TECHNICAL APPENDIX 8.2: PROTECTED SPECIES REPORT

HARESTANES WEST WINDFARM

Ae, Dumfries & Galloway

21.10.2024 VERSION 4

PREFACE

This document is a report for ecological services to be carried out by the company.

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PROJECT INFORMATION

1.1 INTRODUCTION

This Technical Appendix has been prepared to accompany **Chapter 8: Ecology and Biodiversity** in of the Harestanes West Windfarm (hereafter, the 'proposed Development') Environmental Impact Assessment (EIA) Report. The report was instructed by RSK Biocensus on behalf of ScottishPower Renewables to advise on potential ecological constraints to the proposals, as well as to advise on compliance with relevant legislation and planning policy.

It presents the results of the protected species surveys undertaken to establish the baseline ecological conditions to inform the design and assessment of the proposed Development and should be read with reference to the following figures, presented in **Volume 3** of the EIA Report:

- Figure 8.1: Ecological Designated Sites; and
- Figure 8.6: Protected Species.

Ecological work for the Site included:

- Desk study; and
- Protected species survey.

1.2 SITE LOCATION AND DESCRIPTION

The Site (the area within the Application Boundary) measures 1,242 ha and consists of both the main turbine development area and access track. It is located 13 km north of Dumfries in Dumfries & Galloway (central grid reference NX 95993 91814 (Figure 1)). The area around the Site is predominantly plantation woodland, with areas of farmland and heathland in the wider area.

1.3 RELEVANT LEGAL FRAMEWORK AND POLICY

This assessment has taken into account relevant legislation, guidance and policy including:

- EC Habitats (Directive 92/43/EEC);
- The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended);
- The Conservation of Habitats and Species Regulations 2017;
- Wildlife and Countryside Act 1981 (as amended);
- Nature Conservation Scotland Act 2004 (as amended);
- The Wildlife and Natural Environment (Scotland) Act 2011;
- Planning for Natural Heritage: Planning Advice Note 60 (Scottish Government, 2000);
- Dumfries and Galloway Local Biodiversity Action Plan (Dumfries & Galloway Council, 2009);
- Scottish Biodiversity List (SBL) (NatureScot, 2020);
- The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017;

- National Planning Framework 4 (Scottish Government, 2023); and
- Developing with Nature guidance (NatureScot, 2023).

Further details where relevant are provided in Appendix 1.

2 METHODS

2.1 DESK STUDY

A desk study was undertaken to determine the presence of any records of protected and notable species within a 2 km radius of 'Site' (as defined by the Application Boundary (Appendix 2, Figure 1)) that were noted in the last 10 years. Data for the desk study was sourced by RSK in September 2024 and summarised in Appendix 5 of this report. Data sources are listed below in Table 1.

Table 1: Data sources.

Information Obtained	Available From
Protected and noteworthy species-records	South West Scotland Environmental Information Centre
Designated site locations and citations	NatureScot
Designated site locations and citations	Joint Nature Conservation Committee (JNCC) website
Designated site locations and citations	South West Scotland Environmental Information Centre
Designations and legal protection of noteworthy species	Joint Nature Conservation Committee (JNCC) website
Areas / Habitats of Strategic Significance	Dumfries and Galloway Local Biodiversity Action Plan https://www.dumgal.gov.uk/media/19945/Local-Biodiversity-Action-Plan/pdf/Local_Biodiversity_Action_Plan.pdf?m=636561914667330000

2.2 FIELD SURVEY METHODS AND SURVEY AREA

Survey details for the protected species surveys are outlined in Table 2. Ten figure grid references were taken to record notable site features as target notes, using a handheld GPS device.

2.2.1 PROTECTED SPECIES WALKOVER

A walkover survey for evidence of protected species was undertaken, focusing on species that are likely to be present within the Application Boundary. Walkover field surveys identified the presence of, and the suitability of habitats to support, protected and priority herptile and mammal species within the Site and up to 50 m beyond the Application Boundary, or 200 m for otter where access was possible. Freshwater Pearl Mussel *Margaritifera margaritifera* (FWPM) habitat suitability surveys were undertaken within the Application Boundary, with Spot checks being undertaken up to 250 m downstream of the crossing point and 50 m upstream. The area identified for habitat enhancement to the east (as shown on Figure 1) was not included in the surveys as this area is for enhancement only and did not require to be assessed as part of the proposed Development.

Sightings and field evidence was recorded via numbered Target Notes (TN).

2.2.1.1 BADGER

A walkover survey for evidence of badger *Meles meles* activity was undertaken and any evidence of badger activity (in the form of bedding, scratch marks, paths, prints, guard hairs, latrines, dung and signs of foraging) was recorded (Harris *et al.* 1989 & Scottish Badgers 2018).

Badger surveys can be undertaken at any time of year when vegetation growth is not high. Badgers are more active and mark their territories in the spring, but they are still active above ground throughout the year. Badgers can have territories that are over 2 km^2; therefore, seasonal foraging in an area that is within a territory may not be recorded.

2.2.1.2 OTTER & WATER VOLE

Watercourses flowing through the Site were assessed for their suitability to support otter *Lutra lutra.* Any field signs of otter presence (in the form of spraints, slides, holts, couches, prints, and resting up sites) were recorded (Kruuk, 2006 & NaturueScot 2020).

Suitable areas for water vole *Arvicola amphibius* were noted, including any strips of marginal vegetation at the toe of a watercourse's bank and tussocks or marginal vegetation away from the bank. Any field signs of water vole presence (a combination of droppings, feeding remains, burrows and prints) were recorded (Cresswell *et al.,* 2012).

2.2.1.3 RED SQUIRREL & PINE MARTEN

Signs of red squirrel *Sciurus vulgaris* and pine marten *Martes martes* were noted during the walkover survey, such as feeding signs, scats and dens (Cresswell *et al.* 2012). Note was also made of habitats with potential to support these species.

2.2.1.4 OTHER FAUNA

The presence, or potential presence, of any other species of note was recorded (e.g. Scottish Biodiversity List (SBL) species, Local Biodiversity Action Plan species, reptiles, amphibians and invertebrates).

2.2.1.5 FRESHWATER PEARL MUSSEL HABITAT SUITABILITY SURVEY

Watercourses within the Site were assessed for their suitability to support freshwater pearl mussels. Factors such as water depth and speed, shading, substrate type and the likelihood of fish being present on the watercourse were taken into consideration. Where there was suitability for FWPM, spot checks by use of bathyscopes were carried out for live mussels or shell remains where there was suitable habitat present (Young *et al.,* 2003). Typically, FWPM surveys require a licensed ecologist to be present during survey work. However, NatureScot confirmed that there are no known records within the Water of Ae or wider river system. Therefore, it was deemed that survey by unlicensed ecologists that are experienced in FWPM survey (having worked extensively as assistants on other FWPM survey) would be appropriate to confirm the absence of the species. Should any FWPM have been identified during the survey then the ecologists would have immediately stopped until a licensed FWPM ecologist could be present.

2.3 SURVEY INFORMATION

All survey work and reporting was overseen by Beccy Osborn, Principal Ecologist and Company Director. She is an experienced Ecologist and a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) with over 20 years' ecological consultancy experience. She holds various protected species licences including a NatureScot bat licence and badger development licence.

The site surveys were undertaken by Murray Gauld (Assistant Senior Ecologist), Douglas Kerr (Ecologist), Rory Baillie (Ecologist), Scott Allinson (Ecologist), John Heaney (Ecologist) and Abbie Cato (Assistant Ecologist).

Table 2: Survey details.

Date	Surveyor	Survey Type	Start / Finish	Weather
24.06.2023 – 26.06.2023	Murray Gauld Rory Baillie Abbie Cato	Extended Phase 1 Survey	12:00 – 17:00 09:00 – 17:30 09:00 – 15:00	Temp: 18; WS: 0; CC: 1; Rain: 0 Temp: 20; WS: 0-1; CC: 1-3; Rain: 0 Temp: 19; WS: 0-1; CC: 0-2; Rain: 0
16.08.2023 – 18.06.2023	Murray Gauld Rory Baillie Douglas Kerr	Extended Phase 1 survey and FWPM habitat suitability assessment	12:30 – 17:00 09:00 – 17:30 09:00 – 14:00	Temp: 19, WS: 1-2, CC: 6. Rain: 0 Temp: 17, WS: 1-2, CC: 4-8. Rain: 0 Temp: 15, WS: 0-1, CC: 4. Rain: 0
05.12.2023 – 06.12.2023	Scott Allinson Rory Baillie Murray Gauld	Protected species survey	09:30 – 15:45 9:00 – 16:00	Temp: 5-6, WS: 1-2, CC: 7. Rain: 0-1 Temp: 2-4, WS: 1-2, CC: 8. Rain: 0-1
11.12.2023	Scott Allinson John Heany	Protected species survey	09:30 – 15:45	Temp: 5-6, WS: 1, CC: 3-4. Rain: 0
14.12.2023	Scott Allinson John Heany	Protected species survey	09:30 – 15:45	Temp: 5-6, WS: 1, CC: 3-6. Rain: 0-1
15.07.2024 – 17.07.2024	Scott Allinson Rory Baillie Murray Gauld	Protected species survey and FWPM habitat suitability assessment	10:30 – 17:00 09:30 – 16:30 9:00 – 13:00	Temp: 18-21, WS: 2, CC: 2-7. Rain: 0-2 Temp: 19, WS: 2, CC: 3-6. Rain: 0-2 Temp: 19-21, WS: 1, CC: 0-3. Rain: 0
29.07.2024	Murray Gauld Scott Allinson	FWPM Survey	10:00 – 14:00	Temp: 15-17, WS: 0 -1. CC: 3-5. Rain: 0

2.4 SURVEY LIMITATIONS

Large areas of the Site had been severely impacted by windblown trees. These areas were not safe to access and therefore only the edges of these areas were walked, where safe to do so. Dense, young Sitka spruce *Picea sitchensis* plantation woodland also made up a significant proportion of the Site. The density made it difficult to survey in these blocks, so only the edges were walked unless a mammal path or other activity sign was noted and then followed to check for further activity. Further to this, stretches of watercourses that included steep sided gorges with fast flowing water were deemed unsafe to survey.

