



ESB Asset Development (UK) Ltd

Millmoor Rig Wind Farm

Annex to Technical Appendix 8.2: Protected Species Survey

2488037

FEBRUARY 2025

RSK GENERAL NOTES

Project No.: 2488037

Title: Millmoor Rig Wind Farm Access Track - Protected Species Report

Client: ESB Asset Development (UK) Ltd

Date: February 2025

Office: Glasgow

Status: Rev00

Authors

Robyn Maby

Hadyn Murray

Signature

Date:

12.02.2025

20.12.2024

**Project
manager**

Leanne Cooke

Signature

Date:

12.02.2025

**Technical &
quality reviewer**

Ruth Morton

Signature

Date:

20.12.24

RSK Biocensus Ltd (RSK) has prepared this report for the sole use of the client, showing reasonable skill and care, for the intended purposes as stated in the agreement under which this work was completed. The report may not be relied upon by any other party without the express agreement of the client and RSK. No other warranty, expressed or implied, is made as to the professional advice included in this report.

Where any data supplied by the client or from other sources have been used, it has been assumed that the information is correct. No responsibility can be accepted by RSK for inaccuracies in the data supplied by any other party. The conclusions and recommendations in this report are based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.

No part of this report may be copied or duplicated without the express permission of RSK and the party for whom it was prepared.

Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK Biocensus Ltd.

EXECUTIVE SUMMARY

1. This report presents detailed methodologies and results of a protected and notable species (excluding aquatic species) surveys within a proposed access area at the Millmoor Rig Wind Farm, located c. 20 km south-east of the town of Hawick in the Scottish Borders (centred at Ordnance Survey grid reference: NT 64825 07464). The study area boundary is shown in Figure 1.
2. The c. 295 ha study area largely comprises conifer plantation of varying ages and species, marshy grassland, bracken, wet modified bog, wet dwarf shrub heath and some smaller areas of improved grassland, wet dwarf shrub heath, swamp, and broadleaved woodland.
3. Two small watercourses, the Carter Burn to the north and the Black Burn to the south and west, cross the study area. The Black Burn is a tributary of the River Tweed which is a designated Special Area of Conservation (SAC). Where the Black Burn flows through the study area, it is considered part of this SAC.
4. The study area provides suitable habitat for reptiles and amphibians, including tussocky grassland, plantation woodland, clear fell, forestry tracks, ponds, and marshy grassland. Multiple records of common toad (*Bufo bufo*) were identified within the study area. To minimise potential impacts on these species, it is recommended that a Species Protection Plan be implemented during works.
5. The study area has limited suitability for roosting bats (*Chiroptera* spp.), as the majority of trees lack potential roosting features (PRFs). However, the burns and woodland edges provide some suitability for commuting and foraging. The conifer plantation is generally considered unsuitable for bats, as trees are typically harvested before PRFs can develop. If any broadleaved or veteran conifer trees within 15 metres of the proposed access track require felling, a pre-construction survey should be undertaken to assess their potential for roosting bats.
6. The burns within the study area have limited suitability for water vole (*Arvicola amphibius*) and no signs of water vole activity were recorded during the survey.
7. The study area's burns provide suitable habitats for otters (*Lutra lutra*), and while no badger (*Meles meles*) signs were recorded during the survey, the area is suitable for them. Additionally, the plantation woodland offers sub-optimal suitability for red squirrels (*Sciurus vulgaris*), with potential feeding signs observed. Therefore, it is recommended that pre-construction surveys for otters, badgers, and red squirrels be conducted as close to the construction period and no more than three months before the start of works.

