaf litter. No FWPM or their shells were identified.
2C	NS 18487 88524	Absent	The channel and surrounding land-use throughout this transect was largely similar to Ref. 2C, with similar average width and depth. Sand and gravel were compacted in localised areas of this transect. Otherwise, the transect was dominated by pebble substrate and occasionally cobble and boulder in deeper runs. Sub-optimal habitat was present within this transect although no FWPM or their shells were identified within this transect.

Reptiles

3.2.29 Reptiles prefer successional habitats with a degree of heterogeneity. Optimal habitat includes vegetated and / or rocky areas for shelter and open areas for warmth³⁷. Reptiles were recorded on an incidental basis during the suite of species-specific site surveys. Additionally, habitat suitable to support reptiles was considered and target noted where appropriate; and included areas of grass and heathland (wet and dry), rough grassland, moorland, woodland (including clear fell and young plantation). Specifically, features such as dry-stone walls and log piles have been noted to provide optimal habitat for sheltering and basking reptiles.

Amphibians

3.2.30 The terrestrial requirements for most native species of amphibians are fairly generic, as they can occupy a variety of different habitat types. However, they are largely dependent on water and prefer areas that provide adequate levels of shelter. This includes wet woodland, scrub habitat and marshy / inundation vegetation.

3.2.31 No field evidence alluding to the presence of amphibians was recorded during the suite of species-specific site surveys. However, there is still considered to be suitable habitat for amphibians in areas along the Proposed Development site. Specifically, standing waterbodies and the terrestrial habitat surrounding them have potential to support a variety of amphibian species. Great crested newt, a European protected species can be found in aquatic habitats and up to 250 m away within the surrounding terrestrial environment. However, typically they prefer larger ponds for breeding with a lack of fish, varied shade and with an abundance of submerged vegetation³⁸.

³⁷ Froglife (1999). Froglife Advice Sheet 10. Reptile Survey: An introduction to planning, conducting and interpreting survey for snake and lizard conservation. Available at: <https://cieem.net/resource/froglife-advice-sheet-10-reptile-survey/>

³⁸ Baker, J., Beebee, T., Buckley, J., Gent, A. and Orchard, D. (2011). Amphibian Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth.

Invertebrates

- 3.2.32 The range of habitats present along the Proposed Development site, specifically areas of woodland, scrub and moorland habitat present optimal conditions for terrestrial invertebrates.
- 3.2.33 Aquatic invertebrates are likely to inhabit the majority of watercourses and waterbodies that overlap the Proposed Development site.

Invasive Non-Native Species

- 3.2.34 Invasive, non-native, plant species were recorded during the suite of species-specific site surveys and included the following species:
- American skunk-cabbage *Lysichiton americanus*;
 - butterfly-bush *Buddleia davidii*;
 - field horsetail *Equisetum arvense*;
 - Indian balsam *Impatiens glandulifera*³⁹;
 - Japanese knotweed *Reynoutria japonica*; and
 - rhododendron *Rhododendron* sp.
- 3.2.35 Full results of INNS observations are displayed in **Figure 6.9: INNS Observations**. Data tables and target notes relating to otters are described in **Annex A**.
- 3.2.36 No evidence or observations of invasive non-native animals were recorded during the suite of species-specific site surveys.

³⁹ Also commonly referred to as Himalayan balsam.

4. CONCLUSION

4.1.1 Existing ecological data and targeted protected species survey data were used to consolidate assumptions based on field evidence for a range of protected and notable species and their assumed or confirmed presence along the Proposed Development. The following species, or habitats to support them, have been identified along the Proposed Development:

- bats;
- badger;
- red squirrel;
- pine marten;
- otter;
- water vole;
- freshwater pearl mussel;
- reptiles;
- amphibians;
- invertebrates;
- fish; and
- invasive non-native plants.

ANNEX A – TARGET NOTES AND OBSERVATION DATA

Table A-1: Target Notes

Target Note	Details
TN1	Rabbit warren. Outer size and shape of entrance is potentially suitable to support badger. However, the tunnel quickly narrows, to an unsuitable diameter. No evidence of badger identified.
TN2	Recently clear-felled coniferous plantation.
TN3	Recently clear-felled coniferous plantation.
TN4	Recently clear-felled coniferous plantation. Only corner of previous woodland, nearest to the watercourse, remains standing.
TN5	End tip of woodland recently felled.
TN6	Eastern edge of area recently clear felled.
TN7	Multiple other large, mature coniferous trees with bat PRFs adjacent to, but outwith, the target bat habitat at this location.
TN8	Dilapidated building with barn owl roosting potential. No signs observed inside (feathers, pellets etc).
TN9	Private property lochan. Landowner anecdotally confirmed presence of eels and newts within.
TN10	Nearby landowner anecdotally confirmed presence of lamprey and eel along river.
TN11	Owl box
TN12	Owl Box
TN13	Basking common lizard observed. Using felled tree debris / brash as refugia and tree stumps as baking habitat.
TN14	Owl Box
TN15	Wood ant nest mound
TN16	Dilapidated barn with barn owl roosting potential. No signs observed inside (feathers, pellets etc).
TN17	Building with barn owl potential
TN18	Wood ant nest mound

Table A-2: Bat Observations -Trees

Drawing Reference	Tree Tag Number	Bat Suitability	Description
1	0300	Moderate	Split in limb, facing south, approximately 13 m from ground level.
2	0295	Moderate	Dead limb, with hollow centre facing west, approximately 7 m from ground level.
3	0292	Moderate	Old damage to upper side of limb on south side of tree, may extend up limb, approximately 7 m from ground level.
4	0288	Low	Vertical split in Bark up on south side of tree; PRF at approximately 4 m from ground.