High water levels in watercourses on the Site shortly before surveying may have washed away evidence of species such as otter using these for commuting and hunting, but resting up sites would still have been recorded.

No survey beyond the Application Boundary was undertaken surrounding the Turbine Area. There was no access agreed outwith Forestry and Land Scotland owned land.

3 RESULTS

3.1 PROTECTED AND NOTABLE SPECIES

This section summarises the results of the protected species survey for the Site. Target notes for the protected species survey can be found in Appendix 3, Table 3. Figures 2a – 2e, Appendix 2 display the approximate location of each target note.

N.B.: Results from bat tree surveys are outlined in **Technical Appendix 8.6: Bat Report – Tree Surveys** in Volume 4 of the EIA Report.

3.1.1 BADGER

Desk Study

Records of badger were obtained from within 2 km of the Site, the latest of which was from 2023. Records have been made up to 100 m from the Site.

Field survey

Badger activity is concentrated to the immediate north of the Site entrance, with signs such as guard hairs, prints and droppings found. No definite setts were discovered, implying that sett building is taking place off-site in adjacent land, with the survey area being used for foraging and commuting purposes only. Badgers are known to be common in the wider area including south of the Site.

No other signs were found across the rest of the Site, including the tracks and main turbine area. Several areas of the turbine area were noted to have suitable habitat for badgers, mainly in the middle and north of the Site. The numerous forest rides and clearings across the plantation do provide commuting routes and foraging opportunities for badger across the Site. However, the generally wet ground limits the suitability for sett building across much of the turbine area and large parts of the track. The extended habitat from the south of the site is primarily field and mixed deciduous woodland, which would provide good habitat and feeding opportunities for badger. Therefore, it is likely that badgers do use the Site and there could be outlying setts present that may not have been accessible due to areas of windblow.

Photo 1: Indirect register of a badger print found in cattle dropping.

Photo 2: lifted section of fence with badger guard hairs found caught in it.

3.1.2 OTTER AND WATER VOLE

Desk Study

Records of both otter and water vole were obtained from within 2 km of the Site, the latest of which was from 2021 and 2002 respectively. Records of otter have been made up to 100 m from the Site.

Field survey

Watercourses with good connectivity to the Water of Ae and further watercourses beyond the Site provide good commuting and hunting suitability for otter. Evidence of otter was found on watercourses throughout the Site, with the majority of signs found on the Water of Ae. Evidence took the form of spraints and resting up sites with spraints found in their vicinity.

It is considered likely that otters will utilise the majority of the watercourses on the Site for commuting and hunting, including those where signs were absent.

The majority of the watercourses within the Site are unsuitable for water vole, with many being steep, fast flowing and travelling through dense plantation woodland. Vole feeding signs were found on the Glenkiln Burn and its tributary, Auchencaigroch Burn, but no other evidence such as latrines or burrows were found so feeding signs may be from other vole species such as field vole.

Photo 3: Showing a northern portion of the Capel Water.

Photo 4: Showing an otter spraint on a rock by one of the burns on the Site.

3.1.3 RED SQUIRREL AND PINE MARTEN

Desk Study

Records of both red squirrel and pine marten were obtained from within 2 km of the Site, the latest of which were from 2022 and 2023 respectively. Records have been obtained up to 100 m from the Site.

Field survey

The Site consists predominantly of Sitka spruce plantation of mixed ages and therefore has the potential to support red squirrels and pine marten, although Sitka does not provide optimal habitat for red squirrels. Both grey squirrels *Sciurus carolinensis* and red squirrels are known to be present in the area so it is unlikely that any evidence other than a sighting would be able to confirm the presence of red squirrel. Chewed cones by a squirrel species were found in an

area of semi-mature plantation along the access track, but no dreys were noted nearby and there were no sightings of squirrels during the survey.

The mix of young and mature plantation, as well as large areas of windblown trees across the site provides suitable habitat for pine marten for both foraging and shelter. It is possible dens could be present in inaccessible areas of windblow. Mustelid scats were noted on tracks throughout the site which are considered to be pine marten. One was taken for DNA analysis and was confirmed as pine marten (see Appendix 6). While no pine martens were seen during the protected species surveys, incidental sightings have been observed by other ecologists working within the turbine area. A pine marten box was also recorded on a tree adjacent to the access track, though there was no evidence of this being in use at the time of survey.

Photo 5: Pine marten box on tree in stand of mature trees.

Photo 6: Likely pine marten scat.

3.1.4 REPTILE AND AMPHIBIANS

Desk Study

Records of slow worm *Anguis fragilis* and viviparous lizard *Zootoca vivipara* were obtained within 100 m of the site, and records of adder *Vipera berus* were obtained with 2 km of the Site.

Field survey

Four amphibian and reptile species were recorded on site, along with potential refugia and suitable habitat. Common lizards were sighted on the north and middle portions of the turbine area along with two shed skins from common lizard being found in the south of the Site. Lizard sightings were also noted along the access track route. The lizard sightings were all found in clearings around and between the blocks of Sitka plantation where suitable rocks and tree stumps are present for basking. A slow worm was sighted in the north of the site along the track running beside the Capel Water. Several suitable refugia for herpetofauna were recorded on site, many being the old drystone walls that are found throughout the Site, along with stone piles with both surface and sub-surface features suitable for herpetofauna.

Palmate newts *Lissotriton helveticus* were recorded in a small pool alongside a track in the middle portion of the site and noted within pond 3 in the south portion of the Site. They are likely to be found throughout the site in areas of suitable habitat and will use and commute through the adjacent terrestrial habitat. A number of ponds have been recorded, with four

present within the turbine area and further artificial ponds created as part of the track drainage systems have the potential to support populations of amphibians and provide suitable habitat for breeding.

Tadpoles of common frog *Rana temporaria* were noted in several standing water bodies on site, both natural and in artificial sustainable urban drainage system (SUDS) ponds.

Photo 7: Shed skin of a common lizard

Photo 8: Sighting of a slow worm

Photo 9: An old drystone wall providing a potential refugia.

Photo 10: Palmate newts seen within one of the ponds in the south of the Site.

3.1.5 FRESHWATER PEARL MUSSEL ASSESSMENT

Desk study

There are no records of FWPM within 2 km of the Site, and NatureScot do not hold any historic records of FWPM being present on the Water of Ae or its tributaries. However, NatureScot also stated that the absence of records should not be taken to mean that this species is absent in the search area.

Field survey

All watercourses within the Site, or immediately adjacent to the Site, were assessed for their suitability to support populations of freshwater pearl mussels. In total, 15 watercourses were assessed, with the smallest burns and ditches disregarded for being unsuitable without a full assessment being undertaken. Descriptions of each of the fifteen assessed watercourses can be found in Table 4, Appendix 4 and shown in Figure 3, Appendix 2.

Of the watercourses assessed, the Water of Ae, Capel Water, Deer Burn, Bran Burn and Poldivan Lake Burn were deemed to provide some areas that would be suitable for FWPM, with the appropriate substrate, water flow and depth required to support the species. Spot checks were carried out on the Deer Burn, Bran Burn, Glenkiln Burn and Poldivan Lake Burn with no mussels identified. The entire section of the Capel Water and a buffer of 250 m downstream was walked using waders and bathyscopes to identify suitable areas and survey for mussels. While some areas, especially along the edges of the banks, and in slow moving pools were suitable for FWPM, none were identified. A survey of the Water of Ae was carried out up to 200 m downstream of the proposed crossing and 50 m upstream. Suitability this far upstream is limited, with little in the way of sand present, but some areas of gravel were noted.

The Garrel Water was not surveyed further for FWPM as the access track does not cross the watercourse and is suitably offset from the track at present.

3.1.6 OTHER FAUNA

Field survey

Brown hare *Lepus europaeus* was noted on site. Brown hare are a quarry species which is protected in the closed season (1 February – 30 September each year) under the Wildlife and Countryside Act 1981 (as amended). Brown hare are listed on the SBL as a priority species for biodiversity conservation in Scotland.

Red fox *Vulpes vulpes* scats were found across the Site, with many found in the centre of the site along the tracks that run through the plantation and clear-felled compartments.

Other notable records noted during the protected species surveys included a wood ant nest.

4 REFERENCES

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

Harris, S., Cresswell, P. & Jefferies, D. (1989) Surveying Badgers. The Mammal Society.

Kruuk, H. 2006. *Otters: ecology, behavior, and conservation*. Oxford University Press, New York.

NatureScot (2020). Standing Advice for planning consultations - Otters. Available at: https://www.nature.scot/doc/standing-advice-planning-consultations-otters.

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

Young MR, Hastie LC & Cooksley SL (2003). *Monitoring the Freshwater Pearl Mussel, Margaritifera margaritifera. Conserving Natura 2000 Rivers Monitoring Series No. 2*, English Nature, Peterborough.

5 APPENDIX 1 – RELEVANT LEGISLATION

EUROPEAN PROTECTED SPECIES

European protected species (EPS) are those that which were protected by the EC Habitats and Species Directive 92/43/EEC. The Conservation (Natural Habitats, &c.) Regulations 1994 translated this European legislation into UK law. EPS includes bats (all species), beaver, otter, wildcat and great crested newt. These Regulations make it an offence to deliberately or recklessly:

- capture, injure or kill an EPS;
- harass a wild animal or group of wild animals of EPS;
- to disturb such an EPS while it is occupying a structure or place it uses for shelter or protection;
- to disturb an EPS while it is rearing or otherwise caring for its young;
- to obstruct access to a breeding site or resting place of an EPS or to otherwise deny an EPS use of a breeding site or resting place;
- to disturb an EPS in a manner that is, or in circumstances which are, likely to significantly affect the local distribution or abundance of the species to which it belongs;
- to disturb an EPS in a manner that is, or in circumstances which are, likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young; and/or
- to disturb such an animal while it is migrating or hibernating.