CONTENTS

1	INTRODUCTION.....	1
1.1	Purpose of this report	1
1.2	Landscape context	1
1.3	Development proposals	1
1.4	Legislation	1
2	METHODS.....	3
2.1	Overview	3
2.2	Habitat assessment and surveys for protected animals	3
	Amphibians.....	3
	Reptiles	3
	Bats 4	
	Water vole	4
	Otters 5	
	Badger 5	
	Red squirrel	5
2.3	Constraints and limitations.....	5
3	RESULTS	7
3.1	Habitat assessment and surveys for protected animals	7
	Amphibians.....	7
	Reptiles	8
	Bats 8	
	Water vole	8
	Otter 8	
	Badger 9	
	Red Squirrel.....	9
	Other 9	
4	EVALUATION AND RECOMMENDATIONS	10
	Amphibians.....	10
	Reptiles	10
	Bats 10	
	Otter 10	
	Red Squirrel.....	11
	Best Practice Guidance.....	11
	REFERENCES.....	12
	FIGURES	13
	APPENDIX A – ANIMAL NOTES	14
	APPENDIX B – SITE PHOTOGRAPHS.....	15
	TABLES	
	Table 1 Legislation considered in this assessment	2
	Table 2 GCN habitat suitability index	3
	Table 3 Categorisation of the suitability of trees for roosting bats (Collins, 2023)	4
	Table 4 Habitat suitability index scores	7
	Table 5 Protected species target notes.	14

Table 6 Site photographs.....	15
-------------------------------	----

FIGURES

Figure 1 Study Area location plan	13
Figure 2 Protected species survey map	13

1 INTRODUCTION

1.1 Purpose of this report

- 1.1.1 This report presents the results of a protected and notable species survey (excluding aquatic species which is considered separately in **New Technical Appendix 8.6, FEI Report**) within a proposed access area at the Millmoor Rig Wind Farm, located c.20 km south-east of the town of Hawick in the Scottish Borders (centred at Ordnance Survey grid reference: NT 64825 07464). The study area boundary is shown in Figure 1.
- 1.1.2 This report also provides advice on measures to mitigate the risks of disturbance to protected animals.
- 1.1.3 The site access that was proposed in the EIA Report has been redesigned to avoid direct impacts on a scheduled monument. This has necessitated creating a new short section of track which leaves the existing forestry track and goes around the Scheduled Monument before rejoining the existing forestry track.
- 1.1.4 A previous protected species report in connection with the wind farm itself was conducted and produced by RSK Biocensus in 2022. The current report relates to the new proposed access route only.
- 1.1.5 The survey was conducted in October 2024 by Robyn Maby (BSc, MSc) and Hadyn Murray (BSc, MRes) who are consultant ecologists at RSK Biocensus and qualifying members of the Chartered Institute for Ecology and Environmental Management (CIEEM).

1.2 Landscape context

- 1.2.1 The study area is located c.20 km south-east of the town of Hawick in the Scottish Borders (centred at grid reference: NT 64825 07464).
- 1.2.2 The c.295 ha study area largely comprises conifer plantation of varying ages and species, marshy grassland, bracken, wet modified bog, wet dwarf shrub heath and some smaller areas of improved grassland, wet dwarf shrub heath, swamp, and broadleaved woodland.
- 1.2.3 Two small watercourses cross the study area within the red line boundary (RBL). The Carter Burn to the north and the Black Burn to the south and west. The Black Burn is a tributary of the River Tweed which is a designated Special Area of Conservation (SAC). Where the Black Burn flows through the study area, it is considered part of this SAC.
- 1.2.4 Active forestry operations, including felling, are ongoing throughout the land within the application boundary.

1.3 Development proposals

- 1.3.1 The development proposal relating to this report is the proposed revised access route for the associated wind farm development consisting of up to 13 wind turbines.

1.4 Legislation

- 1.4.1 Table 1 below provides a summary of the legislation considered in this assessment.

Table 1 Legislation considered in this assessment

Legislation/ Source	Notes
<u>The Wildlife and Countryside Act (WCA) 1981 (as amended)</u>	Protects UK wildlife, plants, and habitats. Prohibits harm to protected species and nesting birds. Designates Sites of Special Scientific Interest (SSSIs).
<u>Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora 1992 (Habitats Directive).</u>	Affords protection for habitats and species of European importance. Creates Special Areas of Conservation (SACs). Ensures sustainable land use and species management.
<u>Convention on the Conservation of European Wildlife and Natural Habitats 1979 (Bern Convention).</u>	Affords protection to European flora, fauna, and natural habitats. Focuses on migratory species and transboundary habitats. Promotes cooperation between member states.
<u>Nature Conservation (Scotland) Act 2004.</u>	Strengthens biodiversity duties in Scotland. Protects SSSIs and native species. Promotes sustainable land management.
<u>Wildlife and Natural Environment (Scotland) Act 2011</u>	Updates to Scottish wildlife laws. Strengthens invasive species controls. Introduces wildlife crime penalties and improved enforcement.
<u>The Protection of Badgers Act 1992 (as amended)</u>	Affords protection to badgers and their setts.