Drawing Reference	Tree Tag Number	Bat Suitability	Description
5	0293	Moderate	Multi stemmed tree, 2 PRFs on separate stems, both from old decayed/broken limbs, one facing north and one west, approximately 8 m and 11 m from ground level.
6	0289	Moderate	3 dead limbs, 2 on south/south-west side at approximately 10 m from ground level, 1 on north side approximately 9 m from ground level.
7	0291	Moderate	Gaps around old, removed limb facing north at approximately 6 m from ground level.
8	0294	Moderate	Wound on south side of tree from lost limb approximately 7 m from ground level.
9	0298	Moderate	Large central stem cavity approximately 0.5 m from ground (tree leaning almost horizontal) may extend both up and down stem.
10	0299	Low	Vertical split in bark up northern stem with PRF at top.
11	0285	Low	Multiple dead limbs at approximately 8 m with splits.
12	0284	Moderate	Old knot hole at approximately 11 m from ground level on north side. New growth partially obscuring entrance.
13	0297	Moderate	Multi woodpecker holes and knot holes in upper limbs, multi aspects, 8 to 12 m from ground level.
14	0279	Moderate	Multi PRFs - knot hole, woodpecker holes, dead and split limbs, multi aspects.
15	0283	Moderate	Two holes and 1 split in dead limbs on west side of tree, all visible from same viewpoint.
16	0280	Low	Two PRFs - potential cavity on top of limb with exposed bark and old rot hole in different upper limb.
17	0281	Low	Long split in dead limb with rot hole in second dead limb behind it.
18	0282	Moderate	Large vertical twist/split in upper limb/stem.
19	0278	Low	Rot hole / lost limb at fork in upper limb approximately 11 m from ground level on western side.
20	0277	Moderate	Cavity up stem.
21	0274	Moderate	Knot hole on north side at 4.5 m up and limb damage around lost/damaged branch on north side at approximately 10 m from ground level.
22	0033	Moderate	Tag on south-west aspect. PRF on south-west aspect.
23	0034	Moderate	Tag on north aspect. PRF on west aspect.
24	0035	Moderate	Tag on south aspect. PRF on west aspect.
25	0036	Moderate	Tag on south aspect. PRF on south aspect.
26	0037	Moderate	Tag on south aspect. PRF on south aspect.
27	0039	Moderate	Tag on south-east aspect. Multiple PRFS (x5). Split branches due to rot. Cannot be climbed due to rot.
28	0040	Moderate	Tag on west aspect.
29	0042	Moderate	Tag on west aspect. PRF on south aspect.

Drawing Reference	Tree Tag Number	Bat Suitability	Description
30	0041	Low	Tag on southern aspect. PRF on south-eastern aspect.
31	n/a	Moderate	Cannot tag due to location on slippery slope. Tree overhangs stream. Unable to access or tag as tree overhangs stream.
32	0043	High	Tag on north aspect. Two PRFs on limbs on north aspect.
33	0273	Low	Horizontal split in low branch, extends approximately 10 cm into branch in both directions, relatively sheltered.
34	0271	Low	Knot hole on north-west side, 7 m from ground level.
35	0272	Moderate	Long horizontal crack along limb extending east/north-east from tree.
36	0275	Moderate	At least six broken/hazard limbs.
37	0276	Low	Vertical split in top of stem.
38	0287	Low	Multiple gaps under loose bark around upper half of stem.
39	0270	Low	Woodpecker holes and cavity at top of stem.
40	0268	Moderate	Multiple deep vertical crevices in the undulating mature bark, approximately 12-15 m up on south side.
41	0267	Moderate	Large vertical compression fork between upper stem and branch at approximately 14 m up on north side.
42	0265	Moderate	Multiple woodpecker holes and loose bark in upper stem.
43	0264	Moderate	Multiple woodpecker holes and loose bark in upper half of stem.
44	0248	Moderate	Multiple gaps under loose bark and cavities in dead sections across majority of both main stems on multi-stemmed tree.
45	0228	Moderate	PRF in smaller limb at approximately 13 m from ground level on south side of tree.
46	0229	Moderate	Large vertical feature extending from base, may extend at top.
47	0048	Moderate	Tag on south aspect of tree, PRF on south aspect of tree.
48	0044	Moderate	Moderate RRF for bats on tree.
49	0049	Moderate	Moderate RRF for bats on tree.
50	0047	Moderate	Moderate RRF for bats on tree.
51	0050	Moderate	Tag on north-western aspect, PRF on north aspect, PRF on south aspect.
52	0051	Moderate	Moderate RRF for bats on tree.
53	0245	Low	Small hole on small limb at approximately 11 m from ground level on south-west side.
54	0250	Low	Small hole at removed branch on limb on south-east side of tree approximately 12 m from ground level.
55	0296	Low	Sheltered, vertical cavity in deep undulating bark on south side of tree.

Drawing Reference	Tree Tag Number	Bat Suitability	Description
56	0286	Moderate	Upper end of fluting multi stem leaders is sheltered and appears to extend upwards.
57	0246	Moderate	Multi woodpecker holes and loose bark in upper stem.
58	0052	Moderate	Tag and PRF on south aspect.
59	0053	Moderate	Tag and PRF on south aspect.
60	0054	Moderate	Tag not on tree as inaccessible. Tag on south-eastern side of tree.
61	0259	Low	Woodpecker hole near top of stem on north side of tree.
62	0290	Moderate	Multiple woodpecker holes in upper stem.
63	0241	Low	Multi stemmed tree, various areas of loose bark in upper portion of dead stem side.
64	0242	Moderate	Two woodpecker holes.
65	0266	Moderate	Multiple areas of loose bark and eroded limb cavities across tree.
66	0254	Moderate	Lost limb rot hole on west side at approximately 6m from ground level.
67	0239	Low	Cavity extending up stem on west side at 1.5 m from ground level.
68	0255	Moderate	Moderate RRF for bats on tree.
69	0069	Moderate	Large cavity into stem at lost limb.
70	0064	Moderate	Multiple rot holes and old healing split in bark.
71	0063	Low	Rot hole on east side approximately 5 m from ground level.
72	0066	Low	Basil cavity on field side.
73	0065	Moderate	Fluting up upper limb on west side of tree, may extend up limb.
74	0058	Moderate	Large basal cavity extends up main stem beyond reach of endoscope.
75	0067	Moderate	Large basal cavity extends up main stem beyond reach of endoscope.
76	0074	Moderate	Lifting bark.
77	0261	Moderate	Moderate RRF for bats on tree.
78	0201	Moderate	Moderate RRF for bats on tree.
79	0206	Moderate	Moderate RRF for bats on tree.
80	0238	Moderate	Moderate RRF for bats on tree.
81	0257	Moderate	Bark breaking off of limb.
82	0209	Moderate	Two PRFs on neighbouring limbs.
83	0070	Low	Fluting up height of main stem.
84	0055	Moderate	Cavity extending up stem.
85	0071	Moderate	Woodpecker holes lead to cavity up stem.