It is also an offence to:

- damage or destroy a breeding site or resting place of such an animal; and/or
- keep transport, sell or exchange or offer for sale or exchange any wild animal or plant EPS or any part or derivative of one (from 1st May 2007).

In relation to protected species of animal, licences can be issued under Regulation 44 to permit, for specific purposes, certain actions that would otherwise be against the law. NatureScot is responsible for all EPS licensing under the Habitats Regulations (with the exception of some areas of licensing for whales and dolphins).

There is no provision for development licences as such, however, under Regulation 44 (2e) of the Conservation (Natural Habitats, &c.) Regulations 1994 licences may be granted for:

- Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.

However, a licence will not be granted unless, importantly under 44 (3), the appropriate licensing authority is satisfied:

- That there is no satisfactory alternative; and
- That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

WILDLIFE AND COUNTRYSIDE ACT 1981

The Wildlife and Countryside Act 1981 provides protection to species and habitats. The Nature Conservation (Scotland) Act 2004 amends the Wildlife and Countryside Act 1981 in Scotland.

SCHEDULE 5 ANIMALS

Enhanced protection is provided for species listed on Schedule 5, including red squirrel, water vole, pine marten and freshwater pearl mussel. It is an offence to recklessly kill, injure or take animals listed on Schedule 5, with the exception of water vole. Water voles are protected in respect of Section 9(4) only (in Scotland), meaning that water vole habitat is protected, although the animals themselves are not.

It is also an offence to recklessly damage, destroy or obstruct access to any place used for shelter or breeding. Licences are available for development purposes if certain conditions are met. Licences should be applied for from NatureScot.

PROTECTION OF BADGERS ACT 1992

The Protection of Badgers Act (1992) provides full legal protection to badgers. In Scotland, this legislation was amended by the Nature Conservation (Scotland) Act 2004 and more recently by the Wildlife and Natural Environment (Scotland) Act 2011. It is an offence to recklessly take, injure or kill a badger (or knowingly cause or permit such an offence), or destroy or cause disturbance to their setts. This includes underground holes and other places of shelter occasionally used by badgers, such as sheds, concrete pipes or culverts etc. *A sett is defined in the Act as any structure or place which displays signs indicating current use by a badger.* Updated guidance has (September 2014) been provided by NatureScot and can be found on the NatureScot website at: http://www.NatureScot.gov.uk/docs/A1391121.pdf. In addition, badgers are afforded protection from cruel ill treatment. As the definition of 'ill treatment' has not been clearly defined; this is likely to include preventing badgers access to their setts as well as causing the loss of significant foraging resources within a badger territory. Licences are available for the disturbance or destruction of setts. NatureScot must be consulted prior to any works which could cause disturbance to badgers.

APPENDIX 2 – FIGURES

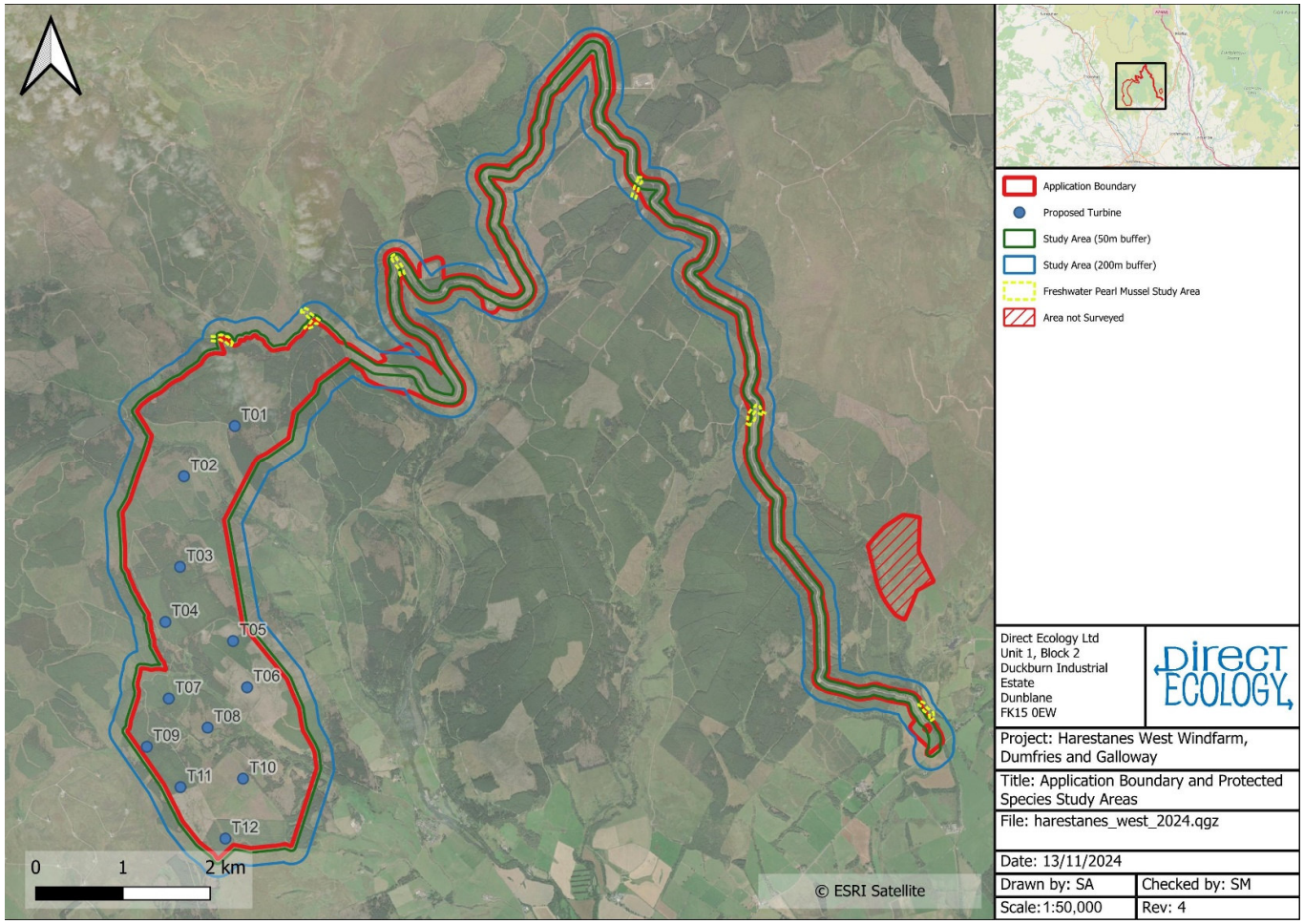


Figure 1: Proposed turbine locations and study areas

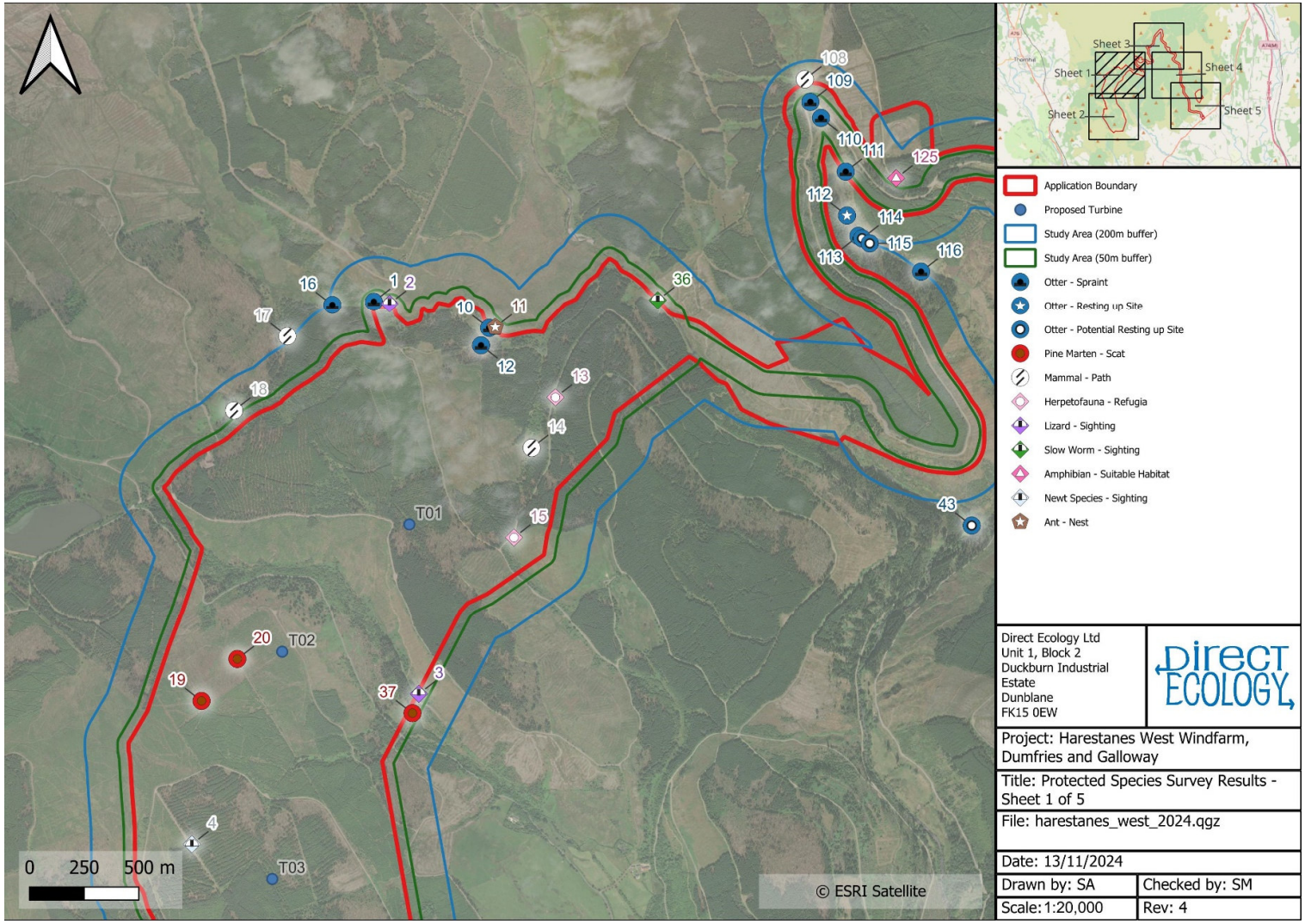


Figure 2a: Protected species results (1 of 5)