2 METHODS

2.1 Overview

- 2.1.1 A previous survey and report were completed for the wind farm development by RSK Biocensus (2022). Within this report a background data search for designated sites and records of protected and notable species was conducted. These results are still valid and cover the same area, so in the interest of brevity have not been duplicated here.

2.2 Habitat assessment and surveys for protected animals

- 2.2.1 Taking into account the habitats present within the Proposed Development, surveys were undertaken to assess the suitability for bats (*Chiroptera* sp), otter (*Lutra lutra*), badger (*Meles meles*), water vole (*Arvicola amphibius*), great crested newts (*Triturus cristatus*), red squirrel (*Sciurus vulgaris*) and reptiles. The results of the protected species survey are shown in Figure 2.

Amphibians

- 2.2.2 Although standing water is essential for their breeding, great crested newts (GCN) are terrestrial for most of the year and have been recorded up to 500 m from their breeding ponds. The study area was assessed for its suitability for both terrestrial and breeding GCN. Optimal breeding ponds tend to be well-vegetated, relatively clean and unpolluted, free of fish and wildfowl, and retentive of water throughout most summers (but not necessarily all). Highly suitable terrestrial habitats include woodland, scrub and tussocky grassland, although GCN can be found in a broad range of sub-optimal habitats as well. Habitat suitability for other amphibians was similarly assessed.
- 2.2.3 A habitat suitability index (HSI) assessment was carried out for GCN of ponds within the study area. This index was developed by Oldham *et al.* (2000) and evaluates the quality and quantity of the habitat. It is numerical, with values between 0 and 1. Values close to 0 indicate unsuitable habitat and 1 are optimal habitats. There are ten indices, which are factors known to affect this species. Final scores are categorised from 'poor' to 'excellent.' The HSI calculation scores are shown below in Table 2.

Table 2 GCN habitat suitability index

HSI Score	Pond Suitability
<0.5	Poor
0.5 – 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good
>0.8	Excellent

Reptiles

- 2.2.4 The study area was assessed for its suitability for adder (*Vipera berus*), common lizard (*Zootoca vivipara*) and slow worm (*Vipera berus*) with particular attention given to those features that provide suitable basking areas (e.g. south-facing slopes), hibernation sites

(e.g. banks, walls, piles of rotting vegetation) and opportunities for foraging (e.g. rough grassland and scrub).

- 2.2.5 Specific habitat requirements differ between species. Common lizards favour habitats such as rough grassland and heathland. Slow-worms occur in a range of different habitats, including grassland, woodland/scrub, heaths, and dunes, as well as brownfield sites in more urban settings. Adders utilize a range of fairly open habitats with some cover but are most often found in dry heath.

Bats

- 2.2.6 Habitats were assessed for their suitability for foraging and commuting bats, in line with guidance provided in Collins (2023). Areas of particular interest vary between species, but generally include sheltered areas and habitats with good numbers of insects, such as woodland, scrub, rivers and species-rich or rough grassland.

Ground-level tree assessment

- 2.2.7 Trees within the study area were surveyed from ground level. Where possible, they were viewed from all elevations. Potential roost features (PRFs) were described and categorised according to Bat Conservation Trust survey guidelines (Collins, 2023) based on their potential for roosting bats, as shown in Table 3 below. Where a tree had multiple PRFs, it was classified according to the highest PRF value present. Trees may also be categorised as further assessment required (FAR) if the surveyor's view was obscured.

Table 3 Categorisation of the suitability of trees for roosting bats (Collins, 2023)

Tree category (Potential to support roosting bats)	Description
None	Either no PRFs in the tree or highly unlikely to be any.
FAR	Further assessment required to establish if PRF's are present in the tree.
PRF	A tree with at least one PRF, but the PRF(s) have not been / cannot be assessed for their suitability from ground level.
PRF-I	A tree with PRF(s) only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats [likely to require aerial inspection to confirm].
PRF-M	A tree with PRF suitable for multiple bats and may therefore be used by a maternity colony [likely to require aerial inspection to confirm].
Confirmed roost	Bats or evidence of bats recorded during the surveys. A confirmed record (supplied by records centre/local bat group) would also apply.