Drawing Reference	Tree Tag Number	Bat Suitability	Description
86	0072	Low	Dying alder. Cavity extends up stem under lifting bark.
87	0073	Low	Lifting bark.
88	0075	Low	Knot hole at approximately 13 m from ground level on west side.
89	0079	Low	Lifting bark.
90	0086	Moderate	Cavity extends up stem.
91	0080	Low	Fluting in limb facing field. Whilst doesn't extend far, does create a sheltered and potentially suitable feature.
92	0085	Low	Cavity extends up the tallest of the two main stems. Whilst open at top, areas are still sheltered and may be suitable for roosting.
93	0076	Moderate	Large cavity extends up stem.
94	0083	Low	Large cavity extends up stem, visible from rot hole on field side.
95	0077	Low	Large cavity extends up stem.
96	0235	Moderate	Snapped branch leaving hole on limb.
97	0203	Moderate	Endoscope used but PRF too deep.
98	0226	Moderate	Endoscope used but PRF too deep.
99	0210	Moderate	Woodpecker hole and split up trunk.
100	0225	Moderate	Knot hole halfway up tree.
101	0212	Moderate	Multiple PRFs. Three knot holes on main stem and two snapped branches near top creating gaps.
102	0215	Moderate	Moderate RRF for bats on tree.
103	0204	Moderate	Tree with PRF behind the one tagged. PRF is knot hole approximately halfway up.
104	0211	Low	Cavity in short broken limb opposite field, extends upwards into sheltered section of short broken limb.
105	0221	Low	Knot hole facing towards field approximately 8 m from ground level.
106	0061	Low	Knot hole facing river approximately 7 m from ground level.
107	0234	Low	Small knot hole on field side of tree (not facing river) approximately 5 m from ground level.
108	n/a	Low	Knot hole on south side approximately 4 m from ground level.
109	0082	Low	Loose Bark on south side of main stem.
110	0097	Moderate	Cavity extending up stem.
111	0068	Low	Knot hole facing north-west approximately 7 m from ground level.
112	0094+0096	Low	Two trees (potentially multi stemmed) both with knot hole/ woodpecker holes at approximately 8 m from ground level on sides facing river.

Drawing Reference	Tree Tag Number	Bat Suitability	Description
113	0081	Low	Knot hole facing north-west approximately 9 m from ground level.
114	n/a	Low	Vertical split circa 4 m from ground level. Cavity leads into stem and appears dry. Inaccessible due to dense rhododendron and wet ground. Three knot holes on north-east side approximately 10 to 12 m from ground level.
115	0062	Moderate	Vertical split, approximately 4 m from ground level. Cavity leads into stem and appears dry.
116	0093	Moderate	Knot hole present on stem circa 12 m from ground level, facing west.
117	0098	Moderate	Hazard beam facing east.
118	0177	Moderate	Wound at 6 m from ground level on south side; lifted bark 8 m from ground level on west side; two knotholes on north side at 5 m and 7 m from ground level.
119	0140	Low	Knot hole present on stem circa 9 m from ground level, facing north.
120	0139	Moderate	Tear out with cavity, 2.5 m from ground level, on north side; knothole, at 3 m from ground, on north side; woodpecker hole at 3 m from ground, on west side.
121	0141	Moderate	Multiple features, including: lifted bark; cankers; knot holes; tear outs; rotten limbs; and transverse snaps. From 1 m to 15 m from ground level. Features on all aspects.
122	0138	Moderate	Two tear outs on the north aspect, at 8 and 10 m from ground level.
123	0133	Low	East-facing tear away on southern limb, circa 7 m from ground level.
124	0132	Moderate	North-facing vertical split down stem.
125	0133	Moderate	Knothole at circa 10 m from ground level, south facing.
126	0129	Moderate	East-facing hazard beam on lower limb, circa 5 m from ground level.
127	0126	Moderate	Bat box, east-facing.
128	0124	Low	Snapped limb causing vertical splits, circa 6 m from ground level, east-facing.
129	0123	Moderate	Tear away on underside of limb, west-facing, circa 6 m from ground level.
130	0122	Moderate	Tear away on underside of limb, north-east facing, circa 8 m from ground level.
131	0121	Moderate	Bat box, east-facing, circa 3 m from ground level.
132	0120	Moderate	Bat box, east-facing, circa 4 m from ground level.
133	0119	Moderate	Frost crack, leading into hollow stem, north-facing, circa 1 m from ground level.
134	0117	Moderate	Multiple splits on limbs, possible knot hole, north-facing, circa 10 m from ground level.