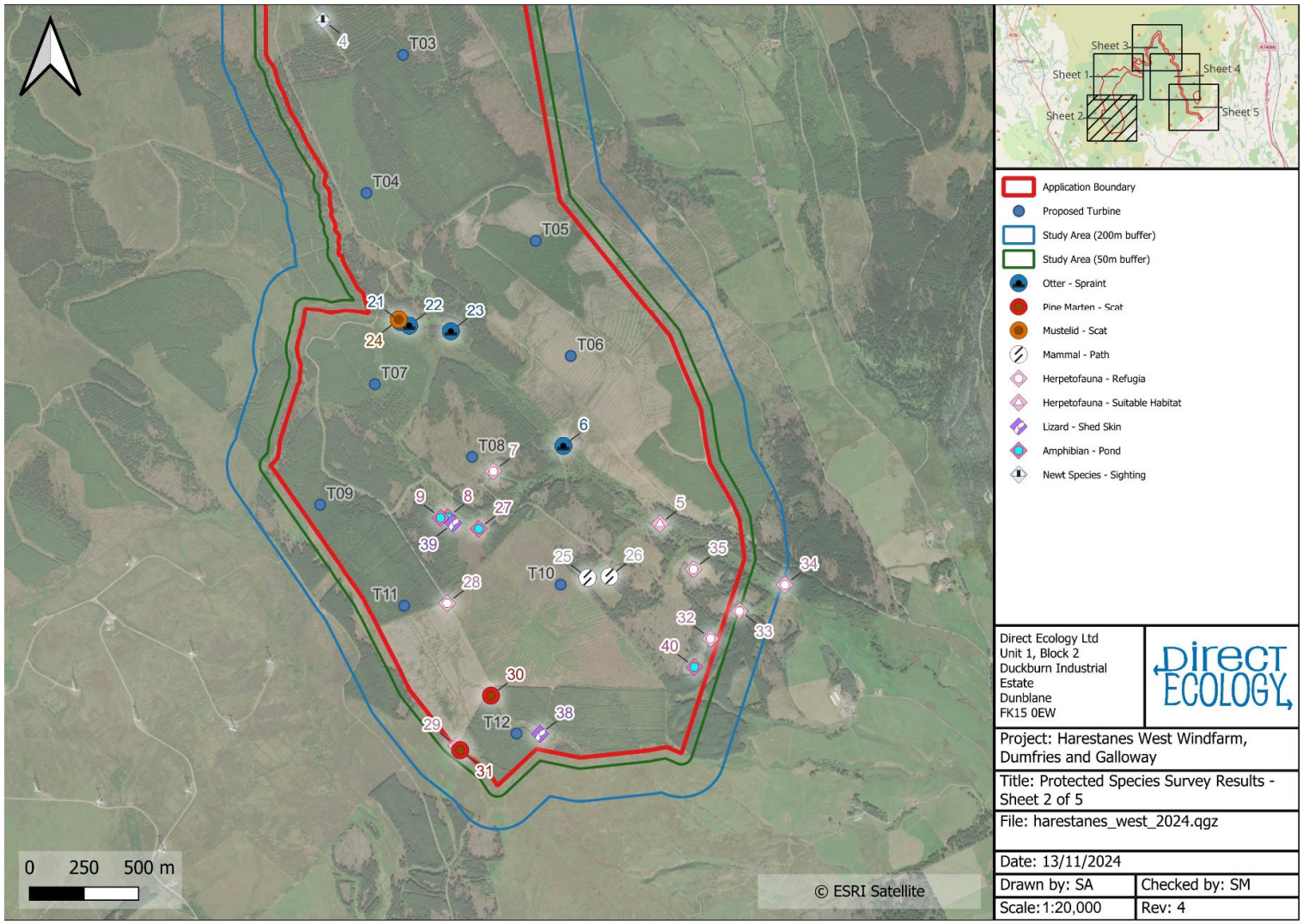


Figure 2b: Protected species results (2 of 5)

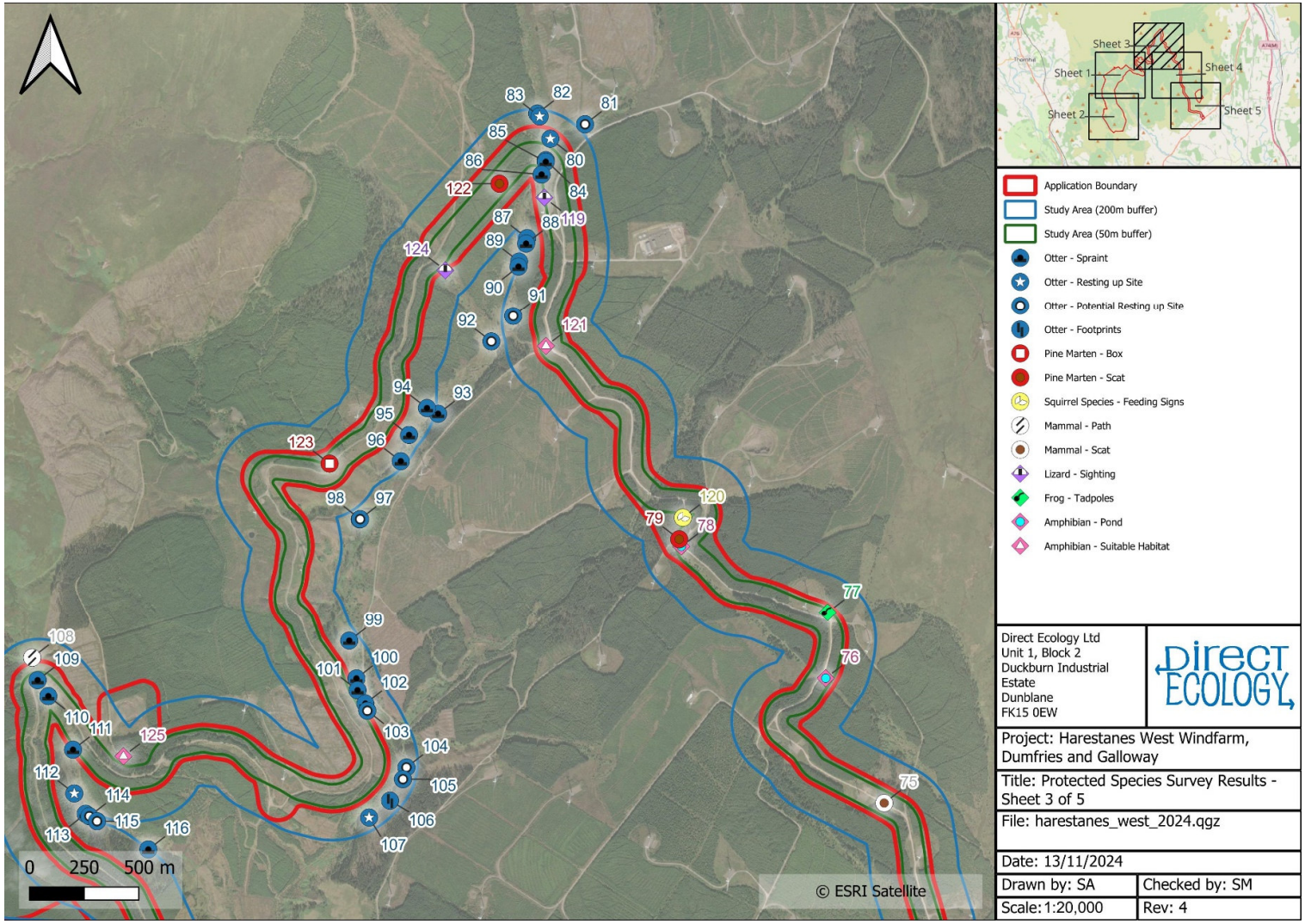


Figure 2c: Protected species results (3 of 5)