Water vole

- 2.2.8 Where access was available, the Carter Burn and the Black Burn were assessed for their suitability for use by water vole. The water vole survey was undertaken in conjunction with the otter survey and followed the methodology described in Strachan (2011) and Dean *et al.* (2016). This was based on vegetation cover and structure, bankside substrate, depth and flow rate and included a brief check for evidence of water vole activity, including burrows, feeding platforms, evidence of feeding (e.g. grass clippings) and droppings.

Otters

- 2.2.9 Where access was available, the Carter Burn and the Black Burn were assessed for their suitability for use by otter. This was based on bankside vegetation cover and structure, likely water quality and prey availability and included a brief check for evidence of otter activity, including holts, couches, slides, spraint, evidence of feeding (e.g. fish remains) and footprints.

Badger

- 2.2.10 Habitats were assessed for their suitability for use by badger for foraging and sett-building. Any incidental signs, such as setts, latrines, foraging signs, or footprints were recorded if they were encountered.
- 2.2.11 Any sett activity status was categorised using the Scottish Badger terminology (Scottish Badgers, 2018).

Red squirrel

- 2.2.12 In line with Gurnell et al. (2009), woodland areas within the study area were assessed for their suitability to support red squirrels (*Sciurus vulgaris*), focusing on habitat characteristics such as foraging resource availability and potential disturbance levels. This was a habitat suitability assessment rather than a dedicated red squirrel survey. Any direct sightings of red squirrels or incidental records of dreys or dens were noted where applicable.
- 2.2.13 Red squirrels can live in both conifer and broadleaved woodland and eat spruce and pine seeds, acorns, berries, fungi, bark and sap tissue.
- 2.2.14 Indicative field signs of squirrel presence include dreys and feeding signs. It should be noted that it is not possible to distinguish between red squirrel field signs and grey squirrel (*Sciurus carolinensis*) field signs. Therefore, sightings are the most reliable method for confirming species presence.

2.3 Constraints and limitations

- 2.3.1 Field signs for protected and valuable species are often difficult to find or absent from a study area. The survey conducted was not intended to be a comprehensive presence/absence survey for all species, but rather to provide an indication of the likely presence of such species based on the field signs found, and the nature of the habitats present.
- 2.3.2 Access to the Black Burn, which runs adjacent to the access route, was restricted in some areas for c. 150 m due to steep banks, posing a health and safety risk. Surveyors made every effort to cover the majority of the watercourse, and it is not considered to have affected the robustness of the surveys or the data collected.
- 2.3.3 Surveyors were unable to access small parts of the area proposed for the access route for health and safety reasons. This was due to the presence of thick vegetation and windblown trees in plantation areas making it difficult to carry out a survey. Additionally, due to the large size of the study area, and extents of plantation woodland, it was not possible to survey every plantation block within the time allocated. For these areas, general suitability was assessed. However, once the final access route is confirmed, more detailed and site-specific pre-construction surveys should be conducted to identify ecological constraints.

3 RESULTS

3.1 Habitat assessment and surveys for protected animals

- 3.1.1 Figure 2 shows the location of the animal notes (AN) which are particular features or evidence of protected and notable animals. These are referred to in the text below. A full description for each of the animal notes is given in Table 5, Appendix A.

Amphibians

- 3.1.2 Two ponds were recorded during the survey (AN 11 and 14, Appendix A, shown at Photographs 1 and 2, Appendix B). These were both located in areas of marshy grassland with tall dense grasses, rushes and sedges around the margins and submerged vegetation. Both ponds were adjacent to the Black Burn to the south of the study area.
- 3.1.3 Additional ponds are visible from aerial maps; however these were not located at the time of the survey, potentially due to tall tussocky vegetation obscuring them or chocking them, or it is possible they have dried out.
- 3.1.4 The suitability of the two visible ponds was calculated as 'average'. Details of the assessment criteria and scores are provided below in Table 4.