Drawing Reference	Tree Tag Number	Bat Suitability	Description
135	0116	Moderate	Bat box, east-facing, circa 4 m from ground level.
136	0107	Moderate	West-facing knotholes, circa 7 m and 8 m from ground level.
137	0108	Moderate	Transverse snap with decay at base, 8 m from ground level, west facing.
138	0106	Moderate	Decay on west side of stem, approximately 6 m from ground level.
139	0136	Moderate	South-facing cavity, 1 m from ground level, with dead wood chamber behind dead wood.
140	n/a	Moderate	Number of features in dead stems, including: desiccation cracks and mechanical damage causing fractures. Unable to access or tag due to adjacent fallen trees.
141	n/a	Low	Transverse snap with cavity extending over 10 cm, approximately 1 m from ground level, facing east.
142	0135	Moderate	Woodpecker holes at 7 m from ground level on east side and 8 m from ground on north side.
143	0134	Moderate	Woodpecker holes, one of which extends upwards, at 3 m from ground level, facing south-east.
144	0130	Moderate	Tear out, facing north, from 1 m to 6 m from ground level, with cavity at top and some 'ram's-horning'/curled wound wood.
145	0129	Moderate	Damaged limb at 5 m from ground level, facing west, with decay cavity.
146	0127	Moderate	Decay cavity, at 2.5 m from ground, facing east, extends upwards.
147	n/a	Moderate	Decay and wounds in main stem, from 3 m to 6 m from ground level, facing north. Unable to access or tag due to steep slope.
148	0125	Moderate	Bat box, labelled as number "8", and transverse snap/hazard beam.
149	0118	Moderate	Dead limb at 4 m from ground level, with tear out and 'ram's-horning'/curled wound wood.
150	0115	Moderate	Two tear outs: one at approximately 6 m from ground level, beyond main fork; and one other from at approximately 8 to 10 m from ground level on north-east limb.
151	0114	Moderate	Hazard beam at 3 m from ground level, facing south-west.
152	0101	Moderate	Large tear out, south-facing, with 'ram's-horning'/curled wound wood and cavity at top.
153	n/a	Moderate	Decay hollow with multiple entrances extending from approximately 2 to 7 m from ground level. Looks to extend up main stem.
154	n/a	Moderate	Conifer with basal cavity on north-eastern aspect and fluting at approximately 1 to 2 m from ground level on north-western aspect.

Drawing Reference	Tree Tag Number	Bat Suitability	Description
155	n/a	Low	Lifted bark at approximately 6 m from ground level on eastern aspect.
156	n/a	Moderate	Fluting on western aspect at approximately 3 to 5 m from ground level. Large basal cavity on south-eastern aspect.
157	n/a	Moderate	Beech with decay hollow at approximately 5 m from ground level extending up main stem on southern aspect.
158	n/a	Moderate	Tear outs with branch collar and decay on multiple aspects between approximately 4 and 10 m from ground level.
159	n/a	Moderate	Oak with multiple features including dead limbs, branch fractures and tear outs on all aspects from approximately 5 to 15 m from ground level.
160	n/a	Moderate	Ash covered in mature ivy creating features across main stem.
161	0053	Moderate	Alder with tear out with decay cavity and two woodpecker holes, all approximately 8 to 10 m from ground level on northern aspect.
162	0303	Moderate	Alder tear out on south-western aspect at approximately 13 m from ground level.
163	0304	Moderate	Dead alder with woodpecker holes at approximately 10 and 12 m from ground level on western aspect.
164	n/a	Moderate	Fluting beneath limbs at approximately 2 and 3 m from ground level on western aspect.
165	0307	Moderate	Fluting under limb at approximately 3 m from ground level on western aspect.
166	0103	Low	Two PRFs, horizontal hazard beam and horizontal flute facing towards road on southern side of tree.
167	0109	Moderate	Sections of hollow stem visible on underside of main stem, approximately two thirds of way up stem.
168	0305	Low	Woodpecker holes at top of dead stem.
169	0145	Moderate	Knot hole at approximately 9 m from ground level facing east towards field. Gaps in bark on underside of limb overhanging field.
170	0165	Low	Lifting bark across height of main stem.
171	0166	Moderate	Two knot holes and a hazard beam.
172	0308	Moderate	Tear out at approximately 6 m from ground level southern aspect of oak.

Table A-3: Bat Observations -Structures

Drawing Reference	Bat Suitability	Description
173	Moderate	Stone, arched bridge. Several large and small gaps in stonework.

Table A-4: Bat Observations - Other

Drawing Reference	Bat Suitability	Description
174	Moderate	Exposed rock face with multiple cracks/fissures. Beside suitable deciduous riparian woodland. Very steep drop. Unable access rock face side of stream on foot.
175	Moderate	Rocky outcrop with flakes and crevices.
176	Low	Crack in expose rock face and two flakes, all of low suitability.
177	Low	Rocky outcrop with deep crevice extending beyond 1 m with chambered flake cavities.
178	Moderate	Horizontal and vertical crevices extending deep upwards moderate summer and hibernation potential.
179	Low	Low suitability flake damp feature.
180	Moderate	Multiple features including horizontal cracks and flaking stone.
181	Moderate	Three vertical and one horizontal crevice of moderate summer and hibernation suitability.
182	Moderate	Rock flake with vertical and horizontal crevice extends deep beyond torch light moderate summer and hibernation suitability.
183	Moderate	Flake with horizontal crevice extending upwards beyond torch light moderate summer and hibernation suitability.
184	Moderate	Rock face with multiple crevices of moderate summer and hibernation suitability.
185	Moderate	Two vertical flaking crevices with moderate summer and hibernation suitability.

Table A-5: Squirrel Observations

Drawing Reference	Observation	Description
1	Red Squirrel Sighting	Visually observed red squirrel.
2	Red Squirrel Sighting	Visually observed red squirrel.
3	Red Squirrel Sighting	Visually observed red squirrel.
4	Red Squirrel Sighting	Observed crossing boulders across river.
5	Squirrel Foraging Signs	Squirrel chewed cones.
6	Squirrel Foraging Signs	Squirrel chewed cones.
7	Red Squirrel Sighting	Visually observed red squirrel.
8	Squirrel Foraging Signs	Squirrel chewed cones.
9	Squirrel Foraging Signs	Squirrel chewed cones.
10	Squirrel Foraging Signs	Squirrel chewed cones.
11	Squirrel Foraging Signs	Squirrel chewed cones.
12	Squirrel Foraging Signs	Squirrel chewed cones.
13	Potential Squirrel Drey	Potential drey, no other field signs within the vicinity.
14	Squirrel Foraging Signs	Squirrel chewed cones.