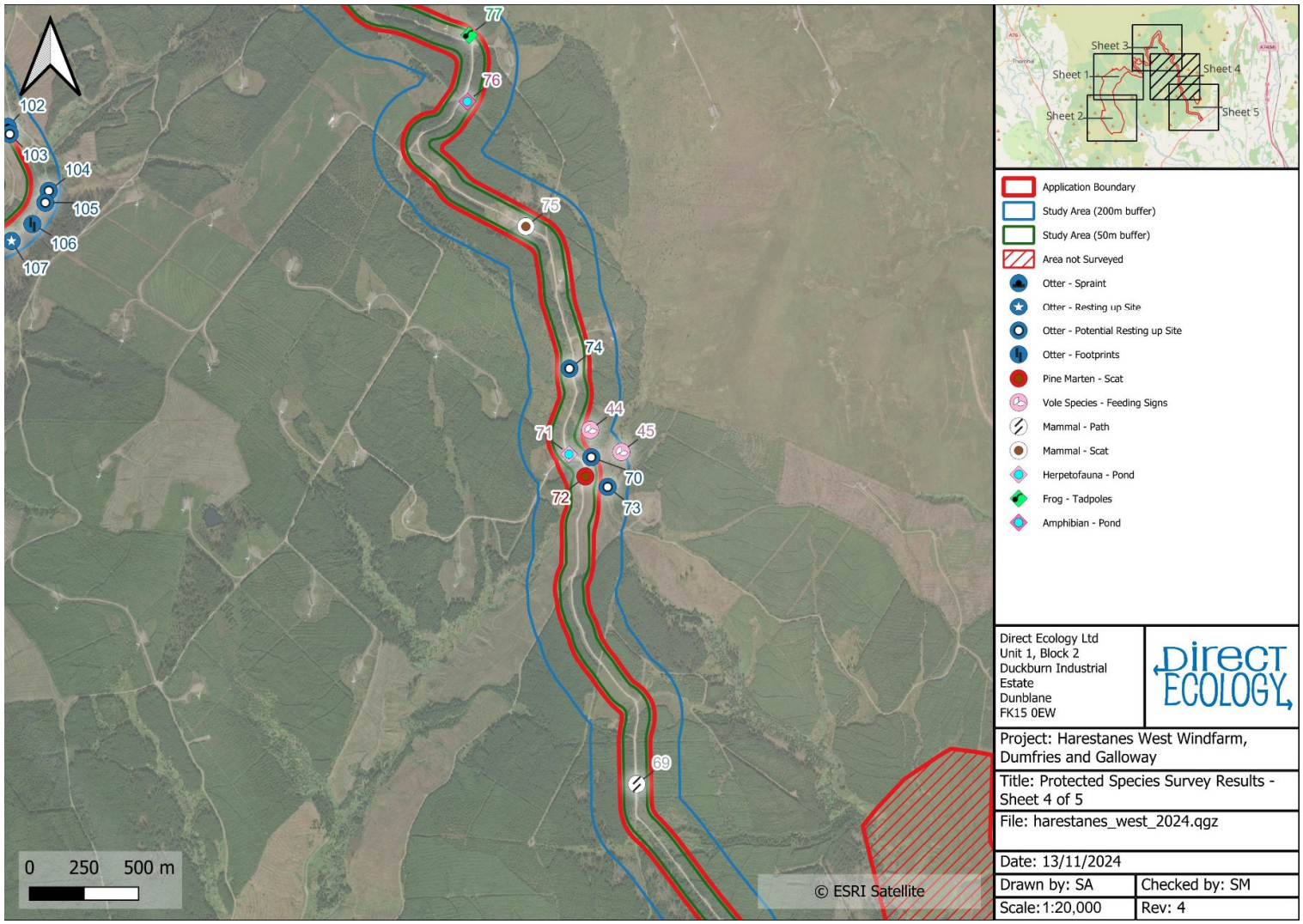


Figure 2d: Protected species results (4 of 5)

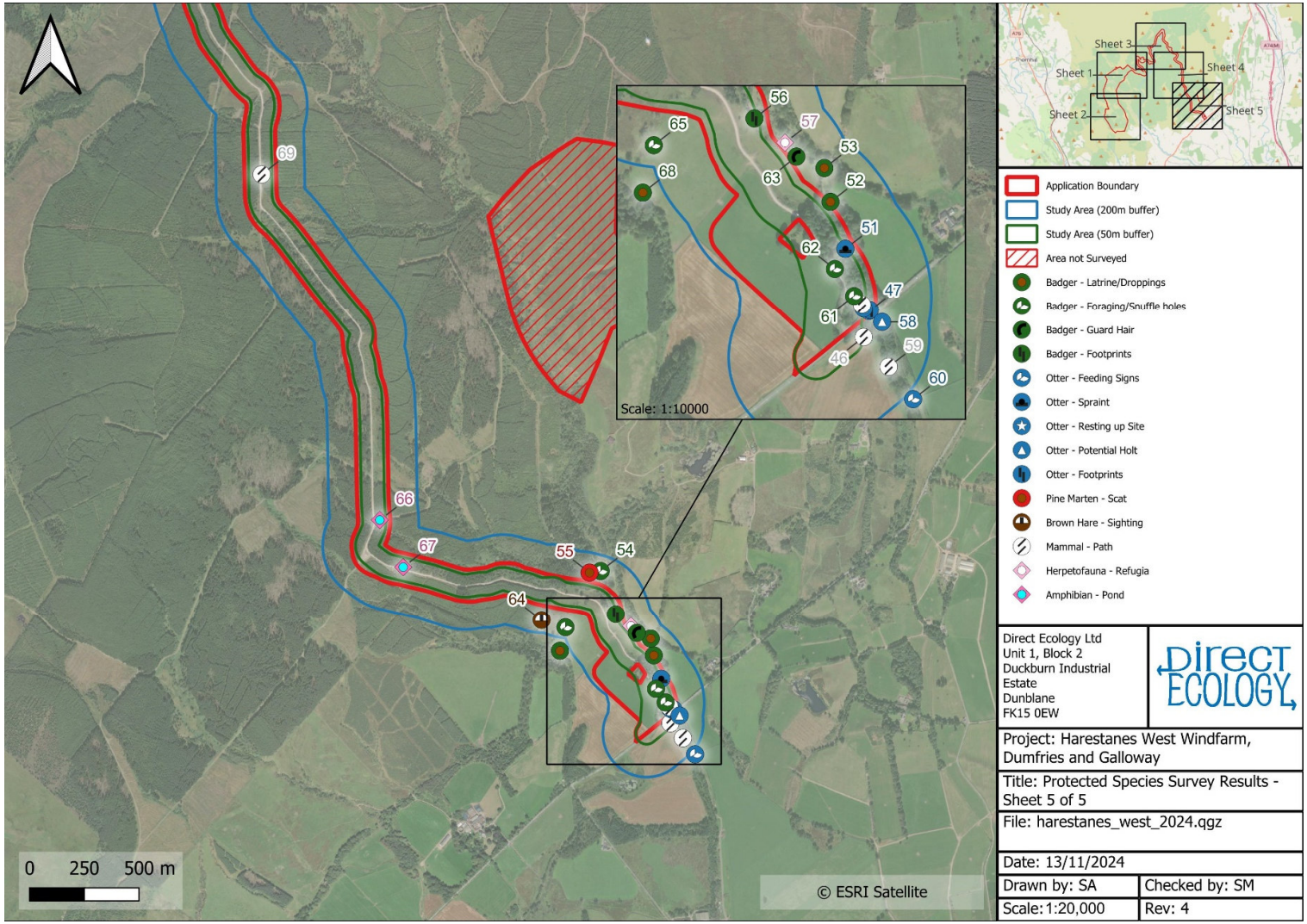


Figure 2e: Protected species results (5 of 5)

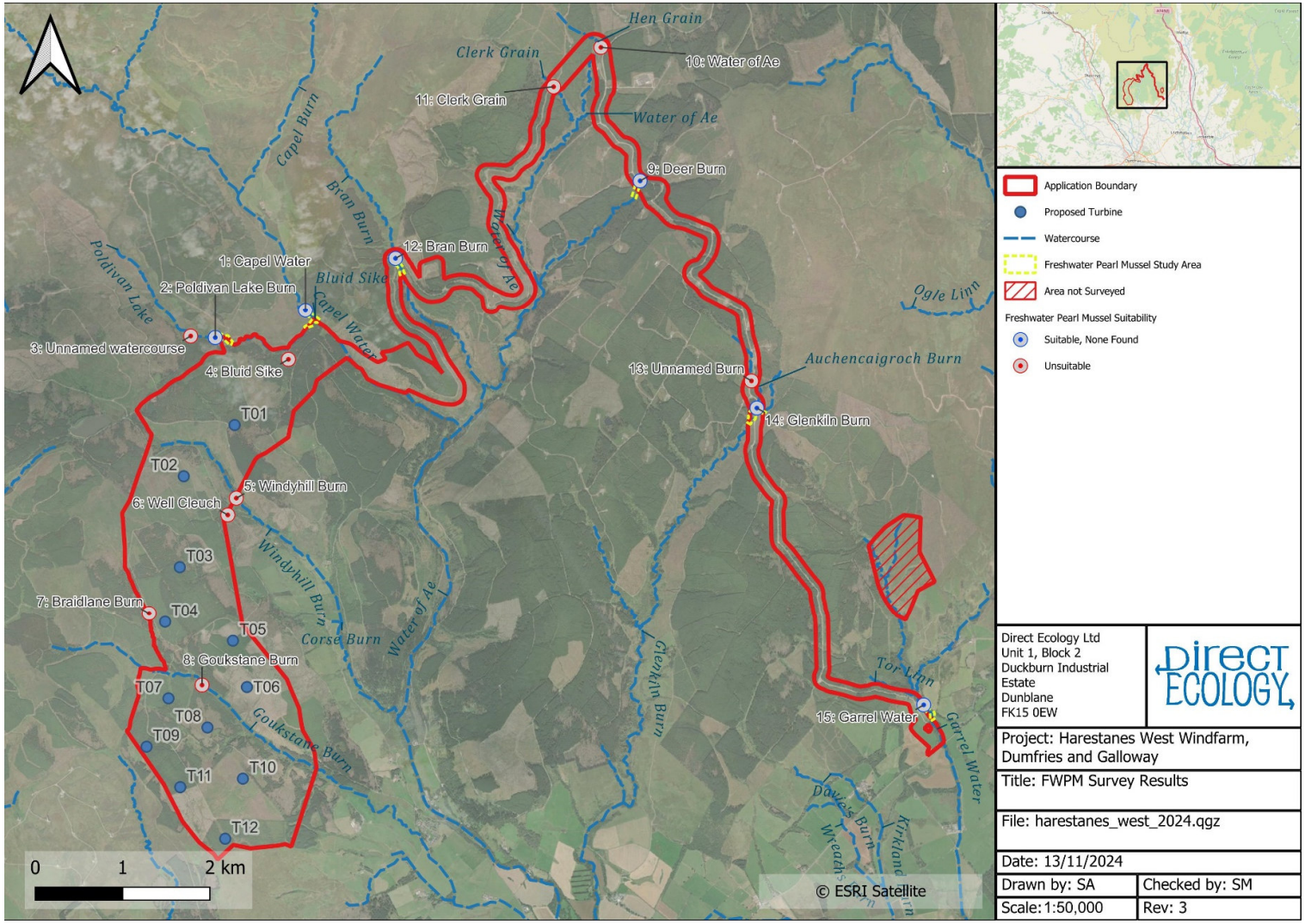
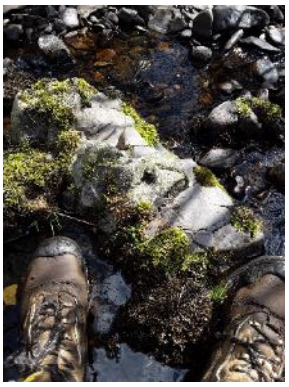