Table 4 Habitat suitability index scores

Suitability Index Description	Suitability Index Parameter	Suitability Index Value
<u>Pond 1 (AN 14)</u>		
Location (SI ₁)	Zone B	0.5
Pond Area (SI ₂)	50-100m ²	0.1
Permanence (SI ₃)	Rarely dries	1
Water Quality (SI ₄)	Good	1
Shade (SI ₅)	0-60%	1
Waterfowl (SI ₆)	Absent	1
Fish (SI ₇)	Possible	0.7
Pond count (SI ₈)	5	0.75
Terrestrial habitat (SI ₉)	Good	1
Macrophytes (SI ₁₀)	6-10%	0.4
HSI Score		0.63
Suitability		Average
<u>Pond 2 (AN 11)</u>		
Location (SI ₁)	Zone B	0.5
Pond Area (SI ₂)	<50m ²	0.05
Permanence (SI ₃)	Rarely dries	1
Water Quality (SI ₄)	Good	1
Shade (SI ₅)	0-60%	1
Waterfowl (SI ₆)	Absent	1
Fish (SI ₇)	Possible	0.7
Pond count (SI ₈)	5	0.75
Terrestrial habitat (SI ₉)	Good	1
Macrophytes (SI ₁₀)	6-10%	0.9
HSI Score		0.64
Suitability		Average

- 3.1.5 Two sightings of common toad (*Bufo bufo*) were recorded during the survey in areas of marshy grassland in proximity to either burn (AN 8 and 13 Appendix A, Photograph 3 Appendix B).

Reptiles

- 3.1.6 There is suitable habitat to support reptile species across the study area. These include the rough, tussocky grassland areas, the clear fell, the gravel access track, and dry-stone wall features (AN 3, 9, and 12 Appendix A, Photograph 4 Appendix B). These features offer shelter, basking and potential hibernacula features for reptiles.
- 3.1.7 The survey was conducted in October, during the hibernation period (October to March). As such, no reptiles were sighted during this visit. However, it is noted that previous surveys in 2021 and 2022 (RSK Biocensus, 2022) for the wind farm did record sightings of common lizard within the adjacent land.

Bats

- 3.1.8 Conifer trees planted for commercial use are largely unsuitable for roosting bats due to the lack of PRFs. However, one standing dead tree with woodpecker holes was recorded as a PRF (AN 4 Appendix A).
- 3.1.9 The small areas of broadleaved plantation were relatively immature and also lacked PRFs (Photograph 5) by way of knotholes, unions, tear outs or cavities, which are often more common on more mature trees and established woodlands.
- 3.1.10 The burns, woodland edges and marshy grasslands do offer suitable habitats for commuting and foraging bats.

Water vole

- 3.1.11 Some sections of the watercourses were determined to be of low suitability for water voles due to the rapid flow of water. Water voles typically prefer slow-moving or still water with a narrower channel that supports the development of vegetation along the banks, which they use for foraging and cover. Fast flowing and wider sections are less likely to provide the calm conditions and dense vegetation required for optimal water vole habitat. No evidence of water vole was recorded during the survey, and it is noted that no water voles or evidence of water voles was recorded during the previous surveys of the adjacent area. Water vole are therefore not considered a constraint to the proposals.

Otter

- 3.1.12 The burns within the study area are suitable for otter holts, commuting and foraging (AN 7 and 10 Appendix A). One possible otter slide (AN 6 Appendix A, Photograph 6 Appendix B) into the Carter Burn was observed in the north of the study area, however no other supporting evidence was recorded at the time of the survey. It is noted that a couch and spraint were found during the previous survey along the Jed Water, which is connected to both the Carter Burn and the Black Burn. A section of the Black Burn is considered part of the River Tweed, which is an SAC where otter is one of the qualifying features¹. It

¹ [SiteLink - River Tweed SAC](#)

is therefore likely that otters may use both burns for commuting, foraging and resting (Photograph 7).

Badger

- 3.1.13 Areas of windblow, clear fell and wet, boggy/marshy ground that make up the majority of the study area are unsuitable habitats for badgers. The small areas of broadleaved plantation offered slightly improved suitability, however no signs of badger such as hairs, setts, footprints, snuffle holes or latrines were found during the survey.