Drawing Reference	Observation	Description
15	Squirrel Foraging Signs	Squirrel chewed cones throughout denser, central areas of the woodland, but outwith the red squirrel survey area.
16	Squirrel Foraging Signs	Squirrel chewed cones.
17	Potential Squirrel Drey	Tree tag no. 0045.
18	Potential Squirrel Drey	Tag number 0046.
19	Red Squirrel Sighting	Visually observed red squirrel.
20	Squirrel Foraging Signs	Squirrel chewed cones.
21	Squirrel Foraging Signs	Squirrel chewed cones.
22	Squirrel Foraging Signs	Squirrel chewed cones throughout woodland.
23	Squirrel Foraging Signs	Squirrel chewed cones.
24	Squirrel Foraging Signs	Squirrel chewed cones.
25	Squirrel Foraging Signs	Squirrel chewed cones throughout woodland.
26	Squirrel Foraging Signs	Squirrel chewed cones.
27	Squirrel Foraging Signs	Squirrel chewed cones.
28	Squirrel Foraging Signs	Feeding remains scattered throughout woodland.
29	Squirrel Foraging Signs	Scattered feeding signs in area.
30	Squirrel Foraging Signs	Squirrel chewed cones.
31	Squirrel Foraging Signs	Squirrel chewed cones.
32	Squirrel Foraging Signs	Squirrel chewed cones.
33	Squirrel Foraging Signs	Scattered feeding signs nearby.
34	Squirrel Foraging Signs	Squirrel chewed cones.
35	Squirrel Foraging Signs	Scattered throughout woodland.
36	Squirrel Foraging Signs	Squirrel chewed cones.
37	Squirrel Foraging Signs	Squirrel chewed cones.
38	Squirrel Foraging Signs	Scattered feeding signs throughout area.
39	Squirrel Foraging Signs	Scattered feeding signs throughout woodland.
40	Squirrel Foraging Signs	Multiple feeding signs at edge of woodland.
41	Other	Anecdotal from adjacent landowner: Multiple red squirrels are known to frequent the area.
42	Squirrel Foraging Signs	Squirrel chewed cones.
43	Squirrel Foraging Signs	Squirrel chewed cones.
44	Squirrel Foraging Signs	Squirrel chewed cones.
45	Squirrel Foraging Signs	Squirrel chewed cones.
46	Squirrel Foraging Signs	Squirrel chewed cones.
47	Squirrel Foraging Signs	Squirrel chewed cones.
48	Squirrel Foraging Signs	Squirrel chewed cones.
49	Squirrel Foraging Signs	Squirrel chewed cones.

Drawing Reference	Observation	Description
50	Squirrel Foraging Signs	Squirrel chewed cones.
51	Squirrel Foraging Signs	Squirrel chewed cones.
52	Squirrel Foraging Signs	Squirrel chewed cones.
53	Squirrel Foraging Signs	Squirrel chewed cones.
54	Squirrel Foraging Signs	Squirrel chewed cones.
55	Squirrel Foraging Signs	Multiple of foraging signs in area.
56	Squirrel Foraging Signs	Squirrel chewed cones.
57	Squirrel Foraging Signs	Squirrel chewed cones.
58	Squirrel Foraging Signs	Squirrel chewed cones.
59	Squirrel Foraging Signs	Squirrel chewed cones.
60	Squirrel Foraging Signs	Squirrel chewed cones.
61	Squirrel Foraging Signs	Squirrel chewed cones.
62	Squirrel Foraging Signs	Squirrel chewed cones.
63	Squirrel Foraging Signs	Squirrel chewed cones.
64	Squirrel Foraging Signs	Squirrel chewed cones.
65	Squirrel Foraging Signs	Squirrel chewed cones.
66	Squirrel Foraging Signs	Squirrel chewed cones.
67	Squirrel Foraging Signs	Squirrel chewed cones.
68	Squirrel Foraging Signs	Squirrel chewed cones.
69	Squirrel Foraging Signs	Multiple feeding signs throughout area.
70	Squirrel Foraging Signs	Squirrel chewed cones.
71	Red Squirrel Sighting	Visually observed red squirrel.
72	Red Squirrel Sighting	Visually observed red squirrel.
73	Red Squirrel Sighting	Red squirrel, foraging within mixed woodland in riparian corridor.
74	Squirrel Foraging Signs	Sitka cones scattered throughout area, with feeding signs indicative of squirrel.
75	Squirrel Foraging Signs	Squirrel chewed cone.
76	Red Squirrel Sighting	Red squirrel sighting.
77	Squirrel Foraging Signs	Squirrel chewed cone.
78	Squirrel Foraging Signs	Chewed sitka cones likely squirrel throughout section of plantation.
79	Squirrel Foraging Signs	Squirrel chewed cones.
80	Squirrel Foraging Signs	Squirrel chewed cones.
81	Squirrel Foraging Signs	Squirrel chewed cone.
82	Squirrel Foraging Signs	Squirrel chewed cones.
83	Squirrel Foraging Signs	Squirrel chewed cones.
84	Squirrel Foraging Signs	Squirrel chewed cones.
85	Squirrel Foraging Signs	Squirrel chewed cones.

Drawing Reference	Observation	Description
86	Squirrel Foraging Signs	Squirrel chewed cones.
87	Squirrel Foraging Signs	Squirrel chewed cones.
88	Squirrel Foraging Signs	Squirrel chewed cones.
89	Squirrel Foraging Signs	Squirrel chewed cones.
90	Red Squirrel Sighting	Live red squirrels observed.
91	Squirrel Foraging Signs	Squirrel chewed cones.
92	Potential Squirrel Drey	Potential squirrel drey observed in tree.
93	Potential Squirrel Drey	Potential squirrel drey observed high in tree.
94	Squirrel Foraging Signs	Squirrel foraging. Chewed cones.
95	Squirrel Foraging Signs	Squirrel chewed pinecones - feeding station.
96	Squirrel Foraging Signs	Squirrel chewed cone.
97	Squirrel Foraging Signs	Partially eaten cones - feeding station.
98	Squirrel Foraging Signs	Squirrel chewed cone.
99	Squirrel Foraging Signs	Squirrel chewed cones.
100	Squirrel Foraging Signs	Squirrel feeding station.
101	Squirrel Foraging Signs	Chewed squirrel cones throughout woodland.
102	Red Squirrel Sighting	Red squirrel sighted.
103	Red Squirrel Sighting	Red squirrel sighted.
104	Squirrel Foraging Signs	Squirrel chewed cones.
105	Red Squirrel Sighting	Red squirrel sighted on the ground.
106	Red Squirrel Sighting	Red Squirrel spotted crossing road whilst driving.
107	Red Squirrel Sighting	Red squirrel sighting.
108	Red Squirrel Sighting	Red squirrel sighted.
109	Red Squirrel Sighting	Red squirrel sighted.
110	Squirrel Foraging Signs	Squirrel chewed cones.
111	Squirrel Foraging Signs	Squirrel feeding signs, chewed cones.
112	Red Squirrel Sighting	Three red squirrels sighted.
113	Red Squirrel Sighting	Two red squirrels sighted in woodland.