Figure 3: Freshwater Pearl Mussel survey results

APPENDIX 3 – PROTECTED SPECIES TARGET NOTES

Table 3: Target notes.

Target Note	Grid Reference	Taxon	Feature	Description	Photo
1	NX 96027 94803	Otter	Spraint	Fairly old spraint on rock on the upstream side of bridge.	
2	NX 96099 94794	Common lizard	Sighting	Old drystone wall offers some herpetofauna refugia potential. Common lizard seen next to wall. The wall continues to follow the burn on both sides.	
3	NX 96233 93003	Common Lizard	Sighting	Lizard seen on edge of track.	No Photo
4	NX 95194 92316	Palmate newt	Sighting	Four palmate newts including one male in standing water in ditch by old track.	
5	NX 96740 90008	Herpetofauna	Habitat	Steep bank close to burn offers good habitat for reptiles. Few trees, with rocks to sunbathe on and good potential refugia under the rocks.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
6	NX 96297 90365	Otter	Spraint	Fairly old spraint on rock in middle of burn. Fish, potential prey for otter, seen in burn close by.	
7	NX 95976 90249	Herpetofauna	Refugia	Herpetofauna refugia potential in ruined house, nearby drystone walls and under old, corrugated metal sheets. The surrounding area is open with few trees, providing good reptile potential.	
8	NX 95766 90039	Amphibians	Pond	Pond with good suitability for breeding amphibians and is unlikely to completely dry.	
9	NX 95734 90036	Amphibians	Pond	Pond with good suitability for breeding amphibians.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
10	NX 96555 94681	Otter	Spraint	Old spraint on a rock in the burn.	
11	NX 96583 94685	Ant	Nest	Ant nest on the side of a tree stump - Not thought to be wood ant.	
12	NX 96518 94601	Otter	Spraint	Noted under lifted tree plate adjacent to a ditch. Old spraint.	
13	NX 96859 94363	Herpetofauna	Refugia	Small rock pile offering refugia potential.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
14	NX 96750 94132	Mammal	Path	Mammal path along the ditch, with second path intersecting a short distance away. Fox scat noted on the path. Could also be used by e.g. badger and pine marten.	
15	NX 96669 93722	Herpetofauna	Refugia	Old drystone dyke that borders the field. Provides refugia potential.	
16	NX 95837 94788	Otter	Spraint	Old spraint on a rock in the burn.	
17	NX 95631 94643	Mammal	Path	Mammal path leading along the edge of the tree line. Fox scat noted on path.	No Photo
18	NX 95387 94303	Mammal	Path	Mammal path following wall then towards nearby burn. Likely used by species such as fox and deer.	No Photo

Target Note	Grid Reference	Taxon	Feature	Description	Photo
19	NX 95238 92971	Pine Marten	Scat	Mustelid scat on path. Likely pine marten.	
20	NX 95402 93163	Pine Marten	Scat	Old mustelid scat on path. Likely pine marten.	No Photo
21	NX 95551 90932	Otter	Spraint	Old, partially washed away spraint on a rock in the burn.	
22	NX 95590 90916	Otter	Spraint	Old spraint on a rock in the burn.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
23	NX 95781 90890	Otter	Spraint	Sprainting site on a rock on the edge of the burn.	
24	NX 95542 90944	Mustelid	Scat	Mustelid scat in the middle of the path. Appears to be fresh. Likely pine marten.	
25	NX 96408 89761	Mammal	Path	Mammal path leading from the field into nearby plantation block. Could be used by fox or deer.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
26	NX 96509 89767	Mammal	Path	Mammal path around the edge of clearing in plantation. Could be used by fox or deer.	
27	NX 95909 89985	Amphibian	Pond	Palmate newts seen in the pond. This has good suitability for breeding amphibians.	
28	NX 95764 89644	Herpetofauna	Refugia	Drystone dyke running south-west and north-east from the track. Potential refugia.	
29	NX 95807 88988	Herpetofauna	Refugia	Drystone dyke running north-west to south-east along site boundary. Potential refugia.	
30	NX 95965 89217	Pine marten	Scat	In forest ride between two mature woodland blocks.	
31	NX 95824 88967	Pine marten	Scat	Beside drystone dyke where a mammal path crosses the wall.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
32	NX 96972 89478	Herpetofauna	Refugia	Remains of drystone wall offers refugia potential.	
33	NX 97105 89608	Herpetofauna	Refugia	Drystone wall surrounding mature plantation offers refugia potential	
34	NX 97313 89729	Herpetofauna	Refugia	Drystone dyke that runs along the length of the Goukstane Burn offering refugia potential.	
35	NX 96894 89800	Herpetofauna	Refugia	Drystone dyke offering refugia potential.	
36	NX 97327 94810	Slow worm	Sighting	On track beside the Capel Water. The path does not appear to be in regular use by vehicles and is becoming slightly overgrown in places.	
37	NX 96204 92915	Pine marten	Scat	Possible pine marten scat in the middle of the path.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
38	NX 96190 89041	Common lizard	Shed skin	Shed skin from a common lizard in forest ride.	
39	NX 95792 90011	Common lizard	Shed skin	Shed skin from a common lizard	No Photo
40	NX 96898 89348	Amphibian	Pond	Pond with good suitability for breeding amphibians and is connected to the Goukstane burn by a small burn.	
41	NX 99008 94031	Otter	Potential resting up site	An undercut in a bank, but it is currently blocked by debris. No signs and low potential to be used by otter.	
42	NX 98925 93901	Otter	Spraint	Possible spraint - frozen solid with no smell, but small pieces of shell appear to be present.	
43	NX 98765 93777	Otter	Potential resting up site	Shallow undercut in the bank with a small area where the bank has partially collapsed creating a fully covered section. No sign of use by otter.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
44	NY 02198 94218	Vole species	Feeding signs	Rushes chewed at a 45-degree angle, indicating vole species. Suitable habitat but no definite signs of water vole found.	
45	NY 02341 94117	Vole species	Feeding signs	Rushes chewed at a 45-degree angle, indicating vole species. Suitable habitat but no definite signs of water vole found. Droppings of small vole and runs also found in the vicinity.	
46	NY 04281 90079	Mammal	Path	Running from field under fence into woodland. No guard hairs or additional signs found.	
47	NY 04293 90139	Otter	Spraint	Extensive spraints found under both sides of the A701 bridge.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
48	NY 04295 90142	Otter	Print	Print by bridge on the bank.	
49	NY 04281 90145	Otter	Resting up site	Hole created by beech tree at the top of bank. Approximately 2 m wide and two entry points with a print found.	
50	NY 04277 90154	Mammal	Path	Strong path down steep bank connecting woodlands to river.	
51	NY 04239 90282	Otter	Spraint	Old spraint with fish bones found on boulder.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
52	NY 04205 90389	Badger	Latrine	Found between fence and river, with fresh droppings.	
53	NY 04191 90466	Badger	Latrine	Droppings found in hole.	
54	NY 03962 90778	Badger	Foraging	Several snuffle holes in field near strong mammal path running adjacent.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
55	NY 03911 90771	Pine marten	Scat	Narrow and black in colour, found on mossy knoll.	
56	NY 04031 90579	Badger	Print	Found in cattle dropping. Appears to be recent, from the last day. Indirect register.	
57	NY 04101 90524	Herpetofauna	Refugia	Potential refugia in completely collapsed wall with good connection to waterway.	No Photo
58	NY 04323 90114	Otter	Potential holt	Deep hole into the bank under an ash tree close to the bridge with suitable holt potential.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
59	NY 04338 90011	Mammal	Path	Well-used path at the top of a steep bank down to the watercourse.	
60	NY 04394 89937	Otter	Feeding signs	Spilled fish guts and eggs found by riverbank.	
61	NY 04259 90174	Badger	Foraging	Group of snuffle holes likely from badger.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
62	NY 04215 90236	Badger	Foraging	Snuffle holes by path close to fence line.	
63	NY 04127 90492	Badger	Guard hair / path	Badger-shaped hole under fence with guard hair found. Strong path here that runs adjacent to fence.	
64	NY 03692 90552	Brown hare	Sighting	Two hares flushed from rushes.	No Photo
65	NY 03801 90518	Badger	Foraging	Extensive sections of turf turned over and lifted sections of grass in fields. Looks to be badger, but also a lot of deer droppings in the general vicinity.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
66	NY 02952 91011	Amphibian	Pond	Ditch by track, well vegetated with horsetail. Likely ephemeral	
67	NY 03059 90796	Amphibian	Pond	Two silty ponds by track. Likely ephemeral.	
68	NY 03776 90410	Badger	Latrine	Dung pit in field close to boundary. No obvious paths close by.	