Red Squirrel

- 3.1.14 The areas of mature coniferous plantation woodland offer some suitability for red squirrels foraging and drey building (Photograph 8, Appendix B). Potential feeding signs of a pine cone were recorded in an area of mature plantation in the north-west of the study area (AN 5 Appendix A, Photograph 9 Appendix B).
- 3.1.15 Previous surveys did not record any signs of red squirrel, and no other evidence was found during this survey. Suitability is also reduced due to areas of windblow, clear fell, newly planted conifers fragmenting the habitat, and active forestry operations, as well as a lack of tree species diversity (Poulsom, *et al.*, 2005). However, due to the size of the study area and density of some of the plantation areas, it was not possible to thoroughly survey every mature plantation block. Due to this and the potential feeding signs, red squirrel cannot be ruled out at this stage.

Other

- 3.1.16 Although specific bird surveys were not carried out, a large disused nest was identified (AN 2 Appendix A, Photograph 10 Appendix B) within an area of mature conifer plantation.

4 EVALUATION AND RECOMMENDATIONS

Amphibians

- 4.1.1 The ponds on study area were assessed to have 'average' suitability for newts using the HSI assessment. Though it is noted that the geographic zone used was 'B' which is 'marginal' in the index, the study area is right on the boundary with zone 'C' which is considered 'unsuitable'. Additionally, historical surveys in the wider area were negative and the background data search included in the previous RSK Biocensus report (2022) for the wind farm also returned no records of GCN. However, surveys on the ponds within the access track boundary have never been carried out.
- 4.1.2 Due to these results, the general suitability of the habitat for all amphibians within the study area and sightings of toads during the survey, it is recommended that a Species Protection Plan for reptiles is implemented for the works.

Reptiles

- 4.1.3 Suitable habitat and a number of refugia and hibernacula features for reptile species were identified within the study area and common lizard were sighted during previous surveys of adjacent areas. A Species Protection Plan (SPP) will be required for these species.
- 4.1.4 If work is required near a hibernaculum, it should ideally be scheduled outside the hibernation period (October to March) to minimise risks to reptiles. If a hibernaculum must be removed, this must be carried outside the hibernation period and under the supervision of an ecologist, with an artificial hibernaculum created as compensation.

Bats

- 4.1.5 Should the singular standing dead tree be affected by the works, or if the works occur within 15 m of the tree, further assessment of the feature will be required.
- 4.1.6 As a precautionary measure, should any broadleaved trees require felling to facilitate the access track works, a pre-construction check should be carried out.

Otter

- 4.1.7 The burns within the study area do offer suitability for otter (*Lutra lutra*), and they are a qualifying feature of the River Tweed Special SAC of which the Black Burn is a part. It is recommended that pre-construction surveys are undertaken as close to the construction period as possible, and no more than three months before the start of works. This will be used to confirm the presence or absence of otters and their resting sites. If works are scheduled to occur within 30 m of a confirmed resting site (e.g. couches or holts), a disturbance licence from NatureScot will be required before works can proceed. If otters are breeding, the zone should be 200 m, however this could be reduced to 100 m depending on the nature of the works (NatureScot, 2024²).
- 4.1.8 If any further evidence of otters is found during the pre-construction check, a species protection plan (SPP) will be required in order for works to commence.

² [Standing advice for planning consultations - Otters | NatureScot](#)

Red Squirrel

- 4.1.9 Limited evidence of red squirrel was recorded, and the habitats were sub-optimal in parts. However, due to the size of the study area, this species cannot be ruled out. Therefore, further pre-construction surveys should be undertaken prior to works being carried out.

Best Practice Guidance

- 4.1.10 Given the potential for legally protected species such as otters to be present within the Proposed Development, construction best practice methods should be implemented during the works to minimise the potential impacts to protected species such as sediment control and pollution prevention where works are due to commence near watercourses. Where necessary mitigation may require species specific plans to minimise the risk of disturbance to protected species:
- It is recommended that construction activities should be undertaken during daylight hours. As such they should be avoided during night-time hours when working near watercourses, in order to avoid the crepuscular activity of otters.
 - All trenches and excavations should be fenced or covered-over at night to prevent any animals from falling in and becoming trapped. Where this is not possible, a means of escape should be provided i.e. gently sloping banks or a ramp to provide escape.

REFERENCES

RSK Biocensus (2022). *2481817 Millmoor Rig Wind Farm Protected Species Survey Report Rev02*.

Amphibian and Reptiles Groups of the United Kingdom (ARG UK) (2010). Advice Note 5 Great Crested Newt Habitat Suitability Index.