Table A-6: Pine Marten Observations

Drawing Reference	Observation	Description
1	Potential Scat	Potential pine marten scat near water's edge, close to bridge.
2	Potential Scat	Potential pine marten scat on forestry track - bones and fur present within.
3	Potential Den Site	Potential den locations around and within rockface.

Drawing Reference	Observation	Description
4	Potential Den Site	Potential den site under fallen trees.
5	Potential Den Site	Potential den location.
6	Potential Den Site	Potential den site under fallen trees.
7	Potential Den Site	Large area of wind throw in coniferous woodland, potentially suitable denning area.
8	Potential Den Site	Dense windthrow, potential den habitat, no field signs.
9	Potential Den Site	Fallen trees on slope, potential den sites.
10	Potential Den Site	Potential den.
11	Potential Den Site	Potential den sites.
12	Potential Den Site	Potential den. Potential scat found within entrance.
13	Potential Feeding Remains	Mammalian predator evidence, potentially attributed to pine marten.
14	Potential Den Site	Large and tall craggy rock outcrops present, potentially suitable den habitat, too steep to safely inspect on foot.
15	Potential Den Site	Very large and steep rock face with potential sheltered den areas.
16	Potential Den Site	Potential den location.
17	Potential Den Site	Old, corrugated wood/storage shed with multiple elevated potential denning areas.
18	Potential Den Site	Large rocky outcrop with multiple elevated potential denning cavities.
19	Potential Den Site	Large rocky outcrop with elevated and sheltered crevice with potential scat near crevice entrance. Second entrance looks to extend to same chamber. Scat inaccessible for collection.
20	Potential Den Site	Deep, sheltered, but not elevated, crevice at base of rocky outcrop. Potentially suitable denning area.
21	Potential Den Site	Potential den opportunity within tree.
22	Potential Den Site	Potential den sites in felled trees.
23	Potential Den Site	Potential den site.
24	Potential Den Site	Inaccessible on foot however various large rocky outcrops within mature coniferous woodland.
25	Potential Den Site	Inaccessible on foot however various large rocky outcrops within mature coniferous woodland.
26	Potential Den Site	Potential den area within large, sheltered crag in boulder. Extends into boulder. No field signs.
27	Potential Den Site	Potential den location.
28	Potential Den Site	Rocky outcrops and overhanging trees along riverbank creating potential den locations.
29	Potential Den Site	Potential den site.
30	Potential Scat	Potential scat on rock. No scent. Not twisted. Relatively wide.
31	Potential Den Site	Large craggy rocky outcrops. Inaccessible by foot. Potentially suitable denning sites.
32	Potential Den Site	Large craggy outcrops visible with potential den opportunities. Inaccessible due to live forestry operations.

Drawing Reference	Observation	Description
33	Potential Den Site	Potential den location.
34	Potential Den Site	Potential den location.
35	Potential Den Site	Potential den location.
36	Potential Scat	Potential pine marten scat on track.
37	Potential Den Site	Boulder pile suitable for denning pine marten. No field signs.
38	Potential Scat	Potential pine marten scat.
39	Potential Scat	Mustelid scat, scent similar to pine marten scat.
40	Potential Scat	Scat with no scent, of a similar size and shape to pine marten.
41	Potential Den Site	Rocky outcrop suitable for denning pine marten with mouse field signs within.
42	Potential Den Site	Rock crevice suitable for denning pine marten.
43	Potential Scat	Potential scat on prominent, large mushroom in woodland.
44	Potential Den Site	Private sheds and outbuildings with potential access for pine marten. Suitable potential pine marten rest areas.
45	Potential Den Site	Metal storage shipping container with dry, sheltered crevice under raised base.
46	Potential Den Site	Large knot hole cavity in tree, large enough for pine marten access. May extend to larger cavity within.
47	Potential Den Site	Sheltered crevice under fallen tree root plate.
48	Potential Scat	Potential pine marten scat.
49	Potential Scat	Two potential pine marten scats on moss hummock.
50	Potential Den Site	Pine marten box on tree without lid.
51	Potential Den Site	Two entrance burrow. No field signs, however, of size suitable for use by pine marten.
52	Potential Den Site	Hollow main stem of tree suitable for denning. No field signs.
53	Potential Scat	Potential pine marten scat.
54	Potential Den Site	Mammal burrow with two visible entrances in steep mossy embankment with potential to support resting pine marten.
55	Potential Den Site	Sheltered crevice under rocky outcrop with two entrances. Upper entrance appears to show signs of current use by unidentified mammals. No definitive pine marten field signs. Potential pine marten resting area.
56	Potential Den Site	Deep, sheltered area under large boulder pile. No definitive pine marten field signs. Potential pine marten resting site.
57	Potential Den Site	Stables and shed with pine marten resting site potential.
58	Potential Den Site	Shed with sheltered gap underneath.
59	Potential Den Site	Silver birch with hollow stem, potential pine marten resting site.
60	Potential Den Site	Large, hollow, mature ash. Potential pine marten resting site.
61	Potential Scat	Potential pine marten scat.
62	Potential Scat	Potential pine marten scat.
63	Potential Scat	Potential pine marten scat.