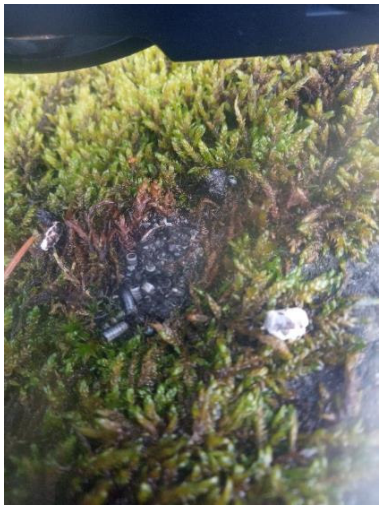
Target Note	Grid Reference	Taxon	Feature	Description	Photo
69	NY 02412 92592	Mammal	Path	Strong mammal path leading into forest. No scat or obvious tracks seen on ground.	
70	NY 02203 94093	Otter	Potential resting up site	Low potential for resting up. Undercut at bend of burn. Ground under is damp and limited in space.	
71	NY 02101 94107	Herpetofauna	Pond	Potential for amphibians. Dragonflies and damselflies seen. Approximately 4 x 6 m.	
72	NY 02176 94005	Pine marten	Scat	Found on track. Degraded with berries, approximately 4 cm long.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
73	NY 02278 93957	Otter	Potential resting up site	Under large overhang. rocky but damp on base, limited potential for transient use due to being at water level.	
74	NY 02103 94499	Otter	Potential resting up site	Under bank, limited potential but damp and narrow.	
75	NY 01903 95153	Mammal	Scat	Likely deer. Recorded due to unusual fruity smell and high concentration of berries.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
76	NY 01635 95724	Amphibian	Pond	Series of trackside ponds with good potential, frogs and tadpoles observed in some.	
77	NY 01644 96027	Common frog	Tadpoles	Tadpoles in ditch by crane pad, many ponds along route with potential.	
78	NY 00974 96330	Amphibian	Pond	Couple of larger ponds with dragonflies and potential for newts and frogs.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
79	NY 00964 96363	Pine marten	Scat	Tapered end, hairs, approximately 4cm and with a pine marten scent.	
80	NY 00374 98196	Otter	Rest up site	Overhang in riverbank. Spraint found and bedding material composed of rushes pulled in.	
81	NY 00533 98262	Otter	Potential resting up site	Mossy boulder in undercut, relatively dry. No spraints found.	

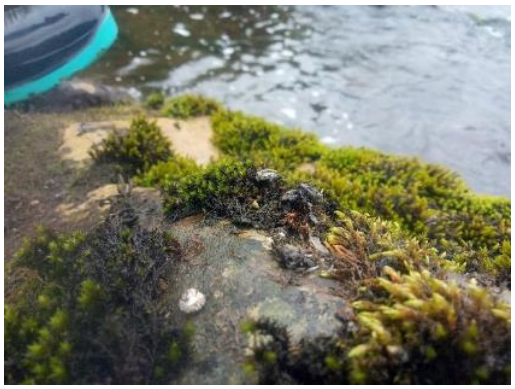
Target Note	Grid Reference	Taxon	Feature	Description	Photo
82	NY 00314 98311	Otter	Potential resting up site	Shallow, though dry under overhang. No spraints or obvious paths but good access.	
83	NY 00325 98298	Otter	Resting up site	Old bedding in corner and main overhang shelter mostly dry.	
84	NY 00353 98098	Otter	Spraint	Partially washed away but recent with smell. On boulder at edge of river. Fish scales present.	
85	NY 00353 98091	Otter	Spraint	Washed out spraint site with remains of bones and scent.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
86	NY 00334 98033	Otter	Spraint	On boulders by water edge. Three within a 5 m radius. Fairly fresh.	
87	NY 00268 97743	Otter	Spraint	At least two spraints on mossy boulder. Not fresh, washed out but faint smell, fish scales and bones remaining.	
88	NY 00263 97718	Otter	Spraint	Single spraint on boulder in middle of river.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
89	NY 00231 97636	Otter	Slide	Running from grassy bank into water. Path runs for approximately 30 m before branching off.	
90	NY 00228 97613	Otter	Spraint	Recent spraint on rock in middle of channel. Small bones and distinct smell.	
91	NY 00204 97385	Otter	Potential resting up site	Overhang from bank, dry underneath, large enough for single individual.	
92	NY 00104 97268	Otter	Potential resting up site	Good potential hollow but cobwebbed over therefore no recent use.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
93	NX 99860 96937	Otter	Spraint	Degraded, washed up spraint pile with bones and faint smell. On boulder in middle of channel.	
94	NX 99809 96963	Otter	Spraint	Large rock in middle of channel. Two spraints degraded and washed out with some bones. Likely sprainting rock.	
95	NX 99727 96840	Otter	Spraint	Degraded but still smell and fish bones. On mossy boulder at bank.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
96	NX 99689 96720	Otter	Spraint	Mostly dry, small bones, fish scales and faint smell. On boulder in middle of channel.	
97	NX 99608 96585	Otter	Spraint	Single spraint on boulder in middle of channel containing bones. No smell.	
98	NX 99503 96455	Otter	Potential resting up site	Dry hollow under bank near spraint. Mossy boulder surrounded by dense vegetation.	

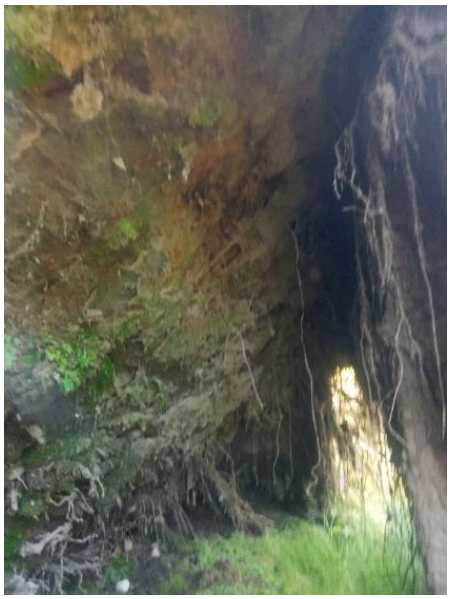
Target Note	Grid Reference	Taxon	Feature	Description	Photo
99	NX 99453 95896	Otter	Spraint	Multiple spraints, some broken up. Faint smell, one old and crumbly one fresher with bones.	
100	NX 99486 95723	Otter	Spraint	Two spraints on mossy rocks at edge of the channel. Beginning to disintegrate.	
101	NX 99491 95669	Otter	Spraint	Two spraints on side of bank, one recent, partially degraded with faint smell, other heavily degraded with no smell.	
102	NX 99527 95608	Otter	Spraint	Three spraints, two recent with bones, scales and faint smell, one old with faint smell. One other possible, though heavily degraded.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
103	NX 99536 95575	Otter	Potential resting up site	Smaller but with some bedding composed of rushes pushed into corner. Pebble substrate under tree root and vegetation.	
104	NX 99715 95316	Otter	Potential resting up site	Low potential, rocky within but dry.	
105	NX 99699 95262	Otter	Potential resting up site	Large interior space in overhang 2-3 m long in interior and dry. Open at both ends.	
106	NX 99640 95164	Otter	Prints	In gravelly bank.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
107	NX 99544 95087	Otter	Resting up site	Large opening under root plate at bank of river, could see use by otter or other mammals e.g. fox. Half dry half exposed. Worn path leading into a central area with signs of use. No scats or spraints, however there were urine stains at edge.	 
108	NX 98001 95818	Mammal	Path	Running parallel to watercourse on top of bank. Likely deer but could also be used by otter.	
109	NX 98026 95715	Otter	Spraint	Two spraints on north side of culvert. One fresh with bones and smell the other older.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
110	NX 98075 95642	Otter	Spraint	Two old spraints on rock in middle of channel. No smell but fish bones present.	
111	NX 98188 95397	Otter	Spraint	Possible old spraint, heavily degraded.	
112	NX 98194 95197	Otter	Resting up site	Wide and approximately 1.5 m deep rest up site under root plate with access to the burn. Three old spraints found.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
					
113	NX 98246 95104	Otter	Spraint	Three mostly washed-out spraints with bones.	
114	NX 98263 95093	Otter	Potential rest up site	Good access to bank and watercourse. Fairly exposed but suitable temporary site.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
115	NX 98298 95070	Otter	Potential rest up site	Approximately 1.5 m tall shelter under root plate. Mostly damp with some dry spots. No spraints or other signs of use.	
116	NX 98533 94941	Otter	Spraint	At least two old, degraded spraints.	
117	NX 98939 94350	Otter	Resting up site	Fairly exposed undercutting but remains of likely spraint found. Space open at both ends, approximately 1 m long.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
118	NX 98997 94197	Otter	Spraint	Two boulders with old spraints within 10 m of each other. One at the side and one in the middle of the channel.	
119	NY 00347 97928	Lizard	Sighting	Running into heather mound.	No Photo
120	NY 00981 96462	Squirrel species	Feeding signs	Two chewed cones below trees near edge of track.	
121	NY 00354 97247	Amphibian	Habitat	Two artificial SUDS ponds next to road. One is almost completely covered in vegetation and the second approximately 50% covered. Good habitat for breeding amphibians.	
122	NY 00141 97991	Pine marten	Scat	Mustelid scat on mossy mound in forest ride. Fresh.	