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

Chartered Institute of Ecology and Environmental Management (2017), *Guidelines for Preliminary Ecological Appraisal*. Technical Guidance Series, www.cieem.net/gpea.asp.

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

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

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

Gurnell, J., Lurz, P., McDonald, R. and Pepper, H. (2009). *Practical Techniques for Surveying and Monitoring Squirrels*. 1 12.

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10(4), 143-155.

Poulsom, L., Griffiths, M., Broome, A., and Mayle, B. (2005). Identification of priority woodlands for red squirrel conservation in North and Central Scotland: a preliminary analysis. Scottish Natural Heritage Commissioned Report No. 089 (ROAME No. F02AC334).

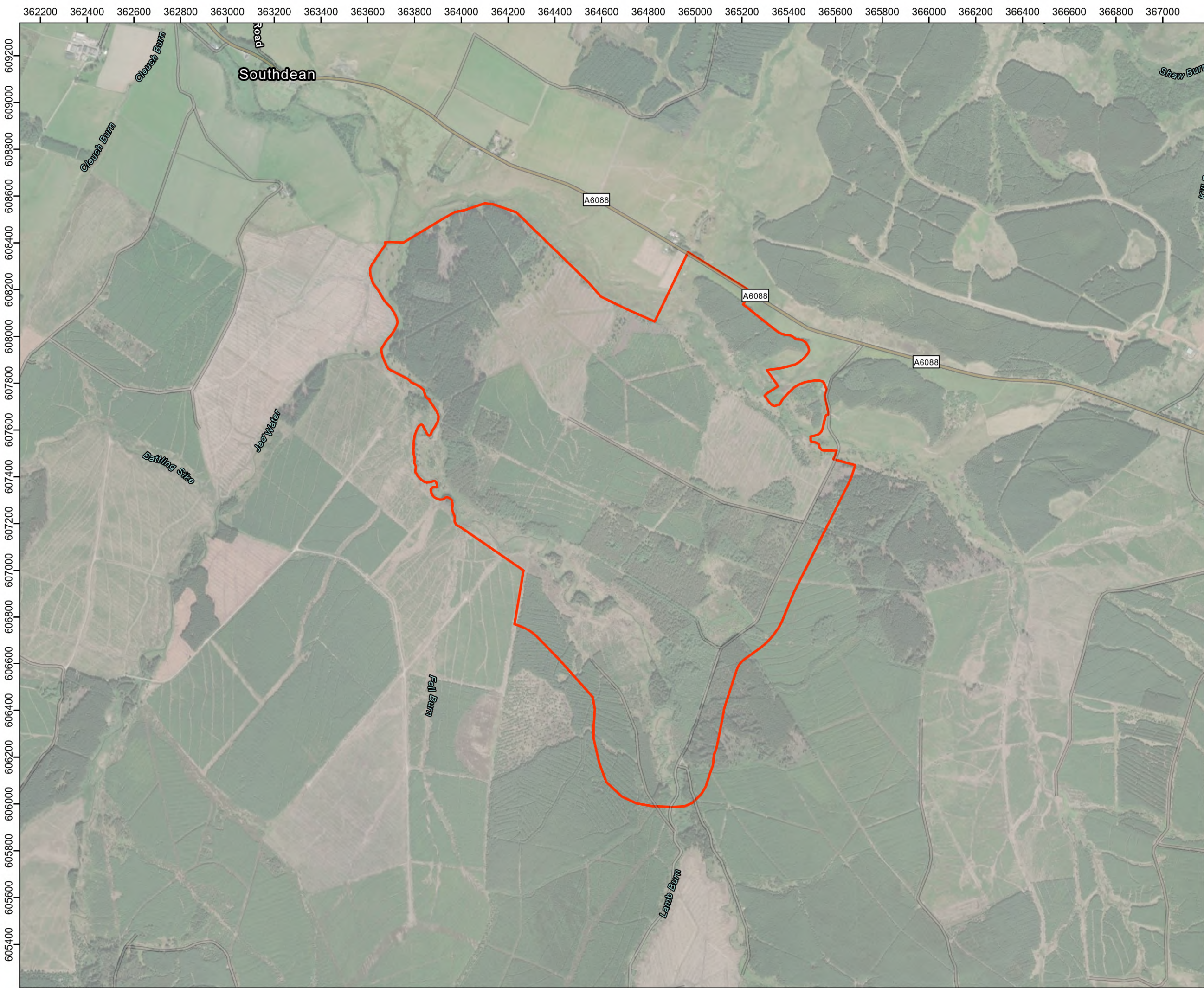
Scottish Badgers (2018). *Surveying for Badgers: Good Practice Guidelines*. Version 1.