Drawing Reference	Observation	Description
64	Potential Scat	Potential pine marten scat.
65	Potential Scat	Potential pine marten scat.
66	Potential Scat	Potential pine marten scat on access track.
67	Potential Scat	Two potential pine marten scats on access track.
68	Potential Den Site	Boulder piles / small cave and potential pine marten scat.
69	Potential Den Site	Rocky outcrop / slabs with gaps and evidence of mammal activity. However, small mammal droppings in one of the entrances indicating lack of larger mammal predators, such as pine marten.
70	Potential Scat	Potential pine marten scat.
71	Potential Scat	Potential pine marten scat.
72	Potential Scat	Potential pine marten scat.
73	Potential Scat	Potential pine marten scat.
74	Potential Scat	Potential pine marten scat on mossy mound at edge of woodland.
75	Potential Scat	Potential pine marten scat.
76	Potential Scat	Potential pine marten scat.
77	Potential Scat	Potential pine marten scat.
78	Potential Scat	Potential pine marten scat.
79	Potential Scat	Potential pine marten scat.
80	Potential Scat	Potential pine marten scat.
81	Potential Scat	Potential pine marten scat.
82	Potential Scat	Potential pine marten scat.

Table A-7: Otter Observations

Drawing Reference	Observation	Description
1	Potential Resting Site	Potential disused otter holt.
2	Spraint	Fresh spraint located on prominent rock on the embankment of the river.
3	Confirmed Resting Site	Active holt. Several otter spraints within entrance of holt. Well used slide at holt entrance running down towards the watercourse. Internal cavity has two chamber entrances that appeared to go deep within. Signs of recent movement on sandbank, however, no clear prints.
4	Spraint	Old dried out otter spraint located on prominent rock in the middle of the watercourse. Approximately 15 m downstream from the holt.
5	Spraint	Multiple spraints, 1 fresh, 1 dried intact, 3+ dried fragmented
6	Spraint	Fresh spraint in large boulder in river, beside analysing mucus/jelly
7	Spraint	Fresh spraint on boulder in river

Drawing Reference	Observation	Description
8	Spraint	Partial fresh otter spraint, majority has been washed away by recent rain fall. Located on prominent rock within the watercourse.
9	Potential Resting Site	Multiple potential rest area opportunities under tree roots and stone walls in both watercourse embankments. However, footpaths on both sides and evidence of dog walking may reduce suitability and usage.
10	Spraint	Fresh spraint on rock at edge of river.
11	Potential Resting Site	Potential resting site locations.
12	Confirmed Resting Site	Hover within boulder formation. Fresh otter spraint at rear.

Table A-8: INNS Observations

Drawing Reference	Species	Single Species / Mixed	Approximate Area / Additional Description
1	American skunk-cabbage	Single	2x2 m
2	Rhododendron	Mixed	1x1 m
3	Rhododendron	Single	1x1 m
4	Rhododendron	Mixed	20x60 m
5	Rhododendron	Single	30x20 m
6	Japanese knotweed	Single	20x5 m
7	Japanese knotweed	Single	20x5 m
8	Rhododendron	Mixed	20x20 m
9	Japanese knotweed	Single	10x20 m
10	Japanese knotweed	Single	5x10 m, Located on sand embankment in an isolated pocket.
11	Japanese knotweed	Single	5x15 m
12	Japanese knotweed	Mixed	3x2 m on south embankment; 20x3 m on north embankment. Small stands dotted along within 1m of the watercourse.
13	Rhododendron	Single	4x4 m, located on embankment of dried out watercourse, on the adjacent embankment from a forest track.
14	Rhododendron	Mixed	5x2 m
15	Rhododendron	Single	1x1 m
16	Rhododendron	Mixed	Scattered throughout woodland.
17	Butterfly-bush	Single	8 m ²
18	Rhododendron	Mixed	Sporadic along watercourse to bridge.
19	Butterfly-bush	Mixed	Scattered along forestry track.
20	Rhododendron	Mixed	Sporadic along road edge.

Drawing Reference	Species	Single Species / Mixed	Approximate Area / Additional Description
21	Rhododendron	Mixed	Small instances scattered throughout area to 250 m. Observed on eastern side of loch long.
22	Indian balsam	Mixed	Small stands located along river embankment, intermittently up and downstream.
23	Field horsetail	Mixed	50 m ² . Observed on eastern side of loch long.
24	Japanese knotweed	Mixed	Sporadic along both banks of river.
25	Japanese knotweed	Single	
26	Rhododendron	Mixed	Along path between road and river.
27	American skunk-cabbage	Single	2 m ²
28	American skunk-cabbage	Single	Two stands.
29	Rhododendron	Mixed	5x5 m
30	Rhododendron	Single	2x2 m
31	Rhododendron	Single	5x5 m
32	Butterfly-bush	Single	2x2 m, single plant stand.
33	Rhododendron	Single	10x5 m, large group at edge of field beside private property gardens.
34	Butterfly-bush	Single	Two individual stands.
35	Rhododendron	Single	6x20 m
36	Rhododendron	Mixed	30x40 m, slope next to fast flowing water.
37	Rhododendron	Single	3x1 m, other small stands nearby.
38	Rhododendron	Mixed	10x10 m. Multiple large stands.
39	Rhododendron	Single	5x5 m
40	Rhododendron	Single	5x10 m
41	Rhododendron	Single	1x1 m
42	Rhododendron	Single	10x5 m
43	Rhododendron	Mixed	10 m ²
44	Rhododendron	Mixed	10x15 m
45	Rhododendron	Mixed	20 m ² either side of Vodafone track.
46	Rhododendron	Mixed	Small, immature instances scattered throughout.
47	Japanese knotweed	Single	8x2 m
48	Japanese knotweed	Single	1x1 m
49	Rhododendron	Mixed	5x1 m
50	Rhododendron	Mixed	10x3 m
51	Rhododendron	Mixed	10x20 m
52	Rhododendron	Mixed	5x5 m
53	Rhododendron	Mixed	10x3 m