Target Note	Grid Reference	Taxon	Feature	Description	Photo
123	NX 99363 96709	Pine marten	Box	Pine marten box on a tree in a small copse of mature trees. No signs of use such as scats on the top, or on ground below, scratch marks on the tree or other signs of use. 'Number 40' written on base.	
124	NX 99893 97596	Lizard	Sighting	Basking on mossy mound near burn.	No Photo
125	NX 98419 95367	Amphibian	Habitat	Artificial SUDS pond on edge of track. Vegetated around edges with pond plants. Suitable breeding for amphibians.	

APPENDIX 4 – FWPM HABITAT SUITABILITY ASSESSMENT

Table 4: FWPM Habitat suitability.

No.	Watercourse	Grid Reference	Description	Photo
1	Capel Water	NX 97001 95098	Largest watercourse on the site. Entire section was walked with waders and bathyscopes to assess the habitat and check for mussels in suitable areas. The watercourse is generally fast flowing with few areas of gravel and sand, except at the edges of the river. The water here is subsequently shallow and unlikely to be suitable for mussels. There are some slower flowing pools which do have potential, but these were surveyed, and no mussels were found. Where the watercourse braids the side channels had sandier substrate, but these will likely dry in periods of low water. The watercourse is suitable for FWPM, but none were identified during the survey.	  
2	Poldivan Lake Burn	NX 95968 94782	At the confluence with the Capel Water no mussels found on the previous day. Where the road crosses the burn is fast flowing downstream with mostly bedrock and cobbles present. Upstream is slow flowing in places and gravel is present in slower flowing places. It is only c.1-1.5 m wide. Small (parr) fish noted during previous survey nearby the burn. The burn is suitable for FWPM, but none were identified in the spot checks, nor were any identified in the Capel Water, which this burn flows into on the site.	 

No.	Watercourse	Grid Reference	Description	Photo
3	Unnamed watercourse	NX 95687 94799	Small watercourse that joins Poldivan lake burn 300 m upstream of road bridge. This is completely shaded by conifer plantation and <1 m wide. There is a gravel bank not far from confluence, but no mussels seen in the water here. Not suitable for FWPM.	
4	Bluid Sike	NX 96806 94533	Flows through Sitka plantation and is shaded. Part flows through a clear fell area also, <1 m wide. Not suitable for FWPM.	No Photo
5	Windyhill Burn	NX 96209 92946	1-2 m wide. Very shallow, no more than 6 inches in general, except in slow flowing pools where it is up to a foot deep. Heavily shaded by trees and vegetation on the banks. Substrate is mostly cobbles and boulders. Near the banks there is some gravel and coarse sand but very shallow. Water is generally fast flowing. Not suitable for FWPM.	
6	Well Cleuch	NX 96112 92754	Too steep and fast flowing for mussels. Not suitable for FWPM.	 
7	Braidlane Burn	NX 95211 91625	Shallow, no more than 10 cm deep and <1 m wide. Small amounts of gravel but majority pebbles and cobbles. Not suitable for FWPM.	

No.	Watercourse	Grid Reference	Description	Photo
8	Goukstane Burn	NX 95817 90800	Possible that the small falls downstream act as a barrier to fish so possible that not at all suitable for FWPM on that basis. Burn is 2 m wide and fast flowing. Substrate mostly bedrock and boulders with some gravel in slower flow. Banks are very overgrown currently so close inspection is difficult. Not suitable for FWPM.	
9	Deer Burn	NY 00832 96578	2.5 m wide where track crosses. Mix of sand, gravel cobbles and pebbles. Unclear if a barrier to fish downstream is present. Water appears to be deep enough to support fish populations if present. Heavily shaded by Sitka up and downstream. Suitable habitat for FWPM, but none identified during spot checks of the burn.	
10	Water of Ae	NY 00383 98100	2-3 m wide. Generally fast flowing with small slow pools. Shallow water with little sand but gravel present in places. Cobbles and boulders are the dominant substrate. Fish are likely present with no significant barrier present. Survey carried out on 250 m section of the burn did not find any mussels and confirmed suitability in this part of the watercourse is limited due to the lack of sandy substrates.	
11	Clerk Grain	NX 99842 97651	Small fast flowing burn. Shallow water with likely barrier to fish between here and the Ae due to the gradient of the watercourse. Not suitable for FWPM.	

No.	Watercourse	Grid Reference	Description	Photo
12	Bran Burn	NX 98032 95695	Fast flowing burn 1.5 m wide. Shallow, with predominantly pebbles and cobbles. Becomes wide and very shallow in places which would not be suitable for FWPM. Some areas of sandy substrate identified during otter survey so spot checks carried out. No mussels identified.	
13	Unnamed Burn	NY 02107 94286	Less than 1 m wide. Overgrown with vegetation, shallow very unlikely to have fish. Unsuitable for FWPM.	
14	Glenkiln Burn	NY 02169 93976	2 m wide. Little to no shade where the track crosses the burn. Predominantly boulders and cobbles with small areas of gravel and course sand. Suitable habitat for FWPM present though no mussels were seen in the pools either side of the bridge.	
15	Garrel Water	NY 04079 90573	3 m wide. Mixed substrate with some areas of sand and gravel, cobbles pebbles and bedrock. The water is fast flowing and there are small drops over bands of bedrock. Some suitability for FWPM in slower flowing pools.	

APPENDIX 5 – DESK STUDY RESULTS

Table 5: Protected species records within 2 km of the site boundary

Latin Name	Common Name	Designation	Most Recent	Any Records in 100m
Mammals				
Arvicola amphibius	European water vole	WCA5, SBL, GB RDB(EN)	2002	
Lutra lutra	Eurasian otter	HR-1994(Sch 2), SBL	2021	☒
Martes martes	Pine marten	WCA5, SBL	2023	☒
Meles meles	Eurasian badger	BA	2023	☒
Sciurus vulgaris	Eurasian red squirrel	WCA5, SBL, GB RDB(EN)	2022	☒
Reptiles				
Anguis fragilis	Slow worm	WCA5, SBL	2021	☒
Vipera berus	Adder	WCA5, SBL	2022	
Zootoca vivipara	Common lizard	WCA5, SBL	2023	☒

Table 6: Noteworthy species records within 2 km of the site boundary

Latin Name	Common Name	Designation
Amphibians		
Bufo bufo	Common toad	WCA5, SBL
Lissotriton helveticus	Palmate newt	WCA5
Lissotriton vulgaris	Smooth newt	WCA5
Rana temporaria	Common frog	WCA5
Invertebrates		
Acronicta rumicis	Knot grass	SBL
Agabus melanarius	Insect - beetle (coleoptera)	NS, Notable:B
Allophyes oxyacanthae	Green-brindled crescent	SBL
Anchoscelis litura	Brown-spot pinion	SBL
Apamea remissa	Dusky brocade	SBL
Arctia caja	Garden tiger	SBL
Atethmia centrago	Centre-barred sallow	SBL
Boloria selene	Small pearl-bordered fritillary	SBL
Bryotropha boreella	Mountain groundling	Notable
Caradrina morpheus	Mottled rustic	SBL

Latin Name	Common Name	Designation
Celaena haworthii	Haworth's minor	SBL
Ceramica pisi	Broom moth	SBL
Chesias legatella	Streak	SBL
Chiasmia clathrata	Latticed heath	SBL
Cirrhia icteritia	Sallow	SBL
Coenonympha pamphilus	Small heath	SBL
Diarsia rubi	Small square-spot	SBL
Ecliptopera silaceata	Small phoenix	SBL
Epirrhoe galiata	Galium carpet	SBL
Eudonia delunella	Pied grey	Notable:B
Eugnorisma glareosa	Autumnal rustic	SBL
Graphiphora augur	Double dart	SBL
Gymnusa variegata	Insect - beetle (coleoptera)	Notable
Hebrus (Hebrusella) ruficeps	Sphagnum bug	SBL
Helotropha leucostigma	Crescent	SBL
Hepialus humuli	Ghost moth	SBL
Hoplodrina blanda	Rustic	SBL
Hydraecia micacea	Rosy rustic	SBL
Hydroporus longulus	Insect - beetle (coleoptera)	SBL
Lasioglossum (Evylaeus) villosulum	Shaggy furrow bee	SBL
Lasiommata megera	Wall	SBL
Leucania comma	Shoulder-striped wainscot	SBL
Litoligia literosa	Rosy minor	SBL
Melanchra persicariae	Dot moth	SBL
Mniotype adusta	Dark brocade	SBL
Oedemera (Oedemera) virescens	Insect - beetle (coleoptera)	NR
Orthonama vittata	Oblique carpet	SBL
Orthosia gracilis	Powdered quaker	SBL
Scotopteryx chenopodiata	Shaded broad-bar	SBL
Spilosoma lubricipeda	White ermine	SBL
Spilosoma lutea	Buff ermine	SBL
Stilbia anomala	Anomalous	SBL

Latin Name	Common Name	Designation
Thryogenes nereis	Insect - beetle (coleoptera)	SBL
Tyria jacobaeae	Cinnabar	SBL
Xanthorhoe decoloraria	Red carpet	SBL
Xanthorhoe ferrugata	Dark-barred twin-spot carpet	SBL
Xestia castanea	Neglected rustic	SBL
Mammals		
Erinaceus europaeus	West European hedgehog	SBL, GB RDB(VU)
Lepus europaeus	Brown hare	SBL
Lepus timidus	Mountain hare	SBL

APPENDIX 6 – eDNA RESULTS

Results

Sample ID: EG-1661-1

Sample information:

Sample type: Faecal
Species group: Pine Marten
Suspected species: Pine Marten
Site Location: Harestanes
Comments:

Laboratory information:

DNA Extraction Code: EG-2024-1616
Identification method: qPCR
Analysis Procedure Notes:

Laboratory Comments:
None

Species Identified:

Species 1: Martes martes (Pine marten)
qPCR Ct Value: 24