Strachan, R., Moorhouse, T., Gelling, M. (2011) *Water Vole Conservation Handbook*, Third Edition. WildCRU, University of Oxford.

FIGURES

Figure 1 Study area location plan

Figure 2 Protected species survey map



Legend:

Study area boundary

00	20/11/2024	2488037	TG	SP	LC
Rev	Date	Project Code	Drn	Chk	App

MMR FEI Briefing

EXPERTS IN ECOLOGY

TITLE: Figure 1:
Study Area plan

0

190

380

570

Metres

SCALE: 1:15,000 @ A3

N

W

E

S

REV 00



- Legend:**
- Study area
 - Animal target note

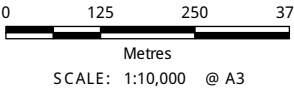


02	20/12/2024	2488037	TG	SP	LC
Rev	Date	Project Code	Drn	Chk	App

MMR FEI Briefing



TITLE: Figure 2:
Protected Species Map



REV 00

APPENDIX A – ANIMAL NOTES

Animal notes (ANs) are described below in Table 5 and illustrated in Figure 2.

Table 5 Protected species target notes.

Animal note	Description
AN 1	A small rodent spotted running through dense rushes. Unable to identify.
AN 2	Large, disused nest, raptors noted flying overhead on site.
AN 3	Old drystone sheep fold, hibernacula potential.
AN 4	Standing dead wood with old woodpecker holes and nest opening into trunk. Potential to support transient bat. - PRF/FAR
AN 5	Old squirrel feeding signs, chewed cone on fallen tree. Potential for red squirrel.
AN 6	Mammal paths along slower flowing section of the burn forming a pool. A potential otter slide noted, no other signs recorded.
AN 7	Burn, very fast flowing with suitability for otter. Appears too fast and big for water vole.
AN 8	Common toad sighting.
AN 9	Old dry stone sheep pen, suitable as reptile hibernacula.
AN 10	Large burn with otter and fish potential, too large and fast flowing for water vole.
AN 11	Small pond approximately 12 ft x 6 ft, amphibian potential.
AN 12	Reptile hibernacula feature, dry stone wall.
AN 13	Common toad sighting.
AN 14	Medium sized pond with amphibian potential.

APPENDIX B – SITE PHOTOGRAPHS

Table 6 Site photographs



Photo	Notes
	<p>Photograph 1. Pond with amphibian potential, well developed marginal vegetation and suitable surrounding habitat. NT 64863 06311</p>
	<p>Photograph 2. Smaller pond with amphibian potential. Tall grass and rushes around the margins with floating aquatic vegetation. NT 65149 07868</p>

Photo	Notes
	<p>Photograph 3. Common toad (<i>Bufo bufo</i>) recorded on site. NT 65339 07673</p>
	<p>Photograph 4. Old stone wall within Scot's Pine (<i>Pinus sylvestris</i>) woodland block. Potential hibernacula feature. NT 63877 08213</p>
	<p>Photograph 5. Young, broadleaved woodland plantation with limited suitability for roosting bats due to lack of PRFs. NT 65471 07754</p>


Photo	Notes
	<p>Photograph 6. Mammal paths along slower flowing section of the burn, with a small pool being formed. A potential otter slide noted, no other signs recorded. NT 64967 08035</p>
	<p>Photograph 7. Burn with suitability for otter and fish. NT 63903 07688</p>

Photo	Notes
	<p>Photograph 8. Mature Scot's Pine (<i>Pinus sylvestris</i>) plantation. Potential suitability for red squirrel. NT 65381 07146</p>
	<p>Photograph 9. Squirrel feeding signs in Scot's Pine plantation.</p>
	<p>Photograph 10. Disused birds nest in Scot's Pine plantation.</p>