Drawing Reference	Species	Single Species / Mixed	Approximate Area / Additional Description
54	Rhododendron	Mixed	10x5 m
55	Rhododendron	Single	10x4 m
56	Rhododendron	Mixed	Scattered throughout woodland.
57	Rhododendron	Mixed	10x30 m
58	Rhododendron	Mixed	Scattered large stands along narrow clearing.
59	Rhododendron	Single	10x6 m
60	Rhododendron	Mixed	Scattered throughout woodland clearing and edge.
61	Rhododendron	Mixed	10x4 m, multiple stands in area.
62	Rhododendron	Mixed	1x5 m
63	Rhododendron	Single	1x5 m, stands scattered around area.
64	Rhododendron	Mixed	10x3 m
65	Rhododendron	Mixed	10x6 m
66	Rhododendron	Mixed	10x10 m, multiple stands.
67	Rhododendron	Single	10x10 m. On boundary of venison shop grounds.
68	Rhododendron	Mixed	Scattered throughout woodland edge.
69	Rhododendron	Mixed	3x6 m, small stands scattered throughout area.
70	Rhododendron	Mixed	10x5 m, large stands in area.
71	Rhododendron	Mixed	10x4 m, scattered stands throughout woodland area.
72	Rhododendron	Mixed	10x5 m, scattered large stands in area.
73	Rhododendron	Mixed	Scattered throughout woodland.
74	Rhododendron	Mixed	10x6 m, multiple stands scattered in area.
75	Japanese knotweed	Mixed	Scattered along field margin.
76	Rhododendron	Single	5 m ²
77	Rhododendron	Mixed	Scattered throughout grounds.
78	Japanese knotweed	Single	5x10 m
79	Rhododendron	Mixed	5x8 m
80	Rhododendron	Single	5x5 m
81	Rhododendron	Mixed	30x10 m
82	Rhododendron	Mixed	10x2 m
83	Rhododendron	Single	5x5 m
84	Rhododendron	Mixed	3x5 m
85	Rhododendron	Mixed	10x6 m, multiple stands along track road.
86	Rhododendron	Single	5x5 m
87	Rhododendron	Mixed	Intermittent along length of footpath.
88	Rhododendron	Single	10x5 m, large stand within area.

Drawing Reference	Species	Single Species / Mixed	Approximate Area / Additional Description
89	Japanese knotweed	Mixed	10x30 m
90	Rhododendron	Mixed	Scattered throughout woodland.
91	American skunk-cabbage	Mixed	4x30 m
92	Rhododendron	Mixed	10x5 m, present in area in large, tall stands off footpath.
93	Rhododendron	Mixed	10x2 m
94	Rhododendron	Single	10x1 m, multiple small stands scattered across hill in area.
95	Rhododendron	Mixed	10x8 m
96	Rhododendron	Mixed	5x5 m, scattered along side of footpath most of length of river.
97	Rhododendron	Mixed	5x5 m
98	Rhododendron	Mixed	5x10 m
99	Rhododendron	Mixed	Scattered throughout southern end of woodland.
100	Rhododendron	Mixed	30x30 m
101	Rhododendron	Mixed	Scattered across hillside, beyond visible range.
102	Rhododendron	Mixed	Scattered along watercourse.
103	Rhododendron	Mixed	Scattered along burn and embankment.
104	Rhododendron	Mixed	2x5 m
105	Rhododendron	Mixed	10x10 m, large spread across area, limiting access.
106	Japanese knotweed	Mixed	10x5 m
107	Rhododendron	Mixed	Scattered along access track and northern bank.
108	Rhododendron	Mixed	Scattered along woodland clearing.
109	Rhododendron	Mixed	Scattered along small woodland clearing.
110	Rhododendron	Mixed	Scattered along length of wayleave north of track.
111	Rhododendron	Mixed	Scattered across upper woodland.
112	Rhododendron	Mixed	Scattered throughout woodland.
113	Rhododendron	Single	10x10 m
114	Rhododendron	Mixed	Scattered along burn.
115	Rhododendron	Mixed	Large areas scattered throughout woodland.
116	Rhododendron	Single	1x1 m, scattered stands in area.
117	Rhododendron	Mixed	5x1 m, multiple stands in area.
118	Rhododendron	Mixed	5x4 m
119	Rhododendron	Mixed	10x5 m, multiple stands in area.
120	Japanese knotweed	Mixed	8x2 m, very young plants.
121	Japanese knotweed	Mixed	5x2 m

Drawing Reference	Species	Single Species / Mixed	Approximate Area / Additional Description
122	Japanese knotweed	Mixed	3x2 m, very young plants.
123	Japanese knotweed	Mixed	Single stand.
124	Rhododendron	Mixed	Scattered throughout woodland.
125	Rhododendron	Mixed	Scattered along steep banks of water course.
126	Butterfly-bush	Mixed	6x3 m
127	Rhododendron	Mixed	Scattered along woodland edge.
128	Rhododendron	Single	One plant.
129	Rhododendron	Mixed	20x10 m
130	Indian balsam	Mixed	3x20 m
130	Japanese knotweed	Mixed	3x20 m
131	Japanese knotweed	Mixed	30x30 m
132	Japanese knotweed	Mixed	30x10 m
133	Indian balsam	Mixed	Stand of Indian balsam present.
134	Butterfly-bush	Mixed	10x20 m, multiple patches along east side of quarry.
135	Rhododendron	Single	6x6 m
136	Rhododendron	Single	3x5 m
137	Butterfly-bush	Mixed	Extensive along track side.
138	Japanese knotweed	Single	5x2 m
139	Japanese knotweed	Single	Single stand.
140	Japanese knotweed	Single	1x1 m and 2x3 m
141	Japanese knotweed	Single	4x2 m
142	Japanese knotweed	Mixed	3x20 m
143	Rhododendron	Mixed	5x15 m
144	Rhododendron	Mixed	30x100 m
145	Rhododendron	Mixed	Either side of path, mixed throughout woodland.
146	Japanese knotweed	Mixed	Scattered throughout southern section of woodland.
147	Japanese knotweed	Mixed	Large dense areas along riparian river edges.